APPENDIX A

Terms of Reference

LEA Consulting Ltd.
625 Cochrane Drive, 9th Floor
Markham, ON, L3R 9R9 Canada
T | 905 470 0015 F | 905 470 0030
WWW.LEA.CA

December 19, 2025

Reference Number: 24224

Stephanie Robinson
City of Burlington
Via Email: Stephanie.robinson@burlington.ca

RE: Terms of Reference - Transportation Impact Study
1376 & 1382 Plains Road East, Burlington

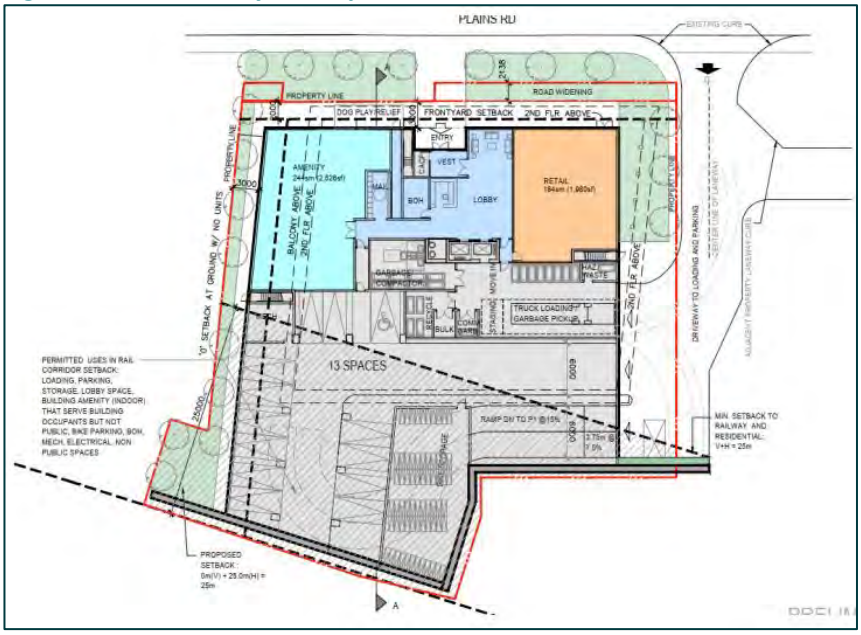
We wish to confirm the following work plan for a Transportation Impact Study (TIS) for the proposed redevelopment located at 1376 & 1382 Plains Road East in the City of Burlington.

To support the Zoning By-law Amendment submission for the proposed development, LEA will prepare a TIS, which will include an assessment of the development's impact on traffic operations as well as its parking and loading provisions. LEA has prepared the following Terms of Reference for this TIS for your review and approval.

PROPOSED DEVELOPMENT

The site is currently occupied by a low-rise commercial use. Based on the preliminary siteplan, the proposed redevelopment is expected to contain approximately 284 residential units. The site access is proposed via a shared full-movement driveway connection to Plains Road East. The proposed site plan is illustrated below in **Figure 1**.

Figure 1 – Preliminary Concept Plan



STUDY AREA AND TRAFFIC DATA COLLECTION

Traffic data will be collected during the weekday AM (7:00 to 9:30 a.m.) and weekday PM (4:00 to 6:30 p.m.) periods. The proposed study area will include the analysis of the following intersections:

- Plains Road East and Maple Avenue (Signalized);
- Plains Road East and Existing Site Access (Unsignalized); and
- Plains Road East and Brant Street (Signalized).

TRAFFIC ASSESSMENT AND STUDY HORIZON YEAR

The TIS will assess vehicle traffic operations during the weekday AM and PM peak hours for the study area intersections. Synchro 12.0 will be used to assess intersection operations utilizing the methodology of the Highway Capacity Manual and input parameter values consistent with the *Halton Region Transportation Impact Study Guidelines (January 2015)*. An existing year of 2026 and future horizon years of 2031 and 2036 will be assessed as part of the study.

Per the *Halton Region Transportation Impact Study Guidelines (January 2015)*, the definition of critical intersections/movements for the vehicle traffic analysis for signalized intersections will be as follows:

- Volume/capacity (V/C) ratios for overall intersection operations, through movements, or shared through/turning movements increased to 0.85 or above;
- V/C ratios for exclusive movements increased to 0.95 or above; or
- Queues for an individual movement are projected to exceed available turning lane.

In addition, the definition of critical intersections/movements for the vehicle traffic analysis for unsignalized intersections will be as follows:

- Level of service (LOS), based on average delay per vehicle, on individual movements exceeds LOS “D”; or
- The estimated 95th percentile queue length for an individual movement exceeds the available queue storage.

Any movements at the studied intersections that exceed a V/C ratio of 1.00 under future total conditions will be identified. If remedial actions such as signal optimization are unsuccessful this will also be identified. If remedial measures are to be employed, a scenario will be provided demonstrating the change in intersection operations.

BACKGROUND TRAFFIC

General Corridor Growth – LEA proposes to apply a 2.0% growth rate in the NB/SB directions along Brant Street, and the EB/ WB directions along Plains Road E during the AM and PM peak hours. Please confirm this growth rate or propose an alternative to be used along the study area intersections.

Road Network Improvements – LEA will note any road network improvements (e.g. road widening) identified within the study area and account for any traffic diversions associated with these improvements within our analysis.

Background Development Traffic – Please confirm any relevant background developments in the area to be included in the TIS. Based on a review of the City's development application website, identified background developments in the study area are summarized in **Table 1**.

Table 1: Identified Background Developments in the Study Area

#	Address/Name of Development	Descriptions
1	1335 & 1355 Plains Road East	38 residential units
2	1134 & 1167 Plains Road East	Phase 1: 654 residential units, 810m^2 GFA ground floor commercial Phase 2: 408 residential units, 208m^2 GFA ground floor commercial, 465m^2 GFA office

TRIP GENERATION, DISTRIBUTION, AND ASSIGNMENT

Due to the proposed residential vehicle parking supply (approximately 0.15 parking spaces per unit), trip generation will be calculated separately for the two categories of residents: those who own a personal vehicle and those who do not.

Person-trip generation for the proposed development will be forecasted based on the ITE Trip Generation Manual 12th Edition for Land Use Code 222 (Multifamily Housing (High-Rise)). A separate mode split will then be applied to determine the appropriate vehicle trip generation for each group: units with a parking space and units without a parking space. The local mode split will be estimated using the 2022 Transportation Tomorrow Survey (TTS), and will also be used to determine multi-modal trips. **Table 2** shows the overall mode split in the City of Burlington, and **Table 3** shows the resulting trip generation by mode.

Table 2: Mode Split in Burlington by Vehicle Ownership

Mode	Residential (Burlington, households with vehicle)	Residential (Burlington, households without vehicle)
Auto Driver	64%	5%
Auto Passenger	18%	15%
Transit	3%	76%
Walk	13%	5%
Cycle	2%	0%
Total	100%	100%

Table 3: Proposed Site Trip Generation

ITE LUC 222 - Multifamily Housing (High-Rise)		Weekday AM Peak Hour			Weekday PM Peak Hour		
		In	Out	Total	In	Out	Total
	Trip Rate	0.10	0.24	0.34	0.25	0.21	0.46
Households with a Personal Vehicle (45 Residential Units)	Person Trips	4	11	15	11	10	21
	Auto Driver Mode Split	64%					
	Vehicle Trips	3	7	10	7	6	13
Households with no Personal Vehicle (239 Residential Units)	Person Trips	23	58	81	59	51	110
	Auto Driver Mode Split	5%					
	Vehicle Trips	1	3	4	3	2	5
Total		**4**	**10**	**14**	**10**	**8**	**18**

The general trip distribution will be determined based on a review of 2022 TTS data. Trip assignment will reflect the configuration of the site access, applicable turning restrictions, and logical routing.

TRANSPORTATION DEMAND MANAGEMENT (TDM) PLAN

A Transportation Demand Management (TDM) Plan will be developed to reduce the dependency of single-occupancy vehicular trips to and from the subject site. The TDM Plan will review pedestrian, cyclist, and transit infrastructure, and recommend key programming to encourage alternative modes of travel for the subject site.

PARKING AND LOADING

The parking and loading requirements for the site will be reviewed and compared with the proposed supply. Due to the site's location within the Burlington GO MTSA boundaries, there are no applicable vehicle parking requirements.

FUNCTIONAL DESIGN REVIEW

A functional design will be conducted to confirm that the site plan is functionally sound and will accommodate all vehicles in an acceptable manner. LEA will investigate if vehicles can effectively access, circulate, and perform loading activities on-site. This will involve plotting swept paths of the subject vehicles using AutoTurn, identifying points of conflict, and providing mitigation measures.

Should you have any questions or concerns regarding these terms of reference, please do not hesitate to contact me at rkeel@lea.ca.

Yours truly,

LEA CONSULTING LTD.



Robert Keel, MSc. Pl, MCIP, RPP
Manager, Transportation Planning

Transportation Planning reviewed the draft Terms of Reference provided by LEA Group, dated December 2025. Transportation Planning's comments are in noted in blue text.

PROPOSED TERMS OF REFERENCE

1. **Proposed Development and Study Area**
   a. Description of development proposal and surrounding area (please refer to 3.1 of the TIS Guidelines)
      i. Most up-to-date Site Concept Plan
      ii. Proposed access points and allowed movements (e.g., right-in/right-out)
      iii. Existing and planned facilities: road network, pedestrian network, cycling network, and transit routes & stops
      iv. For transit-related questions, please reach out to Tony at Tony.Zhuang@burlington.ca
   b. Study area intersections
      i. Plains Road East and Maple Avenue (Signalized)
      ii. Plains Road East and Existing Site Access (Unsignalized)
      iii. Plains Road East and Brant Street (Signalized)
      iv. Brant Street and QEW Off Ramps (Signalized)
      v. Brant Street and Fairview Street (Signalized)
      vi. Plains Road East and Helena St (Unsignalized)
      vii. Plains Road East and QEW Off Ramp (Signalized)
      viii. Plains Road East and Fairview Street (Signalized)
   c. For site access and circulation, please refer to 3.7 of the TIS Guidelines. If the proposed designs do not conform with the City's design guidelines or standard drawings, please provide a justification
      i. Include a discussion on vehicle turning movement
   d. Parking Supply Review
      i. Transportation Planning recognize that a Parking Justification Report is not required; however, Transportation Planning are seeking a holistic review to confirm that the proposed number is appropriate for the particulars of the site. The justification will inform Transportation Planning responses to questions from the public and Council members.
      ii. A written justification for the proposed parking supply, including the land use context, unit mix of development, target demographic, comparable development, maximum number of underground parking levels achievable, financial implications, and assumptions.
      iii. Provide estimated parking demand using ITE Parking Generation Manual (6th Edition), TTS 2022 data, and City of Burlington Development Charges Study (2024)
      iv. Estimate the spill-over parking that may need to be accommodated within the surrounding area
      v. The Consultant shall undertake an inventory of current available on-street parking within 5- or 10-minute walking distance
      vi. To conclude, provide a brief overview of problems and opportunities to summarize the trade-offs, which support the decision-making process for

Commented [EC1]: FOR DISCUSSION - Off Ramps

parking

Commented [SL2]: I'm not sure what you mean by this - maybe add some clarifying text

2. **Existing Conditions**
   a. As per 3.3 of the TIS Guidelines, please examine the study area's operating characteristics for all transportation modes and obtain traffic volume data (less than 2 years of shelf life)
   b. Please note that traffic counts should not be completed during school holiday times, and should be completed during the mid-week period (Tuesday through Thursday), as identified in the Pre-Submission Document Terms of Reference (July 2021)
   c. For traffic movement or data questions, please reach out to Josip at Josip.Kafadar@burlington.ca

3. **Background Traffic Growth**
   a. Background Traffic (as per 3.4.1 of the TIS Guidelines)
      i. 2% growth rate
   b. Planned Developments (as per 3.4.2 of the TIS Guidelines)
      i. 1134-1167 Plains Road E
      ii. 1335-1355 Plains Road E
      iii. 1056-1060 Brant Street
   c. Transportation Network Improvements (as per 3.4.3 of the TIS Guidelines)
      i. Plains Road East (Fairview St to Maple Ave, and 50m east of Helena St to Brant St — Design phase is planned for 2027; construction is planned for 2029

4. **Site Generated Traffic**
   a. As per 3.5 of the TIS Guidelines, include Trip Generation, Distribution, Assignments, and a summary of Traffic Demand Estimates
      i. Use the following land use codes from the ITE Trip Generation Manual (12th Edition) to estimate trip generation for the site: LUC 222 and one retail land use code based on the proposed retail use
      ii. Where TTS 2022 data will be used, the Consultant shall disclose the TAZs used.
      iii. Site Trip Generation shall be conducted for all residential units collectively rather than the proposed method by vehicle ownership
         1) Table 4-5 of the Integrated Mobility Plan describes the existing mode share for the Plains neighbourhood: 92% (automobile), 5% (public transit), 0% (biking), and 3% (walking)
         2) Figure 4-15 of the Integrated Mobility Plan identifies that the subject property is within the Plains neighbourhood
   b. As per 3.6.1 of the TIS Guidelines, include a capacity analysis at intersections

5. **Mitigation Measures**
   a. Assessment of Traffic Impacts
      i. Tables summarizing traffic impacts for future background and total traffic with and without mitigation

ii. MMLOS Analysis using OTC Guidelines (2022)

b. Required Roadway and Traffic Signal Improvements (as per 3.9.1 and 3.9.2 of the TIS Guidelines)
   i. For questions about traffic signals, please contact Steve at Steve.Vrakela@burlington.ca

c. TDM measures to support the targeted mode share (as per 1.4 of the TIS Guidelines) and MMLOS targets
   i. Table 4-5 of the Integrated Mobility Plan propose the following target mode share for the Plains neighbourhood: 72% (automobile), 17% (public transit), 5% (biking), and 6% (walking)
   ii. Quantify the effectiveness of proposed TDM measures in reducing vehicular travel demand by referencing studies (peer-reviewed studies are preferred)
   iii. The Consultant shall work with the Applicant to offer options, including the preferred option, to reach the MMLOS targets set by Transportation Planning

Street Name	Street Type	LOS Per Mode Type				
		Pedestrian	Bikes	Transit	Trucks	Cars
Plains Road E	Neighbourhood Main Street	C	C	D	D	D
	Adjusted Targets	B	C	D	D	D
Brant Street / Fairview Street	Urban Main Street	C	C	D	D	D
	Adjusted Targets	B	B	C	C	D

d. Preliminary Cost Estimates (as per 3.9.3 of the TIS Guidelines)

6. **Conclusions and Recommendations**
   a. Provide a summary as per 3.10 of the TIS Guidelines

7. **Appendices**
   a. Approved Terms of Reference
   b. Vehicle Turning Movement
   c. Traffic Data
   d. Synchro Reports
   e. ITE Trip Generation (variables and graphs)
   f. ITE Parking Generation (variables and graphs)
   g. TTS 2022 data (query forms and additional calculations, if applicable)
   h. OTC MMLOS data sheets (using OTC's template)
   i. Assumptions applied in analyses, including lane configuration/use, pedestrian activity, saturation flows, traffic signal cycle length, phasing and timing, utilization of the inter-green phase and other relevant parameter (as per 4.0 of the TIS Guidelines)

8. **Time Frame for Analysis**
   a. Horizon Years (as per 3.2.1 of the TIS Guidelines)
      i. 5 years and 10 years after full build-out
   b. Peak Periods (as per 3.2.2 of the TIS Guidelines)
      i. 7-9:30AM and 4-6:30PM

9. **Documentation**
   a. The City reserves the right to request digital files of the analysis, including Synchro working files, as per 4.0 of the TIS Guidelines

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APPENDIX B

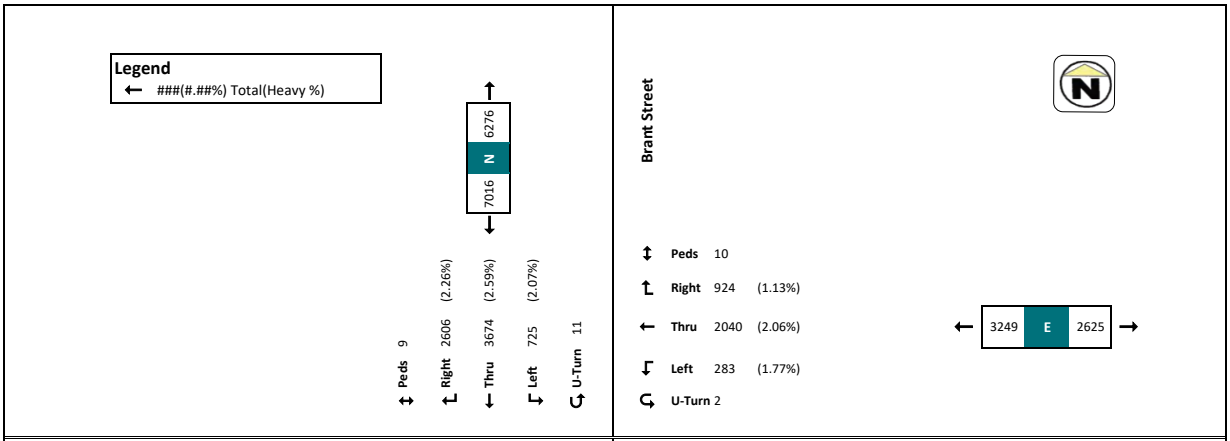
Traffic Data and Signal Timing Plans

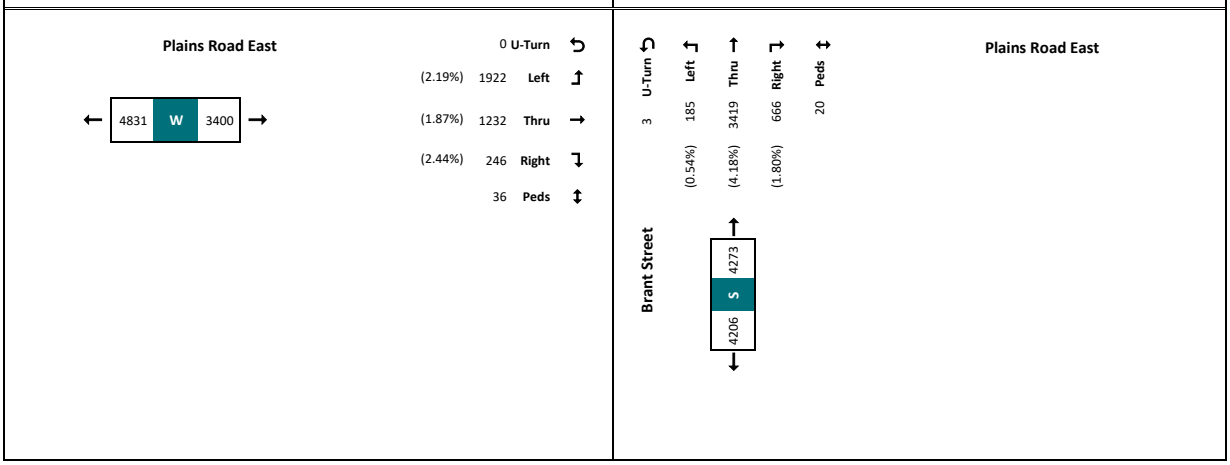
LEA Consulting Ltd.
625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

Intersection : Brant Street & Plains Road East
Survey Date : October 2, 2025
Project No. : 24223
Count ID : 25310

Turning Movement Count - Brant Street & Plains Road East

	Brant Street Southbound						Plains Road East Westbound						Brant Street Northbound						Plains Road East Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
7:00	0	41	76	51	0	168	0	3	17	8	0	28	0	1	114	45	0	160	0	52	98	4	2	154	510
7:15	0	68	75	58	4	201	0	5	21	10	0	36	0	5	141	89	3	235	0	63	108	4	2	175	647
7:30	0	69	107	68	0	244	0	7	27	13	1	47	1	8	164	75	1	248	0	59	124	6	4	189	728
7:45	1	65	194	82	0	342	0	10	26	16	0	52	0	5	189	70	0	264	0	61	93	8	3	162	820
Hourly Total	1	243	452	259	4	955	0	25	91	47	1	163	1	19	608	279	4	907	0	235	423	22	11	680	2705
8:00	1	52	197	89	1	339	0	8	30	10	0	48	0	5	130	38	0	173	0	65	79	12	0	156	716
8:15	0	40	183	91	0	314	0	13	34	17	0	64	0	5	124	33	1	162	0	83	63	5	0	151	691
8:30	1	51	183	114	0	349	0	12	37	12	0	61	0	6	111	23	0	140	0	101	67	4	2	172	722
8:45	1	48	211	95	0	355	0	15	46	18	0	79	0	12	129	38	0	179	0	84	80	7	0	171	784
Hourly Total	3	191	774	389	1	1357	0	48	147	57	0	252	0	28	494	132	1	654	0	333	289	28	2	650	2913
9:00	0	31	208	116	1	355	0	16	32	8	1	56	0	7	182	36	0	225	0	84	49	13	2	146	782
9:15	0	23	175	113	1	311	0	19	21	35	4	75	0	6	180	34	0	220	0	89	50	14	0	153	759
Hourly Total	0	54	383	229	2	666	0	35	53	43	5	131	0	13	362	70	0	445	0	173	99	27	2	299	1541
* Break *																									
16:00	1	16	194	142	0	353	0	27	170	86	3	283	0	11	208	23	1	242	0	155	70	17	1	242	1120
16:15	1	26	186	192	1	405	0	33	192	69	1	294	1	12	245	16	3	274	0	115	27	13	3	155	1128
16:30	0	30	169	197	1	396	0	26	213	104	0	343	0	6	198	18	1	222	0	149	51	16	3	216	1177
16:45	1	29	234	162	0	426	0	25	166	109	0	300	0	18	224	21	0	263	0	100	42	19	4	161	1150
Hourly Total	3	101	783	693	2	1580	0	111	741	368	4	1220	1	47	875	78	5	1001	0	519	190	65	11	774	4575
17:00	1	30	200	169	0	400	0	0	180	60	0	240	0	15	201	13	1	229	0	150	49	23	2	222	1091
17:15	1	18	244	185	0	448	0	0	159	81	0	240	1	13	230	18	3	262	0	117	47	12	1	176	1126
17:30	0	19	238	182	0	439	0	0	186	80	0	266	0	9	139	17	1	165	0	106	32	19	3	157	1027
17:45	2	21	226	168	0	417	0	0	170	73	0	243	0	17	188	20	0	225	0	83	31	16	0	130	1015
Hourly Total	4	88	908	704	0	1704	0	0	695	294	0	989	1	54	758	68	5	881	0	456	159	70	6	685	4259
18:00	0	19	171	167	0	357	2	33	156	62	0	253	0	9	157	20	3	186	0	106	47	18	3	171	967
18:15	0	29	203	165	0	397	0	31	157	53	0	241	0	15	165	19	2	199	0	100	25	16	1	141	978
Hourly Total	0	48	374	332	0	754	2	64	313	115	0	494	0	24	322	39	5	385	0	206	72	34	4	312	1945
Grand Total	11	725	3674	2606	9	7016	2	283	2040	924	10	3249	3	185	3419	666	20	4273	0	1922	1232	246	36	3400	17938
Approach %	0.2%	10.3%	52.4%	37.1%	-	-	0.1%	8.7%	62.8%	28.4%	-	-	0.1%	4.3%	80.0%	15.6%	-	-	0.0%	56.5%	36.2%	7.2%	-	-	-
Total %	0.1%	4.0%	20.5%	14.5%	-	39.1%	0.0%	1.6%	11.4%	5.2%	-	18.1%	0.0%	1.0%	19.1%	3.7%	-	23.8%	0.0%	10.7%	6.9%	1.4%	-	19.0%	-
Lights	11	710	3579	2547	-	6847	2	278	1998	901	-	3179	3	184	3276	654	-	4117	0	1880	1209	240	-	3329	17472
% Lights	100.0%	97.9%	97.4%	97.7%	-	97.6%	100.0%	98.2%	97.9%	97.5%	-	97.8%	100.0%	99.5%	95.8%	98.2%	-	96.3%	-	97.8%	98.1%	97.6%	-	97.9%	97.4%
Buses	-	5	44	16	-	65	-	1	12	10	-	23	-	1	56	5	-	62	-	10	12	3	-	25	175
% Buses	-	0.7%	1.2%	0.6%	-	0.9%	-	0.4%	0.6%	1.1%	-	0.7%	-	0.5%	1.6%	0.8%	-	1.5%	-	0.5%	1.0%	1.2%	-	0.7%	1.0%
Trucks	-	10	51	43	-	104	-	4	30	13	-	47	-	0	87	7	-	94	-	32	11	3	-	46	291
% Trucks	-	1.4%	1.4%	-	-	1.5%	-	1.4%	1.5%	1.4%	-	1.4%	-	0.0%	2.5%	1.1%	-	2.2%	-	1.7%	0.9%	1.2%	-	1.4%	1.6%
Bicycles	-	-	-	-	19	19	-	-	-	-	4	4	-	-	-	-	1	1	-	-	-	-	4	4	28
Pedestrians	-	-	-	-	9	-	-	-	-	-	10	-	-	-	-	-	20	-	-	-	-	-	36	-	75



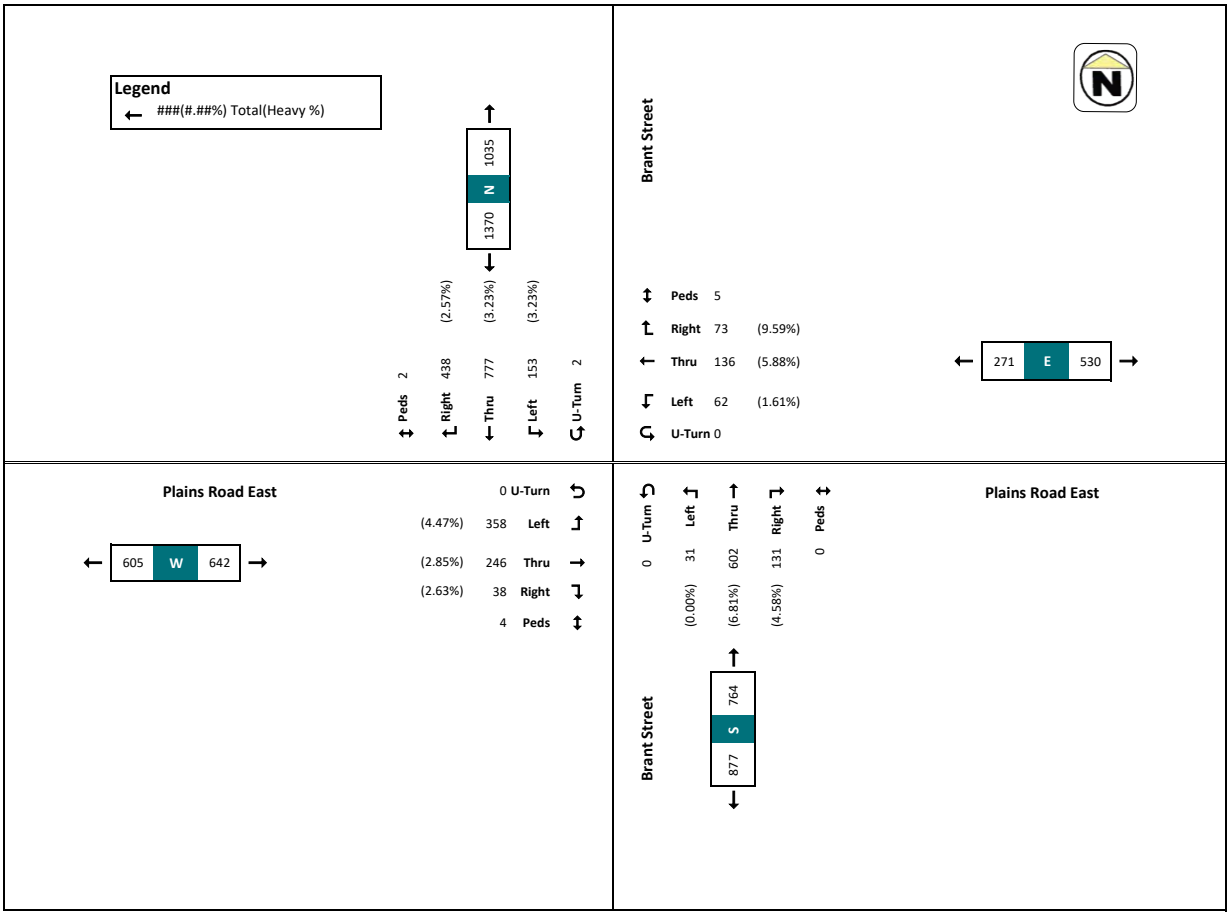


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AM Peak Hour - Brant Street & Plains Road East

	Brant Street Southbound						Plains Road East Westbound						Brant Street Northbound						Plains Road East Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
8:30	1	51	183	114	0	349	0	12	37	12	0	61	0	6	111	23	0	140	0	101	67	4	2	172	722
8:45	1	48	211	95	0	355	0	15	46	18	0	79	0	12	129	38	0	179	0	84	80	7	0	171	784
9:00	0	31	208	116	1	355	0	16	32	8	1	56	0	7	182	36	0	225	0	84	49	13	2	146	782
9:15	0	23	175	113	1	311	0	19	21	35	4	75	0	6	180	34	0	220	0	89	50	14	0	153	759
Hourly Total	2	153	777	438	2	1370	0	62	136	73	5	271	0	31	602	131	0	764	0	358	246	38	4	642	3047
Approach %	0.1%	11.2%	56.7%	32.0%	-	-	0.0%	22.9%	50.2%	26.9%	-	-	0.0%	4.1%	78.8%	17.1%	-	-	0.0%	55.8%	38.3%	5.9%	-	-	-
Total %	0.1%	5.0%	25.5%	14.4%	-	45.0%	0.0%	2.0%	4.5%	2.4%	-	8.9%	0.0%	1.0%	19.8%	4.3%	-	25.1%	0.0%	11.7%	8.1%	1.2%	-	21.1%	-
PHF	0.5	0.75	0.92	0.94	-	0.96	0	0.82	0.74	0.52	-	0.86	0	0.65	0.83	0.86	-	0.85	0	0.89	0.77	0.68	-	0.93	0.97
Lights	2	148	757	420	-	1327	0	61	128	66	-	255	0	31	561	125	-	717	0	342	239	37	-	618	2917
% Lights	100.0%	96.7%	97.4%	95.9%	-	96.9%	-	98.4%	94.1%	90.4%	-	94.1%	-	100.0%	93.2%	95.4%	-	93.8%	-	95.5%	97.2%	97.4%	-	96.3%	95.7%
Buses	-	1	7	7	-	15	-	1	3	0	-	4	-	0	11	3	-	14	-	5	4	0	-	9	42
% Buses	#VALUE!	0.7%	0.9%	1.6%	-	1.1%	-	1.6%	2.2%	0.0%	-	1.5%	-	0.0%	1.8%	2.3%	-	1.8%	-	1.4%	1.6%	0.0%	-	1.4%	1.4%
Trucks	-	4	13	11	-	28	-	0	5	7	-	12	-	0	30	3	-	33	-	11	3	1	-	15	88
% Trucks	#VALUE!	2.6%	1.7%	2.5%	-	2.0%	-	0.0%	3.7%	9.6%	-	4.4%	-	0.0%	5.0%	2.3%	-	4.3%	-	3.1%	1.2%	2.6%	-	2.3%	2.9%
Bicycles	-	-	-	-	5	5	-	-	-	-	0	0	-	-	-	-	1	1	-	-	-	-	0	0	6
Pedestrians	-	-	-	-	2	-	-	-	-	-	5	-	-	-	-	-	0	-	-	-	-	-	4	-	11

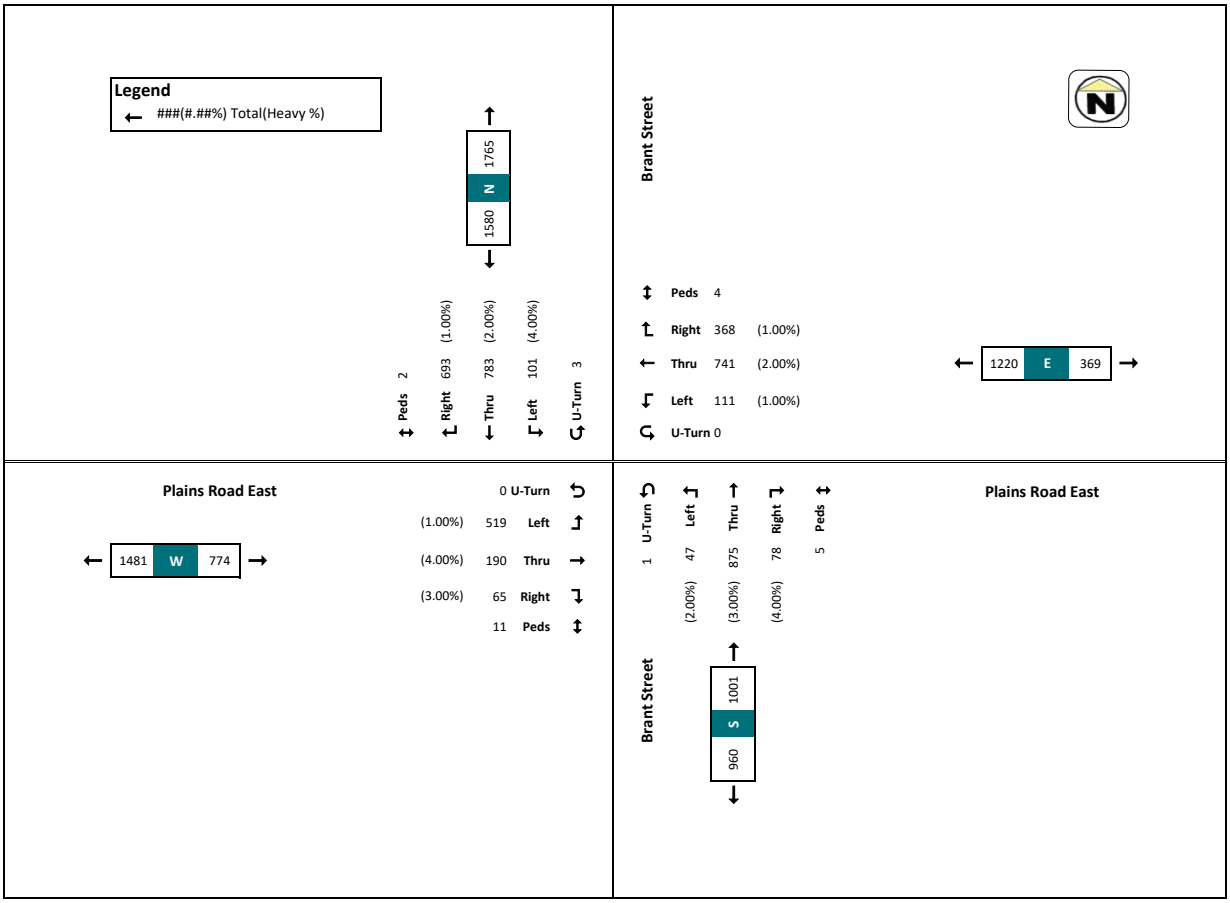


LEA Consulting Ltd.
625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

Intersection : Brant Street & Plains Road East
Survey Date : October 2, 2025
Project No. : 24223
Count ID : 25310

PM Peak Hour - Brant Street & Plains Road East

	Brant Street Southbound						Plains Road East Westbound						Brant Street Northbound						Plains Road East Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
16:00	1	16	194	142	0	353	0	27	170	86	3	283	0	11	208	23	1	242	0	155	70	17	1	242	1120
16:15	1	26	186	192	1	405	0	33	192	69	1	294	1	12	245	16	3	274	0	115	27	13	3	155	1128
16:30	0	30	169	197	1	396	0	26	213	104	0	343	0	6	198	18	1	222	0	149	51	16	3	216	1177
16:45	1	29	234	162	0	426	0	25	166	109	0	300	0	18	224	21	0	263	0	100	42	19	4	161	1150
Hourly Total	3	101	783	693	2	1580	0	111	741	368	4	1220	1	47	875	78	5	1001	0	519	190	65	11	774	4575
Approach %	0.2%	6.4%	49.6%	43.9%	-	-	0.0%	9.1%	60.7%	30.2%	-	-	0.1%	4.7%	87.4%	7.8%	-	-	0.0%	67.1%	24.5%	8.4%	-	-	-
Total %	0.1%	2.2%	17.1%	15.1%	-	34.5%	0.0%	2.4%	16.2%	8.0%	-	26.7%	0.0%	1.0%	19.1%	1.7%	-	21.9%	0.0%	11.3%	4.2%	1.4%	-	16.9%	-
PHF	0.75	0.84	0.84	0.88	-	0.93	0	0.84	0.87	0.84	-	0.89	0	0.65	0.89	0.85	-	0.91	0	0.84	0.68	0.86	-	0.8	0.97
Lights	3	97	764	684	-	1548	0	110	729	364	-	1203	1	46	853	75	-	975	0	513	183	63	-	759	4485
% Lights	100.0%	96.0%	97.6%	98.7%	-	98.0%	-	99.1%	98.4%	98.9%	-	98.6%	-	97.9%	97.5%	96.2%	-	97.4%	-	98.8%	96.3%	96.9%	-	98.1%	98.0%
Buses	-	3	7	2	-	12	-	0	2	1	-	3	-	1	11	2	-	14	-	1	3	1	-	5	34
% Buses	#VALUE!	3.0%	0.9%	0.3%	-	0.8%	-	0.0%	0.3%	0.3%	-	0.2%	-	2.1%	1.3%	2.6%	-	1.4%	-	0.2%	1.6%	1.5%	-	0.6%	0.7%
Trucks	-	1	8	7	-	16	-	1	10	3	-	14	-	0	11	1	-	12	-	5	4	1	-	10	52
% Trucks	#VALUE!	1.0%	1.0%	1.0%	-	1.0%	-	0.9%	1.3%	0.8%	-	1.1%	-	0.0%	1.3%	1.3%	-	1.2%	-	1.0%	2.1%	1.5%	-	1.3%	1.1%
Bicycles	-	-	-	-	4	4	-	-	-	-	3	3	-	-	-	-	0	0	-	-	-	-	0	0	7
Pedestrians	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	3

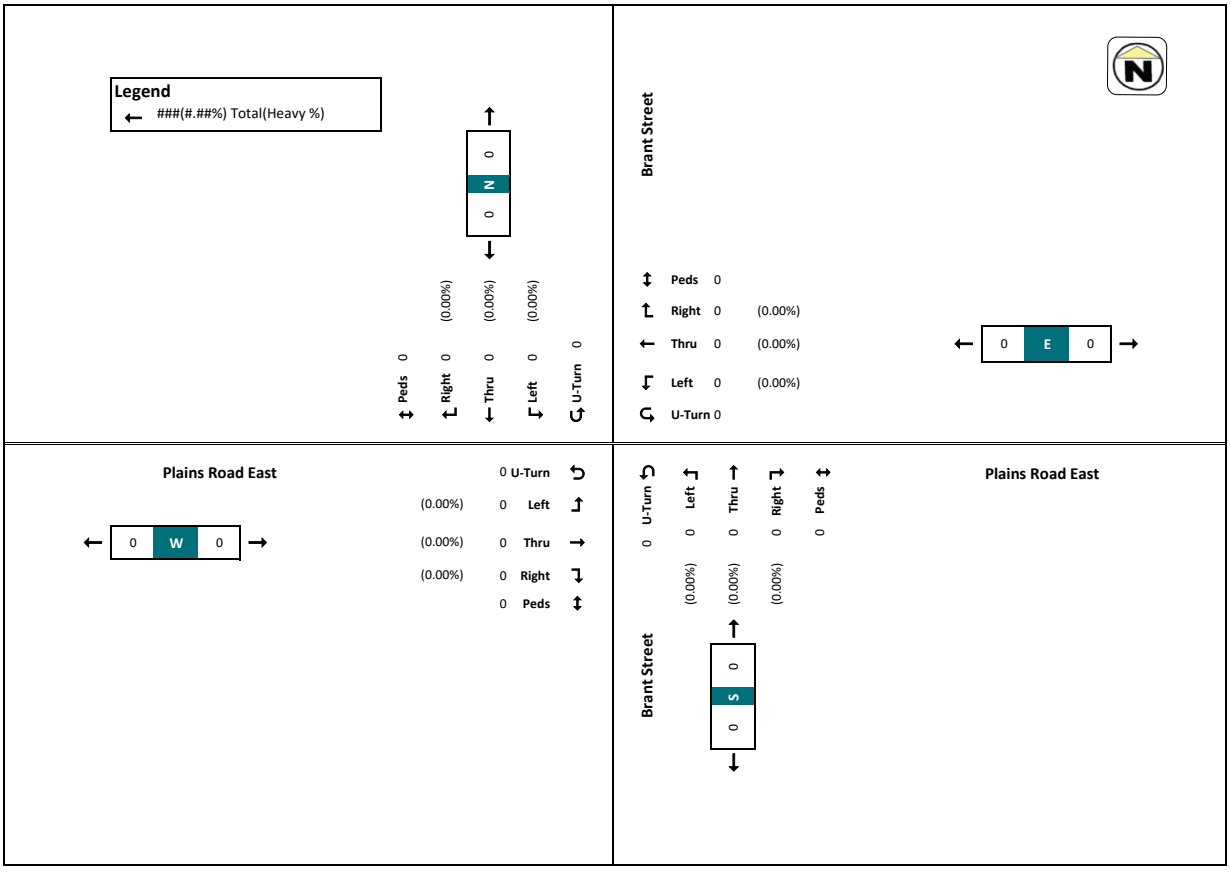


LEA Consulting Ltd.
625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

Intersection : Brant Street & Plains Road East
Survey Date : January 0, 1900
Project No. : 24223
Count ID : 25310

Turning Movement Count - Brant Street & Plains Road East

	Brant Street Southbound						Plains Road East Westbound						Brant Street Northbound						Plains Road East Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total %	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lights	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Lights	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#DIV/0!
Buses	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	0
% Buses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#DIV/0!
Trucks	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	0
% Trucks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#DIV/0!
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	0

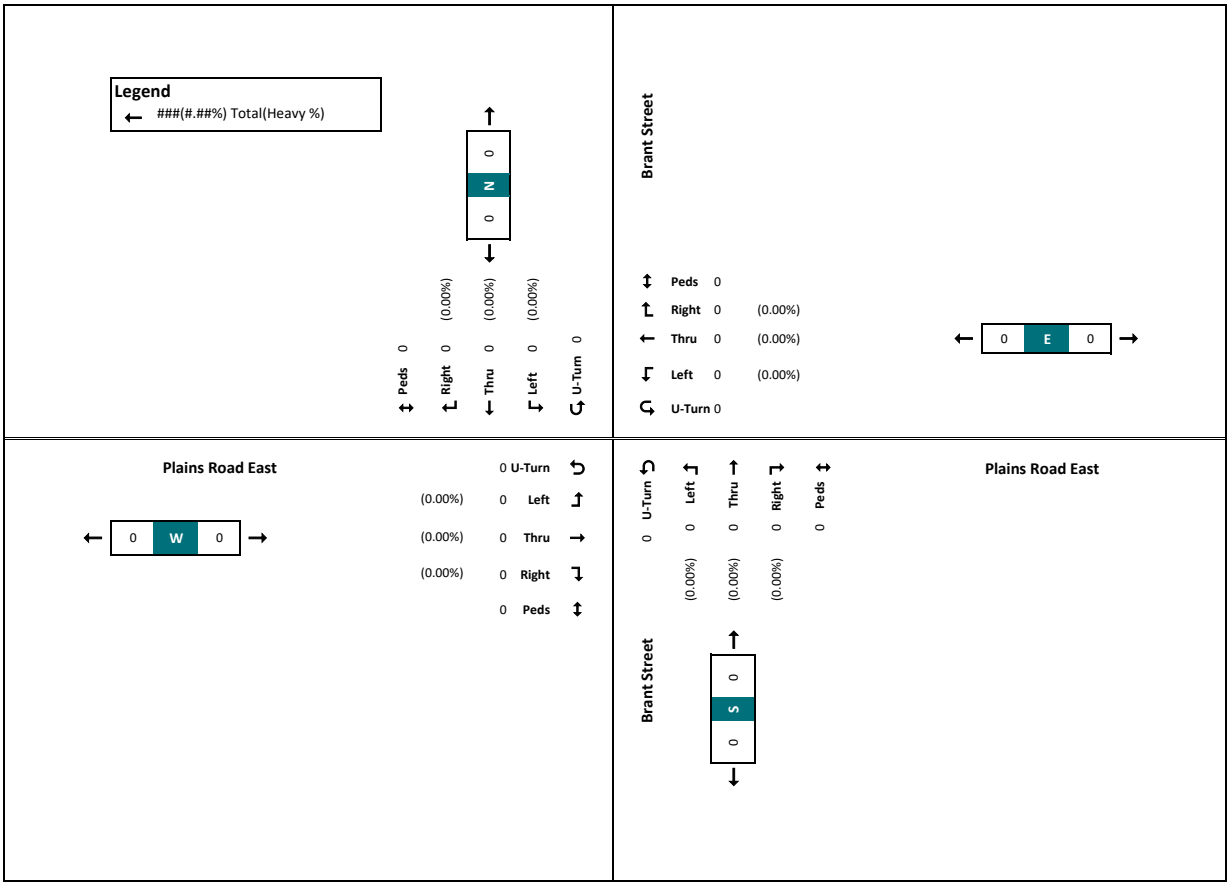


LEA Consulting Ltd.
625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

Intersection : Brant Street & Plains Road East
Survey Date : January 0, 1900
Project No. : 24223
Count ID : 25310

SAT Peak Hour - Brant Street & Plains Road East

	Brant Street Southbound						Plains Road East Westbound						Brant Street Northbound						Plains Road East Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total %	-	-	-	-	-	-	0.0%	0.0%	0.0%	-	-	-	0.0%	0.0%	0.0%	0.0%	-	-	0.0%	0.0%	0.0%	0.0%	-	-	-
PHF	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
Lights	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Lights	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#DIV/0!
Buses	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	0
% Buses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#DIV/0!
Trucks	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	0
% Trucks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#DIV/0!
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	0



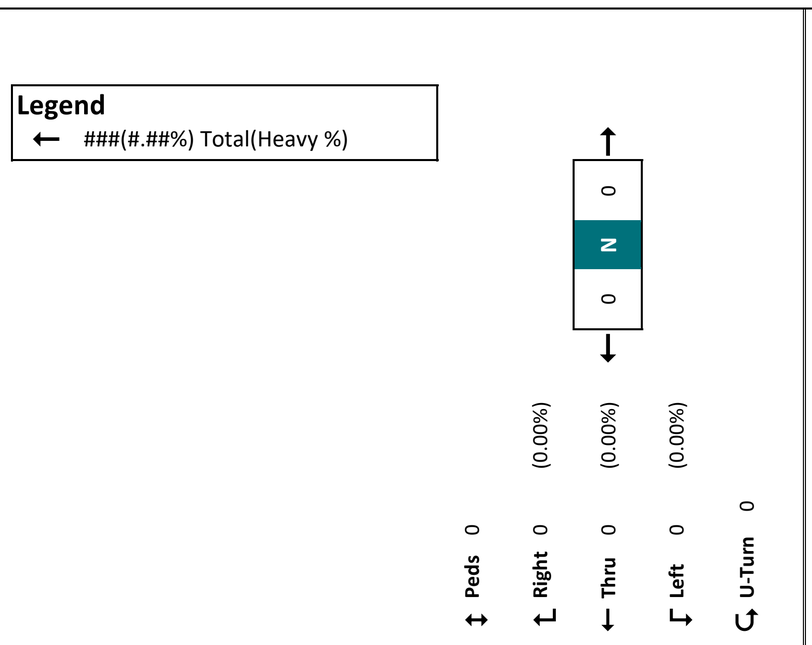
LEA Consulting Ltd.

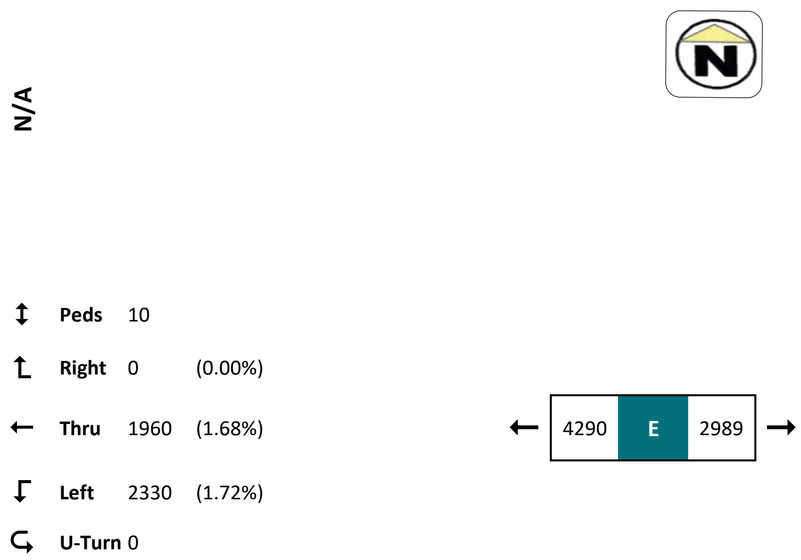
625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

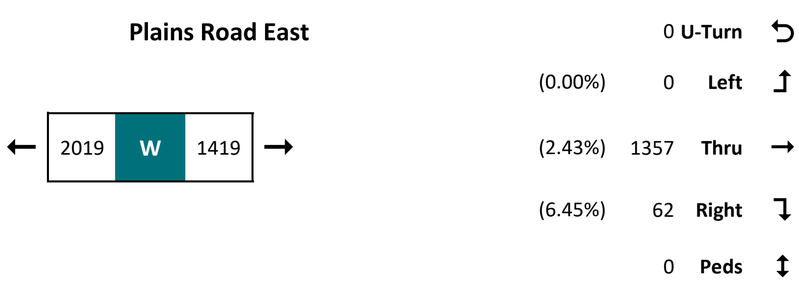
Intersection : Maple Avenue & Plains Road East
Survey Date : January 7, 2026
Project No. : 24224.01
Count ID : 25433

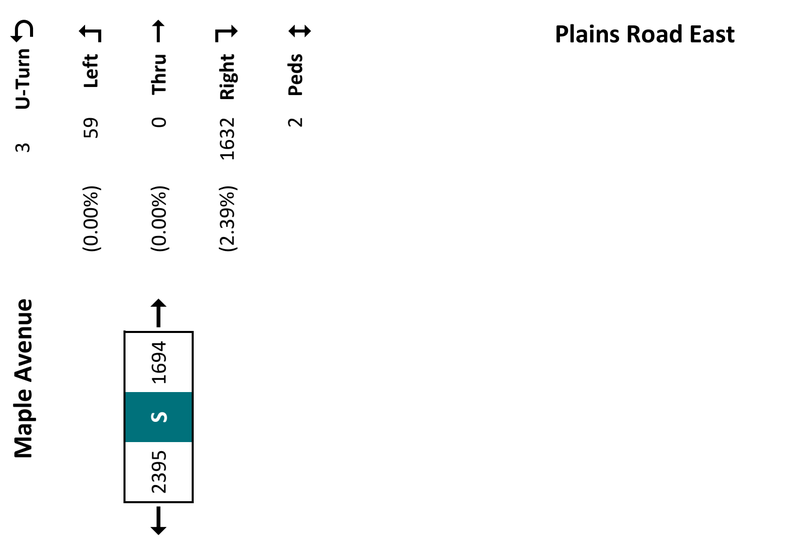
Turning Movement Count - Maple Avenue & Plains Road East

	N/A Southbound						Plains Road East Westbound						Maple Avenue Northbound						Plains Road East Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
7:00	0	0	0	0	0	0	0	32	27	0	0	59	0	3	0	69	0	72	0	0	51	3	0	54	185
7:15	0	0	0	0	0	0	0	22	44	0	0	66	0	1	0	73	0	74	0	0	89	2	0	91	231
7:30	0	0	0	0	0	0	0	31	57	0	1	88	0	1	0	94	0	95	0	0	75	2	0	77	260
7:45	0	0	0	0	0	0	0	46	68	0	0	114	0	5	0	83	0	88	0	0	78	0	0	78	280
Hourly Total	0	0	0	0	0	0	0	131	196	0	1	327	0	10	0	319	0	329	0	0	293	7	0	300	956
8:00	0	0	0	0	0	0	0	43	72	0	0	115	0	0	0	82	1	82	0	0	70	0	0	70	267
8:15	0	0	0	0	0	0	0	36	58	0	1	94	0	1	0	77	0	78	0	0	51	0	0	51	223
8:30	0	0	0	0	0	0	0	42	84	0	0	126	0	0	0	78	0	78	0	0	66	4	0	70	274
8:45	0	0	0	0	0	0	0	61	72	0	0	133	0	1	0	68	0	69	0	0	54	2	0	56	258
Hourly Total	0	0	0	0	0	0	0	182	286	0	1	468	0	2	0	305	1	307	0	0	241	6	0	247	1022
9:00	0	0	0	0	0	0	0	56	78	0	0	134	0	6	0	71	0	77	0	0	65	3	0	68	279
9:15	0	0	0	0	0	0	0	55	72	0	0	127	0	0	0	70	0	70	0	0	55	5	0	60	257
Hourly Total	0	0	0	0	0	0	0	111	150	0	0	261	0	6	0	141	0	147	0	0	120	8	0	128	536
* Break *																									
16:00	0	0	0	0	0	0	0	208	132	0	0	340	1	2	0	87	0	90	0	0	79	10	0	89	519
16:15	0	0	0	0	0	0	0	211	128	0	2	339	0	6	0	91	0	97	0	0	84	4	0	88	524
16:30	0	0	0	0	0	0	0	217	132	0	1	349	2	5	0	100	0	107	0	0	78	6	0	84	540
16:45	0	0	0	0	0	0	0	232	175	0	2	407	0	7	0	98	0	105	0	0	80	5	0	85	597
Hourly Total	0	0	0	0	0	0	0	868	567	0	5	1435	3	20	0	376	0	399	0	0	321	25	0	346	2180
17:00	0	0	0	0	0	0	0	217	138	0	2	355	0	4	0	94	0	98	0	0	76	2	0	78	531
17:15	0	0	0	0	0	0	0	187	127	0	0	314	0	4	0	93	0	97	0	0	91	4	0	95	506
17:30	0	0	0	0	0	0	0	199	124	0	0	323	0	2	0	80	0	82	0	0	61	5	0	66	471
17:45	0	0	0	0	0	0	0	185	130	0	0	315	0	5	0	84	1	89	0	0	58	2	0	60	464
Hourly Total	0	0	0	0	0	0	0	788	519	0	2	1307	0	15	0	351	1	366	0	0	286	13	0	299	1972
18:00	0	0	0	0	0	0	0	143	122	0	0	265	0	4	0	63	0	67	0	0	58	2	0	60	392
18:15	0	0	0	0	0	0	0	107	120	0	1	227	0	2	0	77	0	79	0	0	38	1	0	39	345
Hourly Total	0	0	0	0	0	0	0	250	242	0	1	492	0	6	0	140	0	146	0	0	96	3	0	99	737
Grand Total	0	0	0	0	0	0	0	2330	1960	0	10	4290	3	59	0	1632	2	1694	0	0	1357	62	0	1419	7403
Approach %	-	-	-	-	-	-	0.0%	54.3%	45.7%	0.0%	-	-	0.2%	3.5%	0.0%	96.3%	-	-	0.0%	0.0%	95.6%	4.4%	-	-	-
Total %	0.0%	0.0%	0.0%	0.0%	-	0.0%	0.0%	31.5%	26.5%	0.0%	-	57.9%	0.0%	0.8%	0.0%	22.0%	-	22.9%	0.0%	0.0%	18.3%	0.8%	-	19.2%	-
Lights	0	0	0	0	-	0	0	2290	1927	0	-	4217	3	59	0	1593	-	1655	0	0	1324	58	-	1382	7254
% Lights	-	-	-	-	-	-	-	98.3%	98.3%	-	-	98.3%	100.0%	100.0%	-	97.6%	-	97.7%	-	-	97.6%	93.5%	-	97.4%	98.0%
Buses	-	0	0	0	-	0	-	24	9	0	-	33	-	0	0	19	-	19	-	0	13	0	-	13	65
% Buses	-	-	-	-	-	-	-	1.0%	0.5%	-	-	0.8%	-	0.0%	-	1.2%	-	1.1%	-	-	1.0%	0.0%	-	0.9%	0.9%
Trucks	-	0	0	0	-	0	-	16	24	0	-	40	-	0	0	20	-	20	-	0	20	4	-	24	84
% Trucks	-	-	-	-	-	-	-	0.7%	1.2%	-	-	0.9%	-	0.0%	-	1.2%	-	1.2%	-	-	1.5%	6.5%	-	1.7%	1.1%
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	0
Pedestrians	-	-	-	-	0	-	-	-	-	-	10	-	-	-	-	-	2	-	-	-	-	-	0	-	12









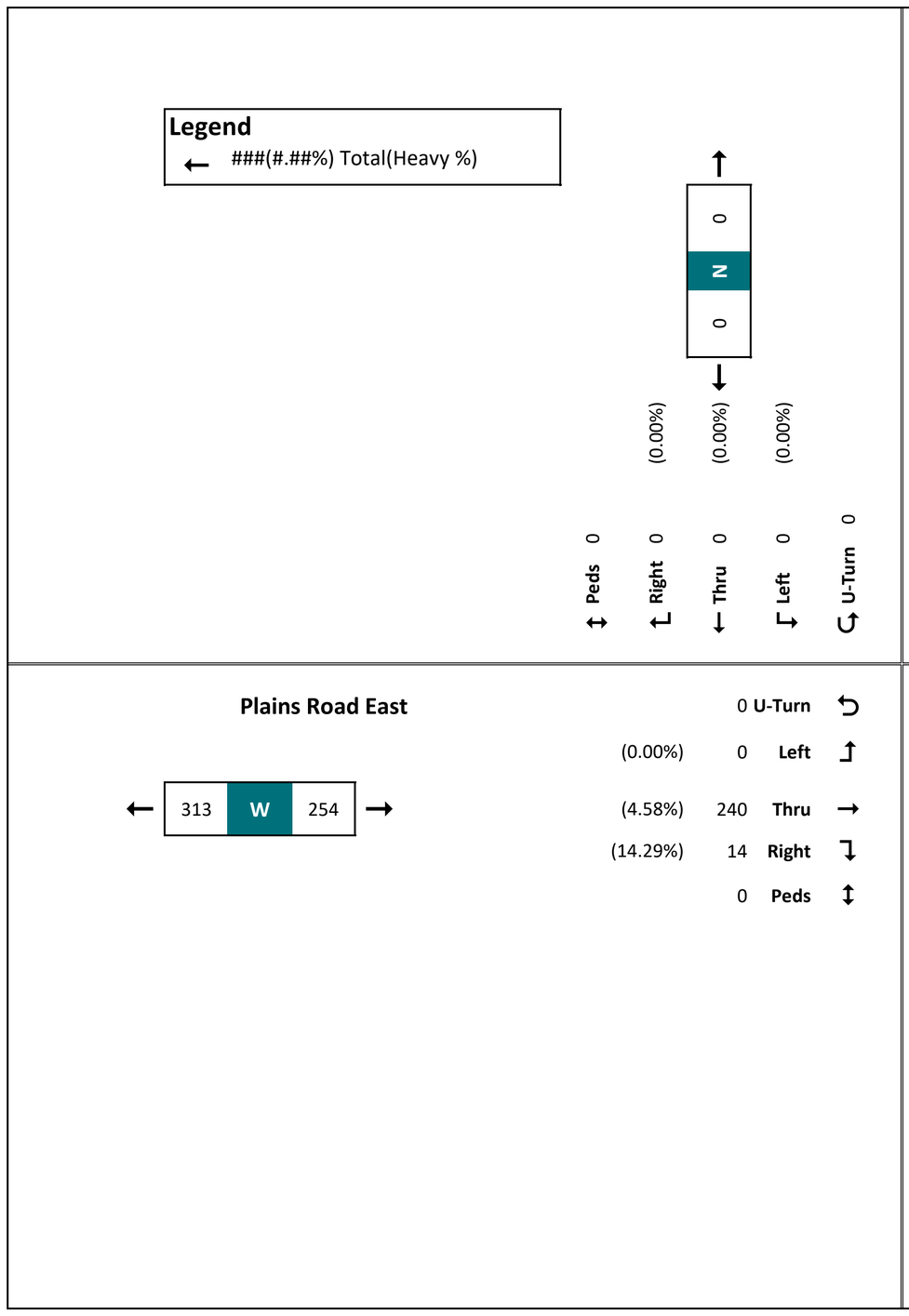
LEA Consulting Ltd.

625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

Intersection : Maple Avenue & Plains Road East
Survey Date : January 7, 2026
Project No. : 24224
Count ID : 25433

AM Peak Hour - Maple Avenue & Plains Road East

	N/A Southbound						Plains Road East Westbound						Maple Avenue Northbound						Plains Road East Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
8:30	0	0	0	0	0	0	0	42	84	0	0	126	0	0	0	78	0	78	0	0	66	4	0	70	274
8:45	0	0	0	0	0	0	0	61	72	0	0	133	0	1	0	68	0	69	0	0	54	2	0	56	258
9:00	0	0	0	0	0	0	0	56	78	0	0	134	0	6	0	71	0	77	0	0	65	3	0	68	279
9:15	0	0	0	0	0	0	0	55	72	0	0	127	0	0	0	70	0	70	0	0	55	5	0	60	257
Hourly Total	0	0	0	0	0	0	0	214	306	0	0	520	0	7	0	287	0	294	0	0	240	14	0	254	1068
Approach %	-	-	-	-	-	-	0.0%	41.2%	58.8%	0.0%	-	-	0.0%	2.4%	0.0%	97.6%	-	-	0.0%	0.0%	94.5%	5.5%	-	-	-
Total %	0.0%	0.0%	0.0%	0.0%	-	0.0%	0.0%	20.0%	28.7%	0.0%	-	48.7%	0.0%	0.7%	0.0%	26.9%	-	27.5%	0.0%	0.0%	22.5%	1.3%	-	23.8%	-
PHF	0	0	0	0	-	0	0	0.88	0.91	0	-	0.97	0	0.29	0	0.92	-	0.94	0	0	0.91	0.7	-	0.91	0.96
Lights	0	0	0	0	-	0	0	200	298	0	-	498	0	7	0	274	-	281	0	0	229	12	-	241	1020
% Lights	-	-	-	-	-	-	-	93.5%	97.4%	-	-	95.8%	-	100.0%	-	95.5%	-	95.6%	-	-	95.4%	85.7%	-	94.9%	95.5%
Buses	-	0	0	0	-	0	-	10	1	0	-	11	-	0	0	8	-	8	-	0	6	0	-	6	25
% Buses	-	-	-	-	-	-	-	4.7%	0.3%	-	-	2.1%	-	0.0%	-	2.8%	-	2.7%	-	-	2.5%	0.0%	-	2.4%	2.3%
Trucks	-	0	0	0	-	0	-	4	7	0	-	11	-	0	0	5	-	5	-	0	5	2	-	7	23
% Trucks	-	-	-	-	-	-	-	1.9%	2.3%	-	-	2.1%	-	0.0%	-	1.7%	-	1.7%	-	-	2.1%	14.3%	-	2.8%	2.2%
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	0

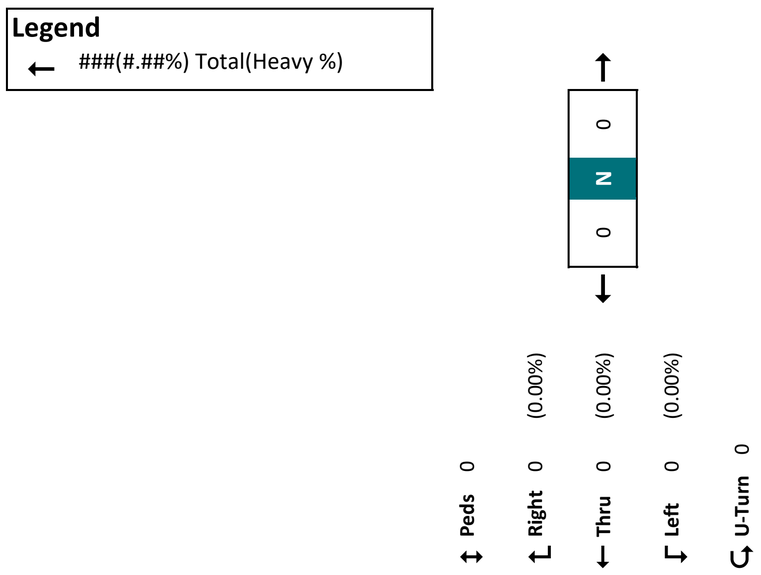


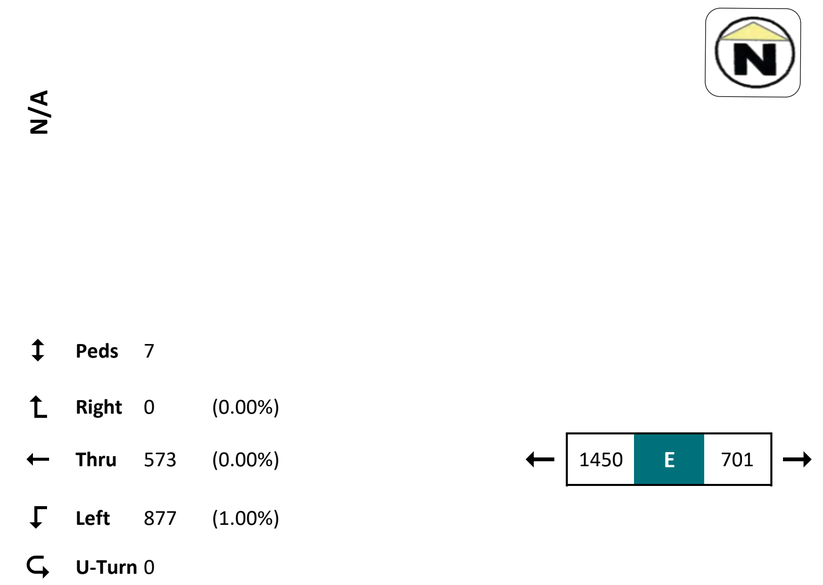
LEA Consulting Ltd.
625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

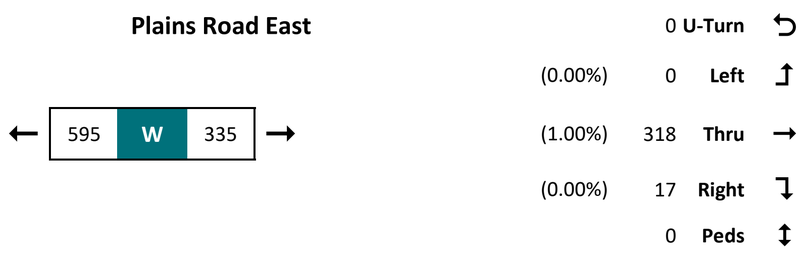
Intersection : Maple Avenue & Plains Road East
Survey Date : January 7, 2026
Project No. : 24224
Count ID : 25433

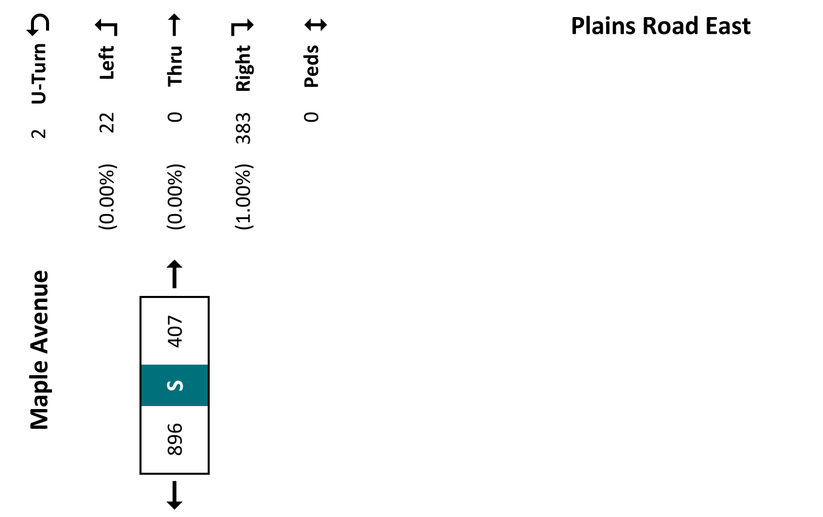
PM Peak Hour - Maple Avenue & Plains Road East

	N/A Southbound						Plains Road East Westbound						Maple Avenue Northbound						Plains Road East Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
16:15	0	0	0	0	0	0	0	211	128	0	2	339	0	6	0	91	0	97	0	0	84	4	0	88	524
16:30	0	0	0	0	0	0	0	217	132	0	1	349	2	5	0	100	0	107	0	0	78	6	0	84	540
16:45	0	0	0	0	0	0	0	232	175	0	2	407	0	7	0	98	0	105	0	0	80	5	0	85	597
17:00	0	0	0	0	0	0	0	217	138	0	2	355	0	4	0	94	0	98	0	0	76	2	0	78	531
Hourly Total	0	0	0	0	0	0	0	877	573	0	7	1450	2	22	0	383	0	407	0	0	318	17	0	335	2192
Approach %	-	-	-	-	-	-	0.0%	60.5%	39.5%	0.0%	-	-	0.5%	5.4%	0.0%	94.1%	-	-	0.0%	0.0%	94.9%	5.1%	-	-	-
Total %	0.0%	0.0%	0.0%	0.0%	-	0.0%	0.0%	82.1%	53.7%	0.0%	-	66.1%	0.2%	2.1%	0.0%	35.9%	-	18.6%	0.0%	0.0%	29.8%	1.6%	-	15.3%	-
PHF	0	0	0	0	-	0	0	0.95	0.82	0	-	0.89	0	0.79	0	0.96	-	0.95	0	0	0.95	0.71	-	0.95	0.92
Lights	0	0	0	0	-	0	0	870	572	0	-	1442	2	22	0	378	-	402	0	0	315	17	-	332	2176
% Lights	-	-	-	-	-	-	-	99.2%	99.8%	-	-	99.4%	-	100.0%	-	98.7%	-	98.8%	-	-	99.1%	100.0%	-	99.1%	99.3%
Buses	-	0	0	0	-	0	-	2	0	0	-	2	-	0	0	1	-	1	-	0	1	0	-	1	4
% Buses	-	-	-	-	-	-	-	0.2%	0.0%	-	-	0.1%	-	0.0%	-	0.3%	-	0.2%	-	-	0.3%	0.0%	-	0.3%	0.2%
Trucks	-	0	0	0	-	0	-	5	1	0	-	6	-	0	0	4	-	4	-	0	2	0	-	2	12
% Trucks	-	-	-	-	-	-	-	0.6%	0.2%	-	-	0.4%	-	0.0%	-	1.0%	-	1.0%	-	-	0.6%	0.0%	-	0.6%	0.5%
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	2









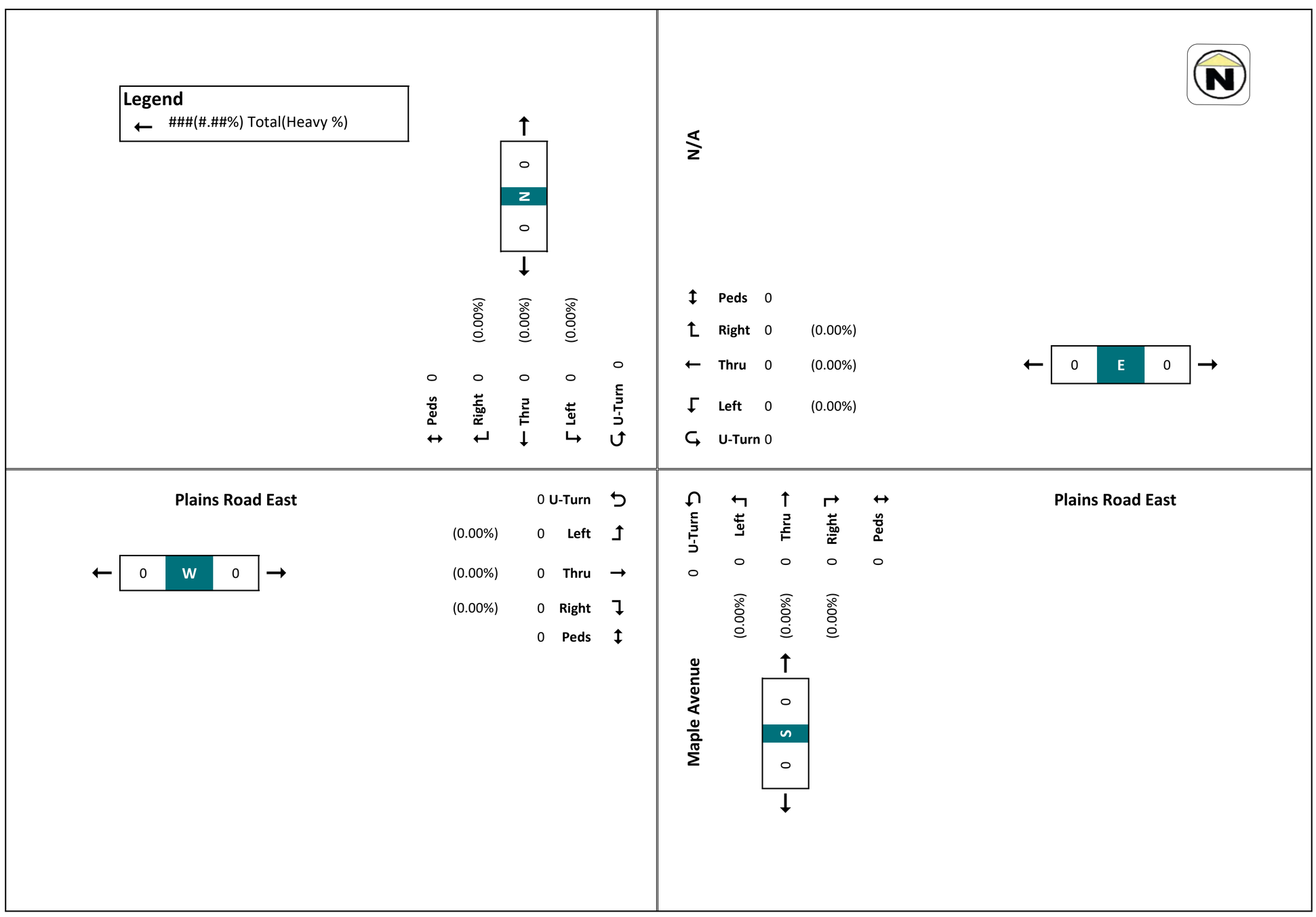
LEA Consulting Ltd.

625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

Intersection : Maple Avenue & Plains Road East
Survey Date : January 0, 1900
Project No. : 24224.01
Count ID : 25433

Turning Movement Count - Maple Avenue & Plains Road East

	N/A Southbound						Plains Road East Westbound						Maple Avenue Northbound						Plains Road East Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total %	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lights	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Lights	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#DIV/0!
Buses	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	0
% Buses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#DIV/0!
Trucks	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	0
% Trucks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#DIV/0!
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	0

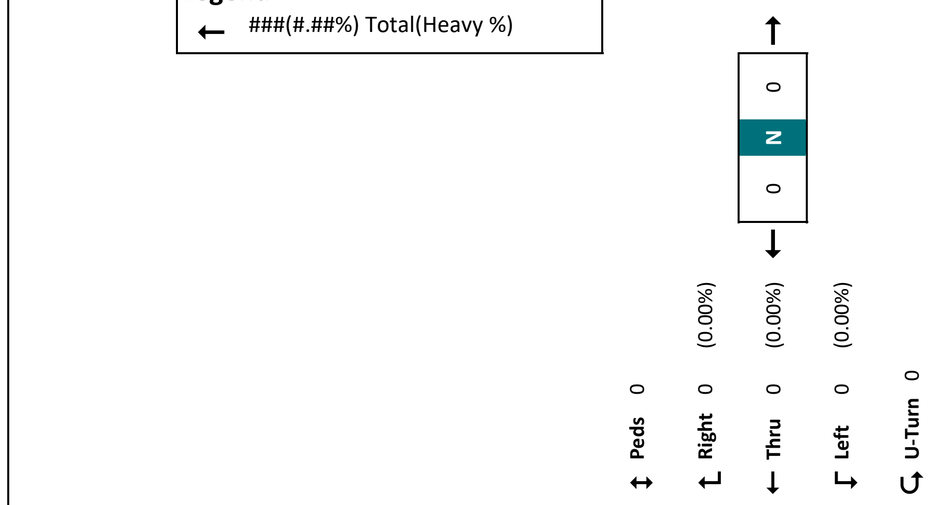


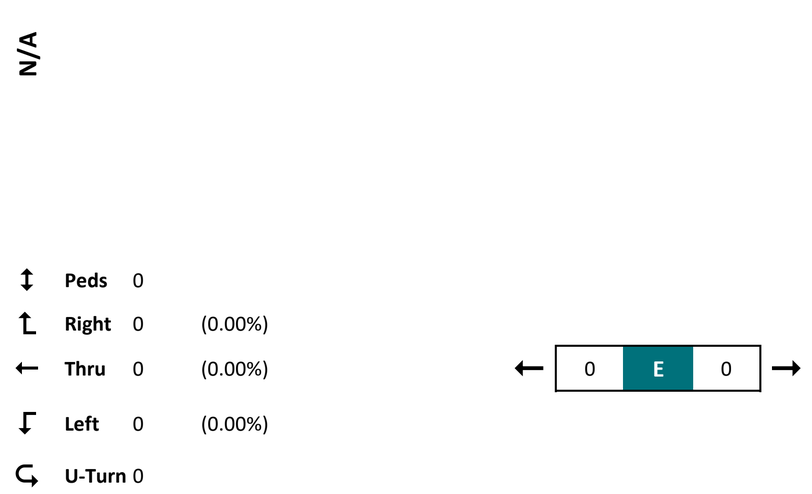
LEA Consulting Ltd.
625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

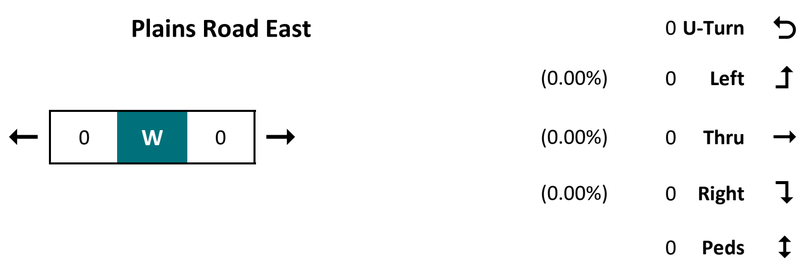
Intersection : Maple Avenue & Plains Road East
Survey Date : January 0, 1900
Project No. : 24224
Count ID : 25433

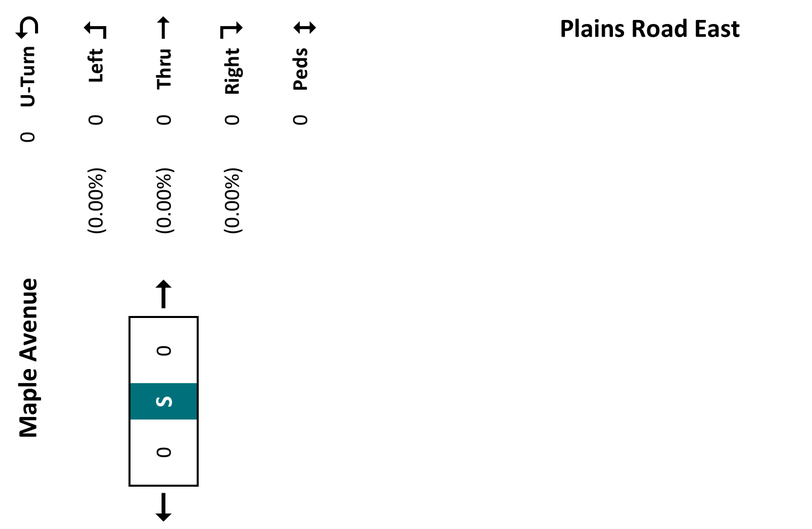
SAT Peak Hour - Maple Avenue & Plains Road East

	N/A Southbound						Plains Road East Westbound						Maple Avenue Northbound						Plains Road East Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total %	-	-	-	-	-	-	0.0%	0.0%	0.0%	-	-	-	0.0%	0.0%	0.0%	0.0%	-	-	0.0%	0.0%	0.0%	0.0%	-	-	-
PHF	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
Lights	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Lights	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#DIV/0!
Buses	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	0
% Buses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#DIV/0!
Trucks	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	0
% Trucks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#DIV/0!
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	0









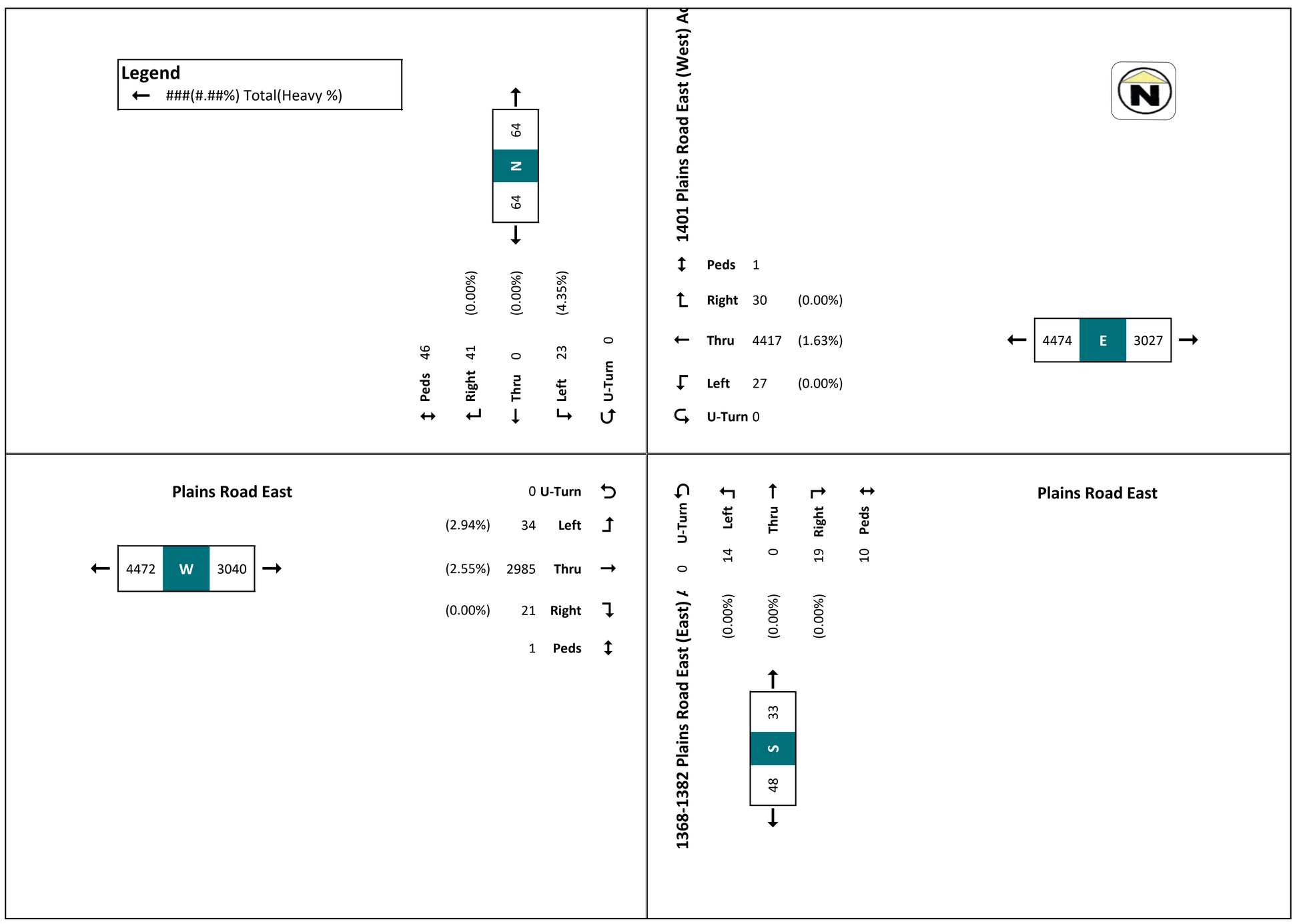
LEA Consulting Ltd.

625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

Intersection : 1368-1382 Plains Road East (East) Access & Plains Road E
Survey Date : January 7, 2026
Project No. : 24224.01
Count ID : 25434

Turning Movement Count - 1368-1382 Plains Road East (East) Access & Plains Road East

	1401 Plains Road East (West) Access Southbound						Plains Road East Westbound						1368-1382 Plains Road East (East) Access Northbound						Plains Road East Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
7:00	0	1	0	0	0	1	0	0	62	0	0	62	0	0	0	0	0	0	0	1	120	0	0	121	184
7:15	0	0	0	1	2	1	0	0	62	0	0	62	0	0	0	0	0	0	0	0	147	0	0	147	210
7:30	0	1	0	0	2	1	0	1	99	0	0	100	0	0	0	0	1	0	0	0	176	0	0	176	277
7:45	0	4	0	3	3	7	0	0	103	0	0	103	0	0	0	0	0	0	0	1	155	0	0	156	266
Hourly Total	0	6	0	4	7	10	0	1	326	0	0	327	0	0	0	0	1	0	0	2	598	0	0	600	937
8:00	0	2	0	1	0	3	0	2	114	3	1	119	0	0	0	0	0	0	0	1	159	1	0	161	283
8:15	0	2	0	2	4	4	0	1	95	2	0	98	0	1	0	3	0	4	0	0	138	1	0	139	245
8:30	0	2	0	5	2	7	0	3	135	3	0	141	0	0	0	0	0	0	0	4	147	1	0	152	300
8:45	0	2	0	3	6	5	0	1	143	1	0	145	0	0	0	1	0	1	0	3	127	0	0	130	281
Hourly Total	0	8	0	11	12	19	0	7	487	9	1	503	0	1	0	4	0	5	0	8	571	3	0	582	1109
9:00	0	0	0	2	0	2	0	3	146	1	0	150	0	1	0	0	2	1	0	3	121	3	0	127	280
9:15	0	0	0	1	1	1	0	2	139	1	0	142	0	0	0	1	1	1	0	0	118	1	0	119	263
Hourly Total	0	0	0	3	1	3	0	5	285	2	0	292	0	1	0	1	3	2	0	3	239	4	0	246	543
* Break *																									
16:00	0	1	0	2	7	3	0	0	394	1	0	395	0	1	0	2	0	3	0	0	163	1	0	164	565
16:15	0	0	0	3	4	3	0	1	337	6	0	344	0	0	0	0	1	0	0	1	186	1	0	188	535
16:30	0	1	0	8	0	9	0	2	396	3	0	401	0	4	0	0	0	4	0	4	181	1	1	186	600
16:45	0	1	0	3	2	4	0	1	382	1	0	384	0	2	0	1	1	3	0	2	176	3	0	181	572
Hourly Total	0	3	0	16	13	19	0	4	1509	11	0	1524	0	7	0	3	2	10	0	7	706	6	1	719	2272
17:00	0	0	0	1	0	1	0	3	364	2	0	369	0	2	0	2	0	4	0	6	181	0	0	187	561
17:15	0	1	0	2	4	3	0	2	315	1	0	318	0	1	0	3	0	4	0	2	163	2	0	167	492
17:30	0	0	0	2	1	2	0	1	326	0	0	327	0	0	0	0	0	0	0	0	139	2	0	141	470
17:45	0	2	0	0	4	2	0	1	310	1	0	312	0	1	0	3	1	4	0	2	141	4	0	147	465
Hourly Total	0	3	0	5	9	8	0	7	1315	4	0	1326	0	4	0	8	1	12	0	10	624	8	0	642	1988
18:00	0	1	0	2	3	3	0	1	277	3	0	281	0	0	0	1	2	1	0	1	120	0	0	121	406
18:15	0	2	0	0	1	2	0	2	218	1	0	221	0	1	0	2	1	3	0	3	127	0	0	130	356
Hourly Total	0	3	0	2	4	5	0	3	495	4	0	502	0	1	0	3	3	4	0	4	247	0	0	251	762
Grand Total	0	23	0	41	46	64	0	27	4417	30	1	4474	0	14	0	19	10	33	0	34	2985	21	1	3040	7611
Approach %	0.0%	35.9%	0.0%	64.1%	-	-	0.0%	0.6%	98.7%	0.7%	-	-	0.0%	42.4%	0.0%	57.6%	-	-	0.0%	1.1%	98.2%	0.7%	-	-	-
Total %	0.0%	0.3%	0.0%	0.5%	-	0.8%	0.0%	0.4%	58.0%	0.4%	-	58.8%	0.0%	0.2%	0.0%	0.2%	-	0.4%	0.0%	0.4%	39.2%	0.3%	-	39.9%	-
Lights	0	22	0	41	-	63	0	27	4345	30	-	4402	0	14	0	19	-	33	0	33	2909	21	-	2963	7461
% Lights	-	95.7%	-	100.0%	-	98.4%	-	100.0%	98.4%	100.0%	-	98.4%	-	100.0%	-	100.0%	-	100.0%	-	97.1%	97.5%	100.0%	-	97.5%	98.0%
Buses	-	0	0	0	-	0	-	0	33	0	-	33	-	0	0	0	-	0	-	0	25	0	-	25	58
% Buses	-	0.0%	-	0.0%	-	0.0%	-	0.0%	0.7%	0.0%	-	0.7%	-	0.0%	-	0.0%	-	0.0%	-	0.0%	0.8%	0.0%	-	0.8%	0.8%
Trucks	-	1	0	0	-	1	-	0	39	0	-	39	-	0	0	0	-	0	-	1	51	0	-	52	92
% Trucks	-	4.3%	-	-	-	1.6%	-	0.0%	0.9%	0.0%	-	0.9%	-	0.0%	-	0.0%	-	0.0%	-	2.9%	1.7%	0.0%	-	1.7%	1.2%
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	0
Pedestrians	-	-	-	-	46	-	-	-	-	-	1	-	-	-	-	-	10	-	-	-	-	-	1	-	58

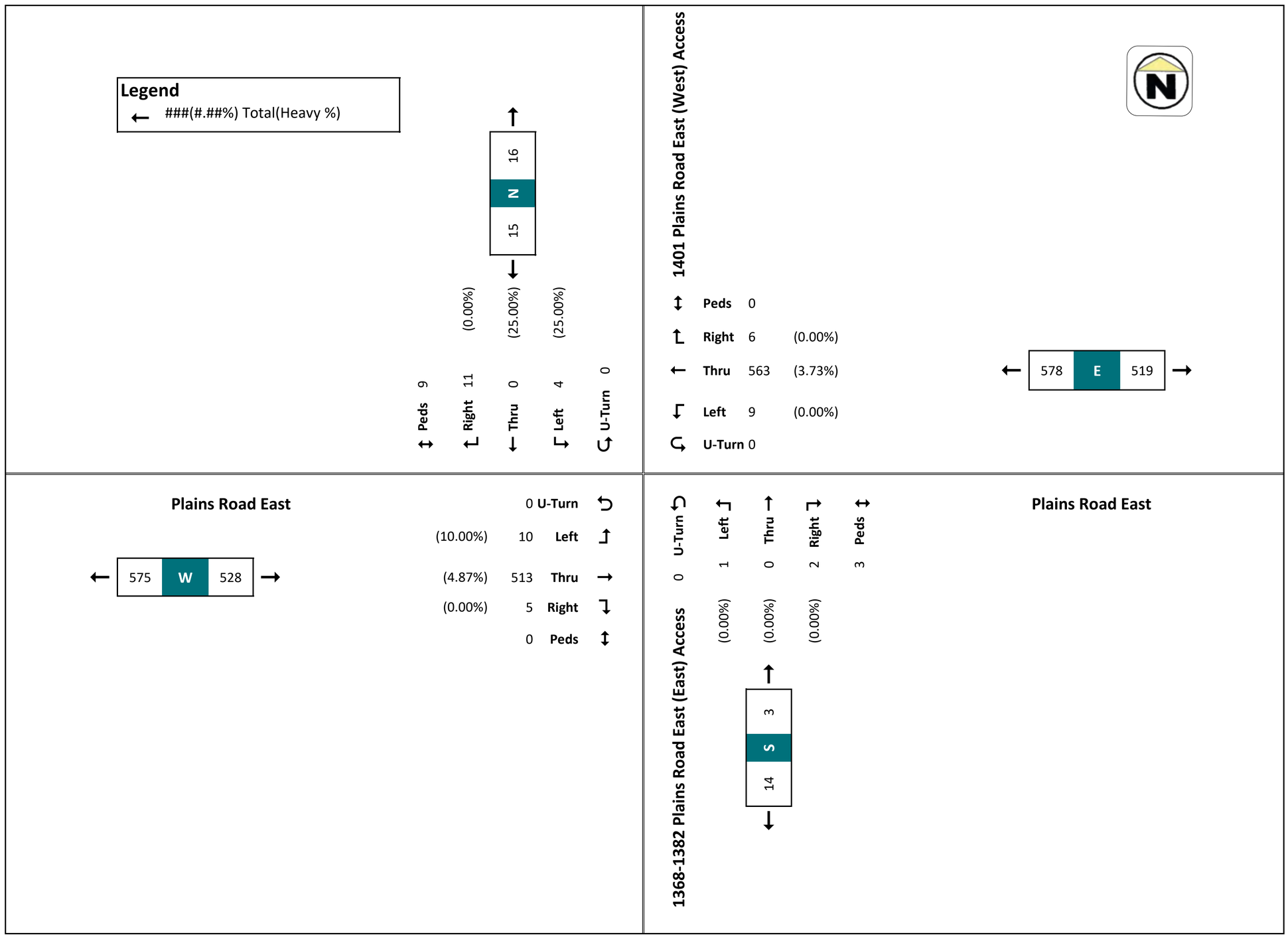


LEA Consulting Ltd.
625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

Intersection : 1368-1382 Plains Road East (East) Access & Plains Road E
Survey Date : January 7, 2026
Project No. : 24224
Count ID : 25434

AM Peak Hour - 1368-1382 Plains Road East (East) Access & Plains Road East

	1401 Plains Road East (West) Access Southbound						Plains Road East Westbound						1368-1382 Plains Road East (East) Access Northbound						Plains Road East Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
8:30	0	2	0	5	2	7	0	3	135	3	0	141	0	0	0	0	0	0	0	4	147	1	0	152	300
8:45	0	2	0	3	6	5	0	1	143	1	0	145	0	0	0	1	0	1	0	3	127	0	0	130	281
9:00	0	0	0	2	0	2	0	3	146	1	0	150	0	1	0	0	2	1	0	3	121	3	0	127	280
9:15	0	0	0	1	1	1	0	2	139	1	0	142	0	0	0	1	1	1	0	0	118	1	0	119	263
Hourly Total	0	4	0	11	9	15	0	9	563	6	0	578	0	1	0	2	3	3	0	10	513	5	0	528	1124
Approach %	0.0%	26.7%	0.0%	73.3%	-	-	0.0%	1.6%	97.4%	1.0%	-	-	0.0%	33.3%	0.0%	66.7%	-	-	0.0%	1.9%	97.2%	0.9%	-	-	-
Total %	0.0%	0.4%	0.0%	1.0%	-	1.3%	0.0%	0.8%	50.1%	0.5%	-	51.4%	0.0%	0.1%	0.0%	0.2%	-	0.3%	0.0%	0.9%	45.6%	0.4%	-	47.0%	-
PHF	0	0.5	0	0.55	-	0.54	0	0.75	0.96	0.5	-	0.96	0	0.25	0	0.5	-	0.75	0	0.63	0.87	0.42	-	0.87	0.94
Lights	0	3	0	11	-	14	0	9	542	6	-	557	0	1	0	2	-	3	0	9	488	5	-	502	1076
% Lights	-	75.0%	-	100.0%	-	93.3%	-	100.0%	96.3%	100.0%	-	96.4%	-	100.0%	-	100.0%	-	100.0%	-	90.0%	95.1%	100.0%	-	95.1%	95.7%
Buses	-	0	0	0	-	0	-	0	10	0	-	10	-	0	0	0	-	0	-	0	13	0	-	13	23
% Buses	-	0.0%	-	0.0%	-	0.0%	-	0.0%	1.8%	0.0%	-	1.7%	-	0.0%	-	0.0%	-	0.0%	-	0.0%	2.5%	0.0%	-	2.5%	2.0%
Trucks	-	1	0	0	-	1	-	0	11	0	-	11	-	0	0	0	-	0	-	1	12	0	-	13	25
% Trucks	-	25.0%	-	0.0%	-	6.7%	-	0.0%	2.0%	0.0%	-	1.9%	-	0.0%	-	0.0%	-	0.0%	-	10.0%	2.3%	0.0%	-	2.5%	2.2%
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	0
Pedestrians	-	-	-	-	9	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	9

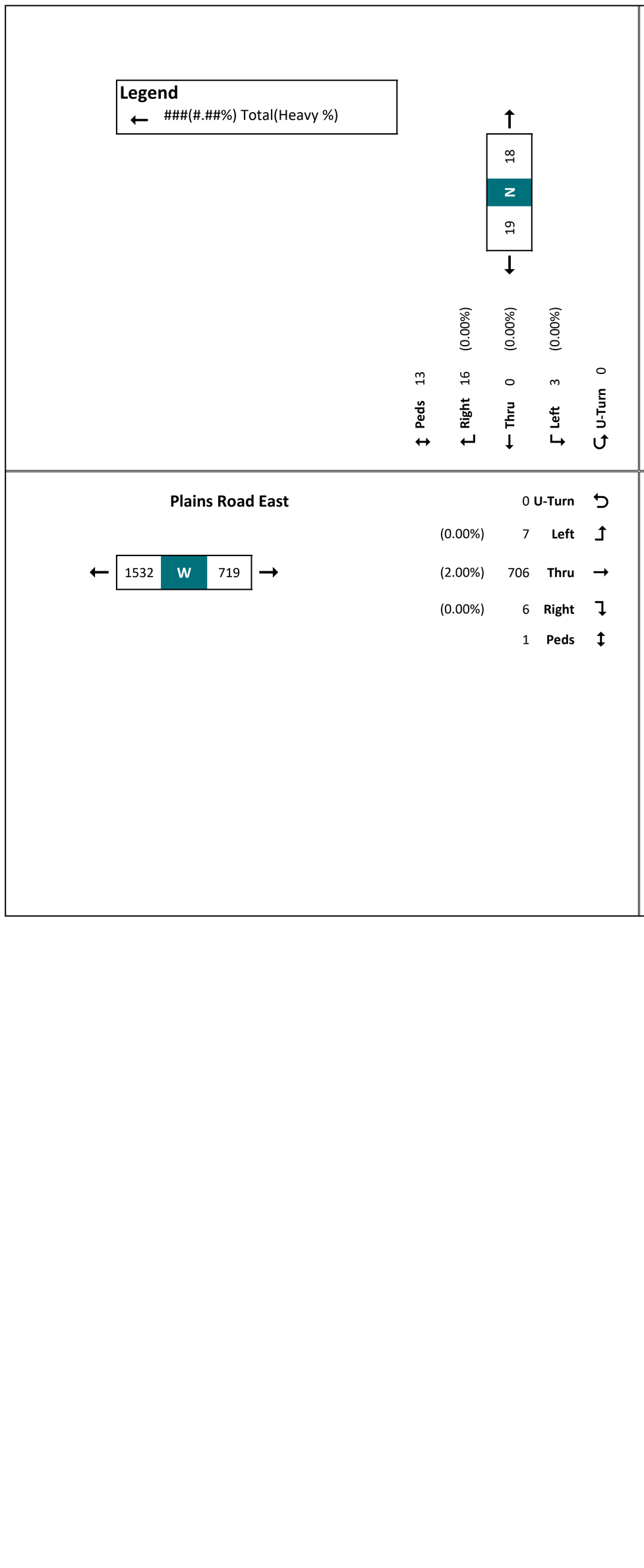


LEA Consulting Ltd.
625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

Intersection : 1368-1382 Plains Road East (East) Access & Plains Road E
Survey Date : January 7, 2026
Project No. : 24224
Count ID : 25434

PM Peak Hour - 1368-1382 Plains Road East (East) Access & Plains Road East

	1401 Plains Road East (West) Access Southbound						Plains Road East Westbound						1368-1382 Plains Road East (East) Access Northbound						Plains Road East Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
16:00	0	1	0	2	7	3	0	0	394	1	0	395	0	1	0	2	0	3	0	0	163	1	0	164	565
16:15	0	0	0	3	4	3	0	1	337	6	0	344	0	0	0	0	1	0	0	1	186	1	0	188	535
16:30	0	1	0	8	0	9	0	2	396	3	0	401	0	4	0	0	0	4	0	4	181	1	1	186	600
16:45	0	1	0	3	2	4	0	1	382	1	0	384	0	2	0	1	1	3	0	2	176	3	0	181	572
Hourly Total	0	3	0	16	13	19	0	4	1509	11	0	1524	0	7	0	3	2	10	0	7	706	6	1	719	2272
Approach %	0.0%	15.8%	0.0%	84.2%	-	-	0.0%	0.3%	99.0%	0.7%	-	-	0.0%	70.0%	0.0%	30.0%	-	-	0.0%	1.0%	98.2%	0.8%	-	-	-
Total %	0.0%	0.1%	0.0%	0.7%	-	0.8%	0.0%	0.4%	134.3%	0.5%	-	67.1%	0.0%	0.6%	0.0%	0.3%	-	0.4%	0.0%	0.6%	62.8%	0.5%	-	31.6%	-
PHF	0	0.75	0	0.5	-	0.53	0	0.5	0.95	0.46	-	0.95	0	0.44	0	0.38	-	0.63	0	0.44	0.95	0.5	-	0.96	0.95
Lights	0	3	0	16	-	19	0	4	1492	11	-	1507	0	7	0	3	-	10	0	7	692	6	-	705	2241
% Lights	-	100.0%	-	100.0%	-	100.0%	-	100.0%	98.9%	100.0%	-	98.9%	-	100.0%	-	100.0%	-	100.0%	-	100.0%	98.0%	100.0%	-	98.1%	98.6%
Buses	-	0	0	0	-	0	-	0	8	0	-	8	-	0	0	0	-	0	-	0	2	0	-	2	10
% Buses	-	0.0%	-	0.0%	-	0.0%	-	0.0%	0.5%	0.0%	-	0.5%	-	0.0%	-	0.0%	-	0.0%	-	0.0%	0.3%	0.0%	-	0.3%	0.4%
Trucks	-	0	0	0	-	0	-	0	9	0	-	9	-	0	0	0	-	0	-	0	12	0	-	12	21
% Trucks	-	0.0%	-	0.0%	-	0.0%	-	0.0%	0.6%	0.0%	-	0.6%	-	0.0%	-	0.0%	-	0.0%	-	0.0%	1.7%	0.0%	-	1.7%	0.9%
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	0
Pedestrians	-	-	-	-	13	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	13



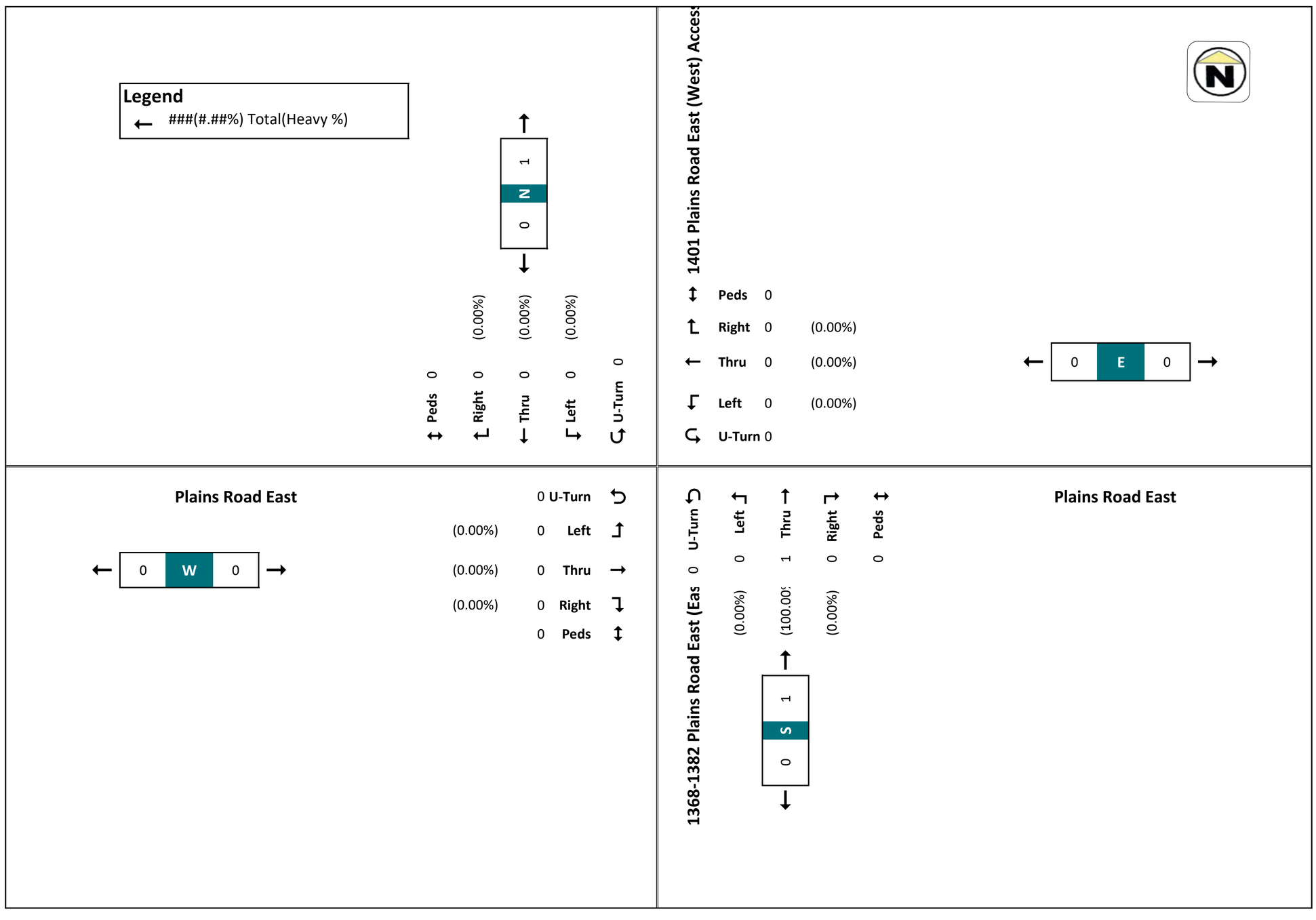
LEA Consulting Ltd.

625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

Intersection : 1368-1382 Plains Road East (East) Access & Plains Road E
Survey Date : January 0, 1900
Project No. : 24224.01
Count ID : 25434

Turning Movement Count - 1368-1382 Plains Road East (East) Access & Plains Road East

	1401 Plains Road East (West) Access Southbound						Plains Road East Westbound						1368-1382 Plains Road East (East) Access Northbound						Plains Road East Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
Approach %	-	-	-	-	-	-	-	-	-	-	-	-	0.0%	0.0%	100.0%	0.0%	-	-	-	-	-	-	-	-	-
Total %	0.0%	0.0%	0.0%	0.0%	-	0.0%	0.0%	0.0%	0.0%	0.0%	-	0.0%	0.0%	0.0%	100.0%	0.0%	-	100.0%	0.0%	0.0%	0.0%	0.0%	-	0.0%	-
Lights	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Lights	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0%	-	-	0.0%	-	-	-	-	-	-	0.0%
Buses	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	0
% Buses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0%	-	-	0.0%	-	-	-	-	-	-	0.0%
Trucks	-	0	0	0	-	0	-	0	0	0	-	0	-	0	1	0	-	1	-	0	0	0	-	0	1
% Trucks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0%	-	-	100.0%	-	-	-	-	-	-	100.0%
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	0

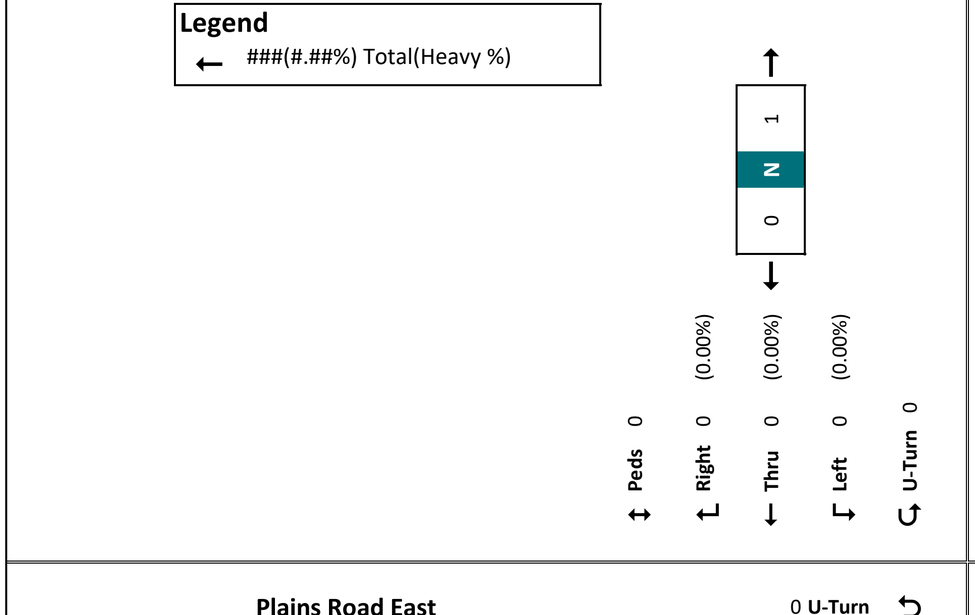


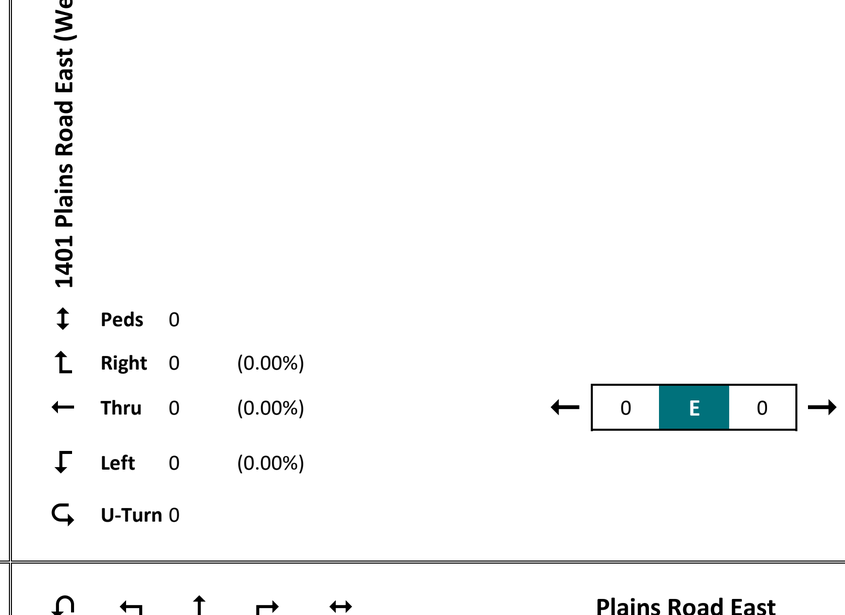
LEA Consulting Ltd.
625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

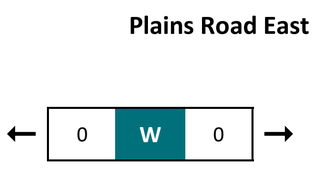
Intersection : 1368-1382 Plains Road East (East) Access & Plains Road I
Survey Date : January 0, 1900
Project No. : 24224
Count ID : 25434

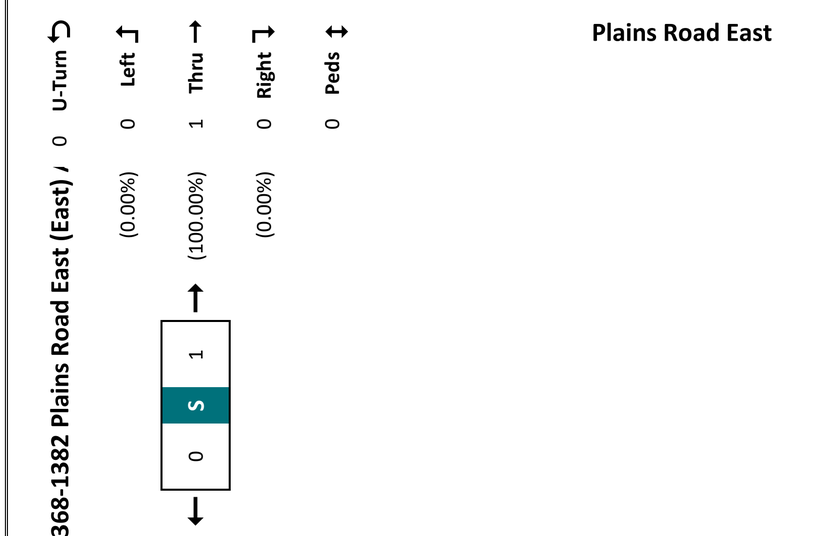
SAT Peak Hour - 1368-1382 Plains Road East (East) Access & Plains Road East

	1401 Plains Road East (West) Access Southbound						Plains Road East Westbound						1368-1382 Plains Road East (East) Access Northbound						Plains Road East Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
Approach %	-	-	-	-	-	-	-	-	-	-	-	-	0.0%	0.0%	100.0%	0.0%	-	-	-	-	-	-	-	-	-
Total %	0.0%	0.0%	0.0%	0.0%	-	0.0%	0.0%	0.0%	0.0%	0.0%	-	0.0%	0.0%	0.0%	0.1%	0.0%	-	100.0%	0.0%	0.0%	0.0%	0.0%	-	0.0%	-
PHF	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0.25	0	-	0.25	0	0	0	0	-	0	0.25
Lights	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Lights	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0%	-	-	0.0%	-	-	-	-	-	-	0.0%
Buses	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	0
% Buses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0%	-	-	0.0%	-	-	-	-	-	-	0.0%
Trucks	-	0	0	0	-	0	-	0	0	0	-	0	-	0	1	0	-	1	-	0	0	0	-	0	1
% Trucks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0%	-	-	100.0%	-	-	-	-	-	-	100.0%
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	0







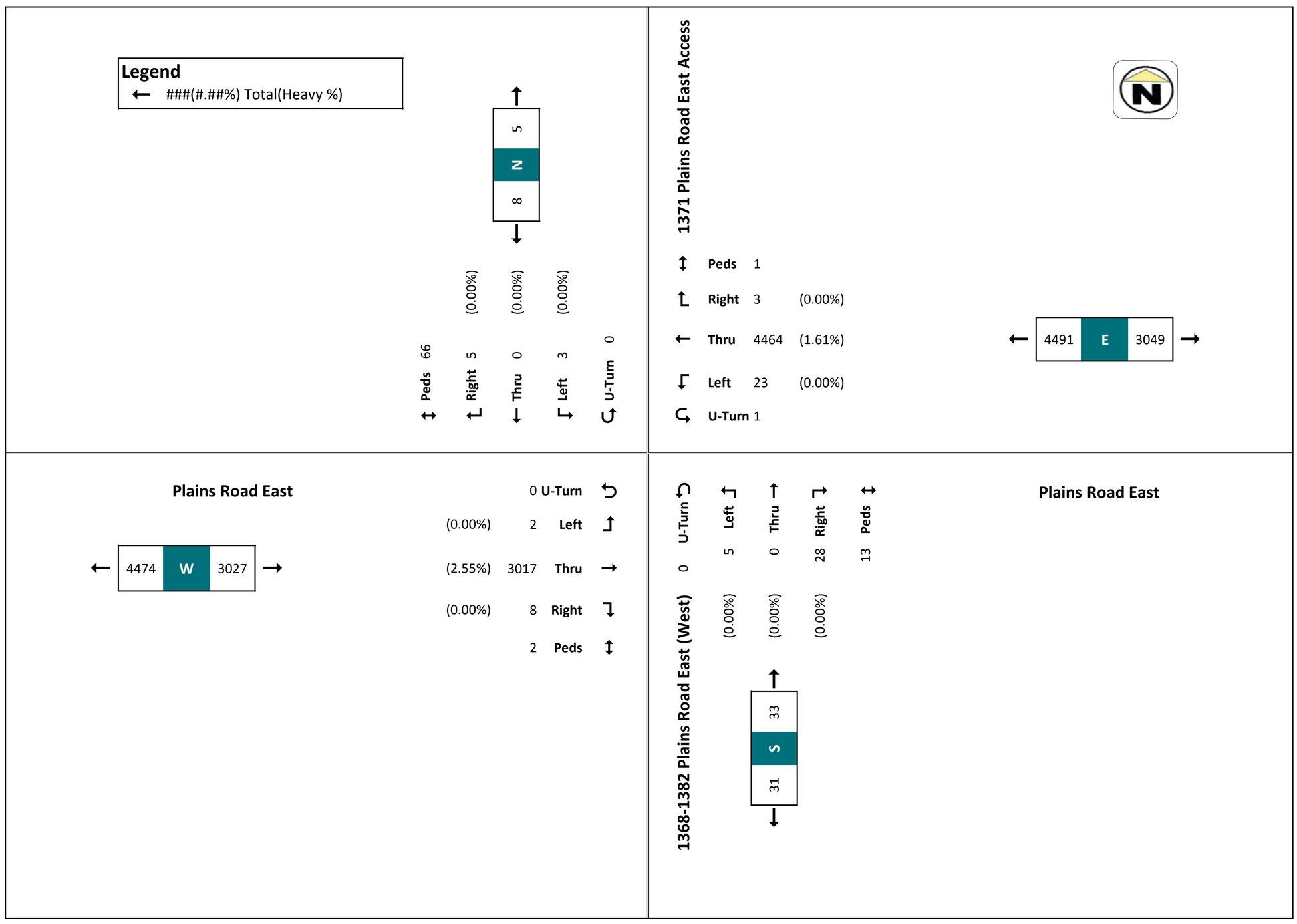


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Intersection : 1368-1382 Plains Road East (West) Access & Plains Road
Survey Date : January 7, 2026
Project No. : 24224.01
Count ID : 25435

Turning Movement Count - 1368-1382 Plains Road East (West) Access & Plains Road East

	1371 Plains Road East Access Southbound						Plains Road East Westbound						1368-1382 Plains Road East (West) Access Northbound						Plains Road East Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
7:00	0	0	0	0	2	0	0	0	62	0	0	62	0	0	0	0	0	0	0	0	121	0	0	121	183
7:15	0	0	0	0	2	0	0	0	62	0	0	62	0	0	0	0	0	0	0	0	147	0	0	147	209
7:30	0	0	0	0	5	0	0	0	100	0	0	100	0	0	0	0	1	0	0	0	177	0	0	177	277
7:45	0	0	0	0	6	0	0	0	103	0	0	103	0	0	0	1	0	1	0	0	159	0	0	159	263
Hourly Total	0	0	0	0	15	0	0	0	327	0	0	327	0	0	0	1	1	1	0	0	604	0	0	604	932
8:00	0	0	0	1	2	1	0	1	118	0	0	119	0	0	0	0	0	0	0	0	161	0	0	161	281
8:15	0	0	0	1	2	1	0	0	97	1	0	98	0	0	0	2	0	2	0	0	142	1	0	143	244
8:30	0	0	0	0	6	0	0	0	141	0	0	141	0	0	0	0	1	0	0	0	149	0	0	149	290
8:45	0	0	0	0	6	0	0	1	145	0	0	146	0	0	0	0	0	0	0	0	130	0	0	130	276
Hourly Total	0	0	0	2	16	2	0	2	501	1	0	504	0	0	0	2	1	2	0	0	582	1	0	583	1091
9:00	0	0	0	0	1	0	0	4	150	0	0	154	0	0	0	2	2	2	0	0	121	0	0	121	277
9:15	0	0	0	0	5	0	1	0	142	0	0	143	0	0	0	0	1	0	0	0	118	1	0	119	262
Hourly Total	0	0	0	0	6	0	1	4	292	0	0	297	0	0	0	2	3	2	0	0	239	1	0	240	539
* Break *																									
16:00	0	0	0	0	7	0	0	3	394	0	1	397	0	1	0	2	2	3	0	0	166	0	2	166	566
16:15	0	1	0	0	3	1	0	0	344	0	0	344	0	0	0	3	0	3	0	0	186	0	0	186	534
16:30	0	0	0	0	1	0	0	2	401	0	0	403	0	0	0	0	1	0	0	1	181	0	0	182	585
16:45	0	0	0	1	3	1	0	2	383	1	0	386	0	0	0	5	1	5	0	0	176	2	0	178	570
Hourly Total	0	1	0	1	14	2	0	7	1522	1	1	1530	0	1	0	10	4	11	0	1	709	2	2	712	2255
17:00	0	0	0	1	0	1	0	3	368	0	0	371	0	0	0	3	0	3	0	0	180	3	0	183	558
17:15	0	0	0	0	4	0	0	1	315	0	0	316	0	3	0	4	0	7	0	0	166	1	0	167	490
17:30	0	0	0	0	1	0	0	2	327	0	0	329	0	0	0	1	0	1	0	0	139	0	0	139	469
17:45	0	0	0	0	3	0	0	3	312	0	0	315	0	0	0	4	1	4	0	0	146	0	0	146	465
Hourly Total	0	0	0	1	8	1	0	9	1322	0	0	1331	0	3	0	12	1	15	0	0	631	4	0	635	1982
18:00	0	1	0	1	5	2	0	1	280	1	0	282	0	0	0	1	2	1	0	0	122	0	0	122	407
18:15	0	1	0	0	2	1	0	0	220	0	0	220	0	1	0	0	1	1	0	1	130	0	0	131	353
Hourly Total	0	2	0	1	7	3	0	1	500	1	0	502	0	1	0	1	3	2	0	1	252	0	0	253	760
Grand Total	0	3	0	5	66	8	1	23	4464	3	1	4491	0	5	0	28	13	33	0	2	3017	8	2	3027	7559
Approach %	0.0%	37.5%	0.0%	62.5%	-	-	0.0%	0.5%	99.4%	0.1%	-	-	0.0%	15.2%	0.0%	84.8%	-	-	0.0%	0.1%	99.7%	0.3%	-	-	-
Total %	0.0%	0.0%	0.0%	0.1%	-	0.1%	0.0%	0.3%	59.1%	0.0%	-	59.4%	0.0%	0.1%	0.0%	0.4%	-	0.4%	0.0%	0.0%	39.9%	0.1%	-	40.0%	-
Lights	0	3	0	5	-	8	1	23	4392	3	-	4419	0	5	0	28	-	33	0	2	2940	8	-	2950	7410
% Lights	-	100.0%	-	100.0%	-	100.0%	100.0%	100.0%	98.4%	100.0%	-	98.4%	-	100.0%	-	100.0%	-	100.0%	-	100.0%	97.4%	100.0%	-	97.5%	98.0%
Buses	-	0	0	0	-	0	-	0	33	0	-	33	-	0	0	0	-	0	-	0	25	0	-	25	58
% Buses	-	0.0%	-	0.0%	-	0.0%	-	0.0%	0.7%	0.0%	-	0.7%	-	0.0%	-	0.0%	-	0.0%	-	0.0%	0.8%	0.0%	-	0.8%	0.8%
Trucks	-	0	0	0	-	0	-	0	39	0	-	39	-	0	0	0	-	0	-	0	52	0	-	52	91
% Trucks	-	0.0%	-	-	-	0.0%	-	0.0%	0.9%	0.0%	-	0.9%	-	0.0%	-	0.0%	-	0.0%	-	0.0%	1.7%	0.0%	-	1.7%	1.2%
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	0
Pedestrians	-	-	-	-	66	-	-	-	-	-	1	-	-	-	-	-	13	-	-	-	-	-	2	-	82

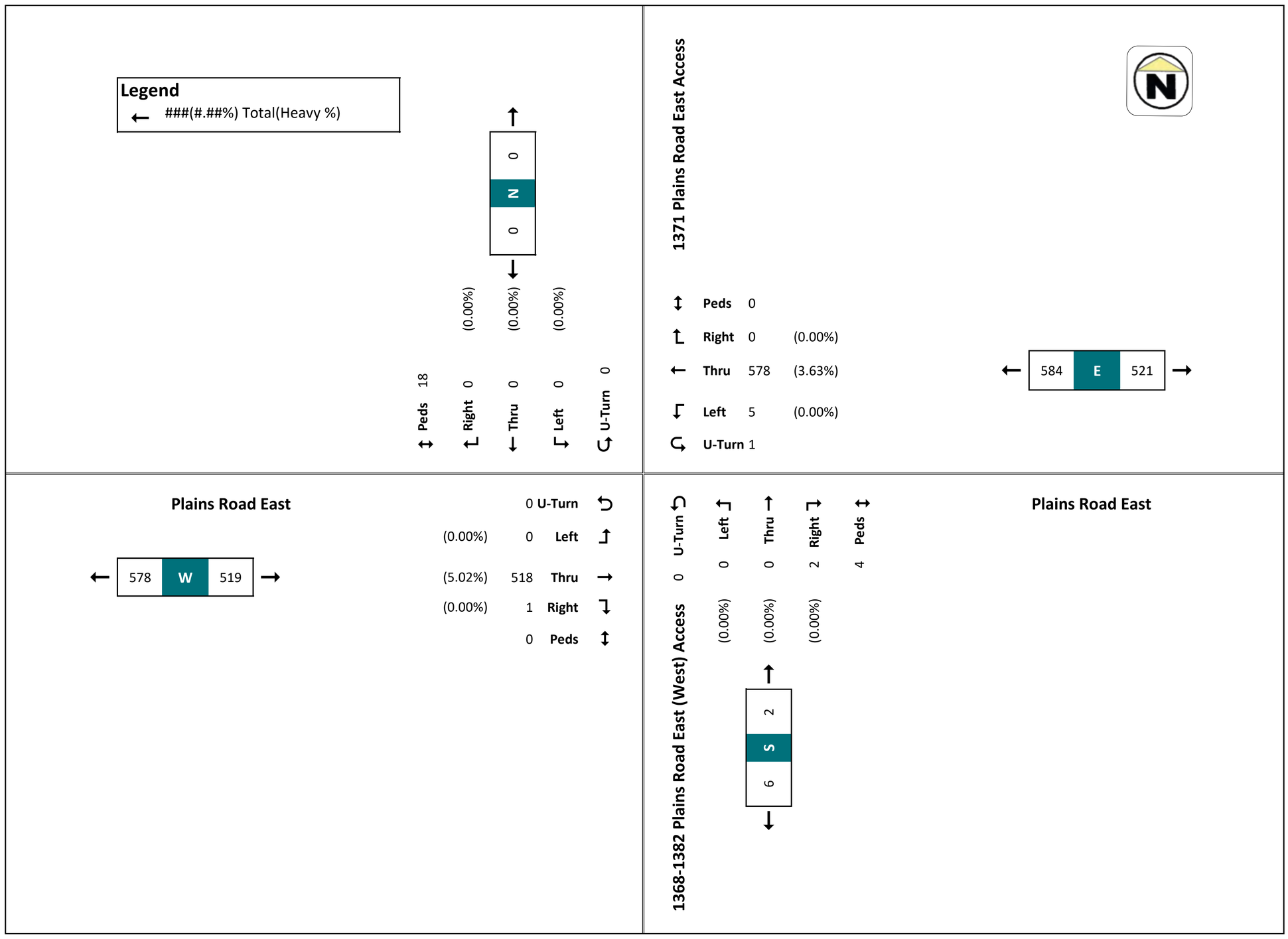


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Intersection : 1368-1382 Plains Road East (West) Access & Plains Road
Survey Date : January 7, 2026
Project No. : 24224
Count ID : 25435

AM Peak Hour - 1368-1382 Plains Road East (West) Access & Plains Road East

	1371 Plains Road East Access Southbound						Plains Road East Westbound						1368-1382 Plains Road East (West) Access Northbound						Plains Road East Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
8:30	0	0	0	0	6	0	0	0	141	0	0	141	0	0	0	0	1	0	0	0	149	0	0	149	290
8:45	0	0	0	0	6	0	0	1	145	0	0	146	0	0	0	0	0	0	0	0	130	0	0	130	276
9:00	0	0	0	0	1	0	0	4	150	0	0	154	0	0	0	2	2	2	0	0	121	0	0	121	277
9:15	0	0	0	0	5	0	1	0	142	0	0	143	0	0	0	0	1	0	0	0	118	1	0	119	262
Hourly Total	0	0	0	0	18	0	1	5	578	0	0	584	0	0	0	2	4	2	0	0	518	1	0	519	1105
Approach %	-	-	-	-	-	-	0.2%	0.9%	99.0%	0.0%	-	-	0.0%	0.0%	0.0%	100.0%	-	-	0.0%	0.0%	99.8%	0.2%	-	-	-
Total %	0.0%	0.0%	0.0%	0.0%	-	0.0%	0.1%	0.5%	52.3%	0.0%	-	52.9%	0.0%	0.0%	0.0%	0.2%	-	0.2%	0.0%	0.0%	46.9%	0.1%	-	47.0%	-
PHF	0	0	0	0	-	0	0.25	0.31	0.96	0	-	0.95	0	0	0	0.25	-	0.25	0	0	0.87	0.25	-	0.87	0.95
Lights	0	0	0	0	-	0	1	5	557	0	-	563	0	0	0	2	-	2	0	0	492	1	-	493	1058
% Lights	-	-	-	-	-	-	-	100.0%	96.4%	-	-	96.4%	-	-	-	100.0%	-	100.0%	-	-	95.0%	100.0%	-	95.0%	95.7%
Buses	-	0	0	0	-	0	-	0	10	0	-	10	-	0	0	0	-	0	-	0	13	0	-	13	23
% Buses	-	-	-	-	-	-	-	0.0%	1.7%	-	-	1.7%	-	-	-	0.0%	-	0.0%	-	-	2.5%	0.0%	-	2.5%	2.1%
Trucks	-	0	0	0	-	0	-	0	11	0	-	11	-	0	0	0	-	0	-	0	13	0	-	13	24
% Trucks	-	-	-	-	-	-	#VALUE!	0.0%	1.9%	-	-	1.9%	-	-	-	0.0%	-	0.0%	-	-	2.5%	0.0%	-	2.5%	2.2%
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	0
Pedestrians	-	-	-	-	18	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	18

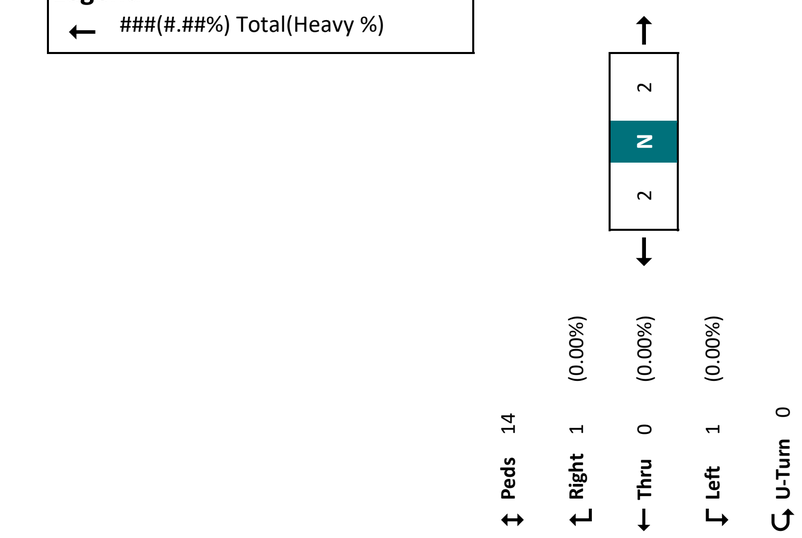


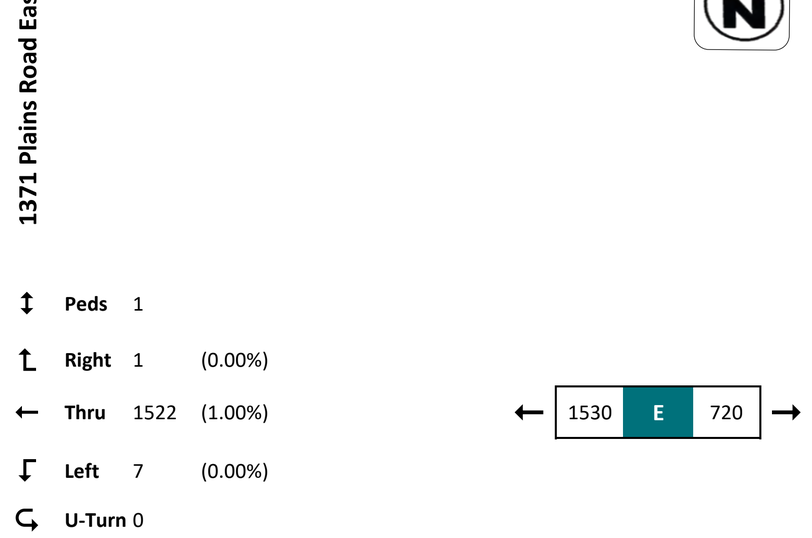
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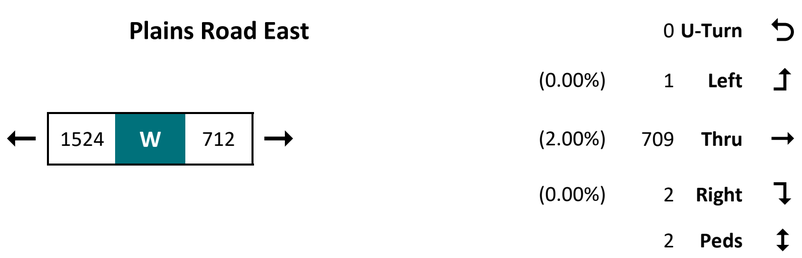
Intersection : 1368-1382 Plains Road East (West) Access & Plains Road
Survey Date : January 7, 2026
Project No. : 24224
Count ID : 25435

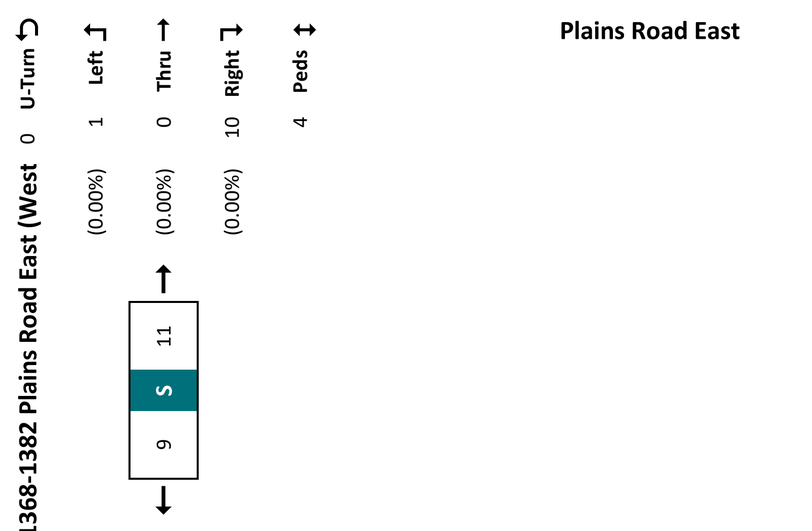
PM Peak Hour - 1368-1382 Plains Road East (West) Access & Plains Road East

	1371 Plains Road East Access Southbound						Plains Road East Westbound						1368-1382 Plains Road East (West) Access Northbound						Plains Road East Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
16:00	0	0	0	0	7	0	0	3	394	0	1	397	0	1	0	2	2	3	0	0	166	0	2	166	566
16:15	0	1	0	0	3	1	0	0	344	0	0	344	0	0	0	3	0	3	0	0	186	0	0	186	534
16:30	0	0	0	0	1	0	0	2	401	0	0	403	0	0	0	0	1	0	0	1	181	0	0	182	585
16:45	0	0	0	1	3	1	0	2	383	1	0	386	0	0	0	5	1	5	0	0	176	2	0	178	570
Hourly Total	0	1	0	1	14	2	0	7	1522	1	1	1530	0	1	0	10	4	11	0	1	709	2	2	712	2255
Approach %	0.0%	50.0%	0.0%	50.0%	-	-	0.0%	0.5%	99.5%	0.1%	-	-	0.0%	9.1%	0.0%	90.9%	-	-	0.0%	0.1%	99.6%	0.3%	-	-	-
Total %	0.0%	0.0%	0.0%	0.0%	-	0.1%	0.0%	0.6%	137.7%	0.0%	-	67.8%	0.0%	0.1%	0.0%	0.9%	-	0.5%	0.0%	0.1%	64.2%	0.2%	-	31.6%	-
PHF	0	0.25	0	0.25	-	0.5	0	0.58	0.95	0.25	-	0.95	0	0.25	0	0.5	-	0.55	0	0.25	0.95	0.25	-	0.96	0.96
Lights	0	1	0	1	-	2	0	7	1505	1	-	1513	0	1	0	10	-	11	0	1	695	2	-	698	2224
% Lights	-	100.0%	-	100.0%	-	100.0%	-	100.0%	98.9%	100.0%	-	98.9%	-	100.0%	-	100.0%	-	100.0%	-	100.0%	98.0%	100.0%	-	98.0%	98.6%
Buses	-	0	0	0	-	0	-	0	8	0	-	8	-	0	0	0	-	0	-	0	2	0	-	2	10
% Buses	-	0.0%	-	0.0%	-	0.0%	-	0.0%	0.5%	0.0%	-	0.5%	-	0.0%	-	0.0%	-	0.0%	-	0.0%	0.3%	0.0%	-	0.3%	0.4%
Trucks	-	0	0	0	-	0	-	0	9	0	-	9	-	0	0	0	-	0	-	0	12	0	-	12	21
% Trucks	-	0.0%	-	0.0%	-	0.0%	-	0.0%	0.6%	0.0%	-	0.6%	-	0.0%	-	0.0%	-	0.0%	-	0.0%	1.7%	0.0%	-	1.7%	0.9%
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	0
Pedestrians	-	-	-	-	14	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	14







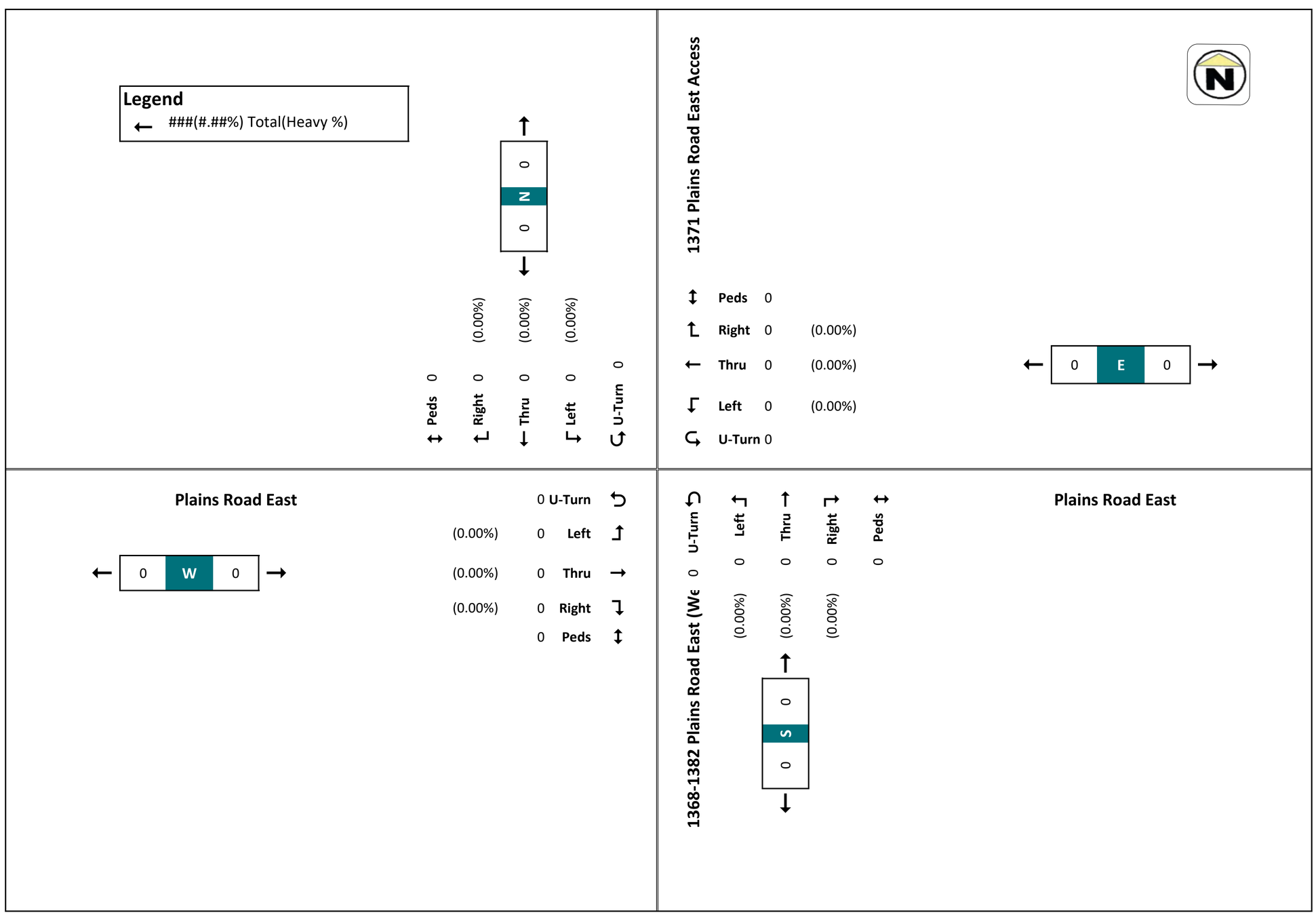


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Intersection : 1368-1382 Plains Road East (West) Access & Plains Road
Survey Date : January 0, 1900
Project No. : 24224.01
Count ID : 25435

Turning Movement Count - 1368-1382 Plains Road East (West) Access & Plains Road East

	1371 Plains Road East Access Southbound						Plains Road East Westbound						1368-1382 Plains Road East (West) Access Northbound						Plains Road East Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total %	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lights	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Lights	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#DIV/0!
Buses	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	0
% Buses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#DIV/0!
Trucks	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	0
% Trucks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#DIV/0!
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	0

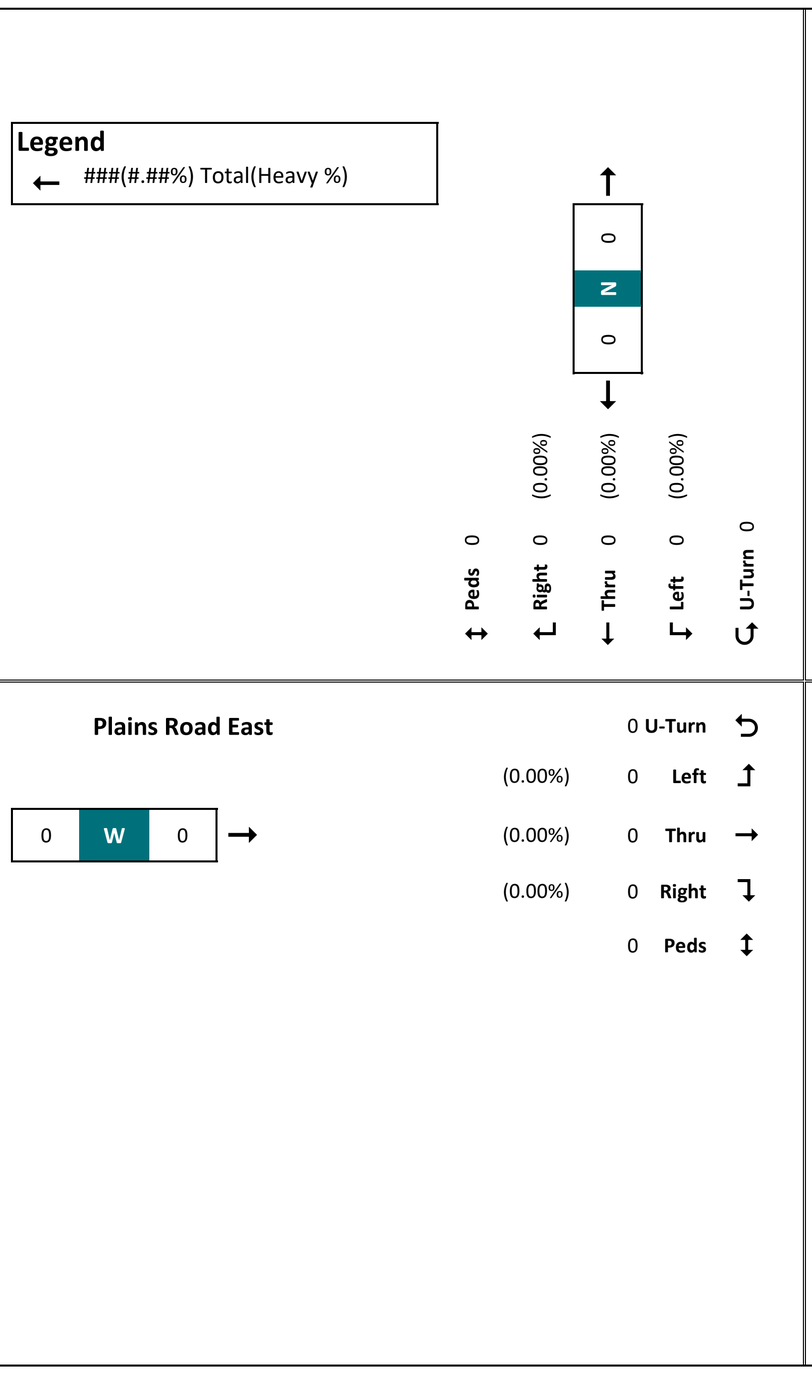


LEA Consulting Ltd.
625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

Intersection : 1368-1382 Plains Road East (West) Access & Plains Road
Survey Date : January 0, 1900
Project No. : 24224
Count ID : 25435

SAT Peak Hour - 1368-1382 Plains Road East (West) Access & Plains Road East

	1371 Plains Road East Access Southbound						Plains Road East Westbound						1368-1382 Plains Road East (West) Access Northbound						Plains Road East Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total %	-	-	-	-	-	-	0.0%	0.0%	0.0%	-	-	-	0.0%	0.0%	0.0%	0.0%	-	-	0.0%	0.0%	0.0%	0.0%	-	-	-
PHF	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
Lights	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Lights	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#DIV/0!
Buses	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	0
% Buses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#DIV/0!
Trucks	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	-	0	0	0	-	0	0
% Trucks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	#DIV/0!
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	0



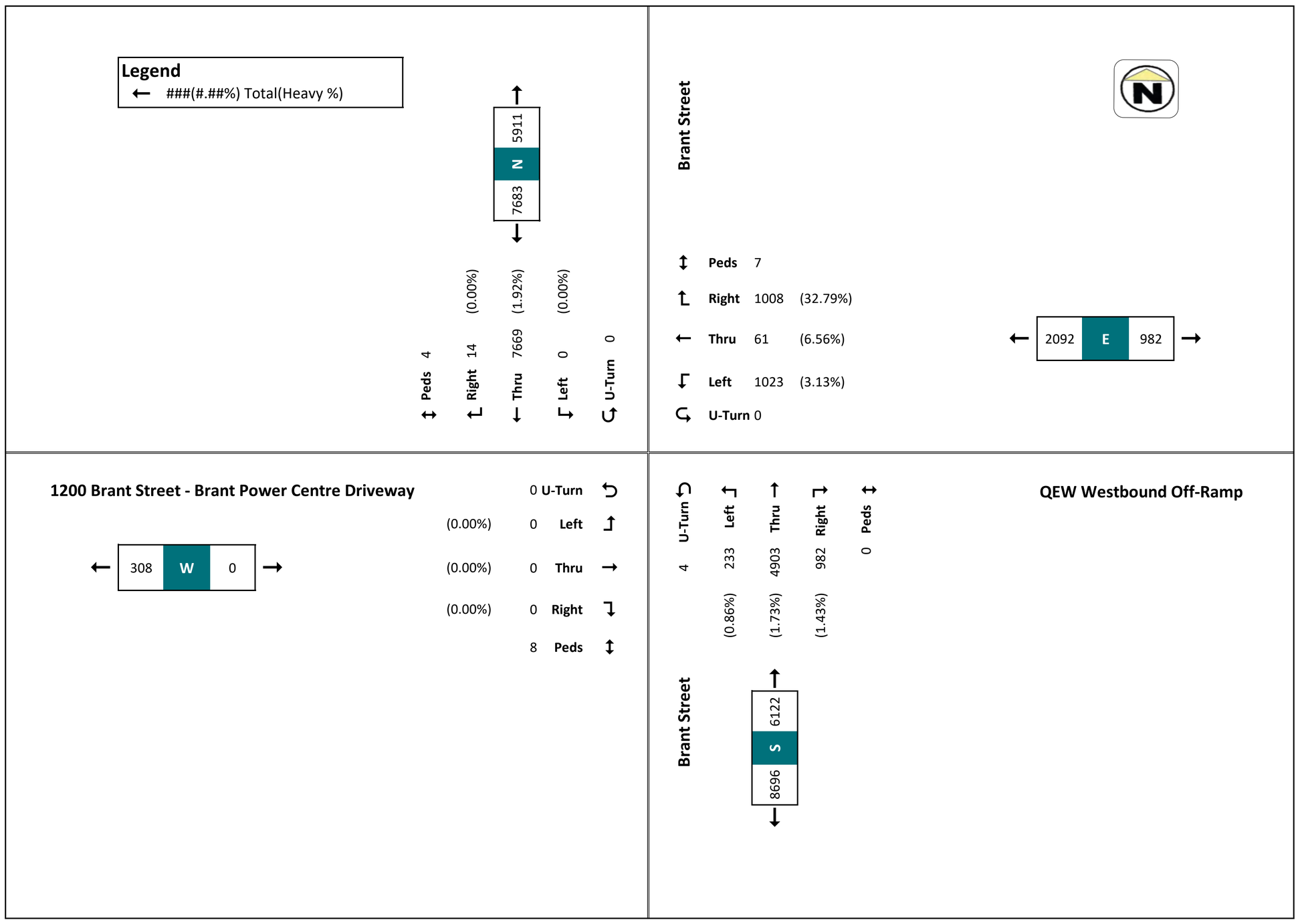
LEA Consulting Ltd.

625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

Intersection : Brant Street & QEW Westbound Off-Ramp
Survey Date : February 19, 2026
Project No. : 24224.01
Count ID : 25469

Turning Movement Count - Brant Street & QEW Westbound Off-Ramp

	Brant Street Southbound						QEW Westbound Off-Ramp Westbound						Brant Street Northbound						1200 Brant Street - Brant Power Centre Driveway Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
7:30	0	0	329	0	1	329	0	47	3	44	0	94	0	5	157	30	0	192	0	0	0	0	1	0	615
7:45	0	0	379	0	0	379	0	61	1	46	0	108	0	5	169	38	0	212	0	0	0	0	0	0	699
Hourly Total	0	0	1223	0	1	1223	0	173	8	155	1	336	0	19	591	118	0	728	0	0	0	0	1	0	2287
8:00	0	0	348	0	0	348	0	59	4	62	0	125	0	6	203	43	0	252	0	0	0	0	0	0	725
8:15	0	0	361	1	0	362	0	75	2	95	0	172	0	8	171	39	0	218	0	0	0	0	0	0	752
8:30	0	0	338	0	0	338	0	63	6	90	1	159	1	11	188	38	0	238	0	0	0	0	0	0	735
8:45	0	0	386	0	0	386	0	95	2	100	0	197	0	2	222	26	0	250	0	0	0	0	0	0	833
Hourly Total	0	0	1433	1	0	1434	0	292	14	347	1	653	1	27	784	146	0	958	0	0	0	0	0	0	3045
9:00	0	0	310	0	0	310	0	76	3	90	0	169	0	6	191	24	0	221	0	0	0	0	0	0	700
9:15	0	0	312	1	0	313	0	85	1	59	0	145	0	10	167	18	0	195	0	0	0	0	0	0	653
Hourly Total	0	0	622	1	0	623	0	161	4	149	0	314	0	16	358	42	0	416	0	0	0	0	0	0	1353
* Break *																									
16:00	0	0	457	0	0	457	0	52	4	41	0	97	0	18	311	79	0	408	0	0	0	0	4	0	962
16:15	0	0	447	0	1	447	0	43	2	30	0	75	1	11	317	68	0	397	0	0	0	0	1	0	919
16:30	0	0	452	2	0	454	0	45	4	34	1	83	1	17	339	48	0	405	0	0	0	0	0	0	942
16:45	0	0	453	1	1	454	0	28	5	19	1	52	1	21	361	74	0	457	0	0	0	0	0	0	963
Hourly Total	0	0	1809	3	2	1812	0	168	15	124	2	307	3	67	1328	269	0	1667	0	0	0	0	5	0	3786
17:00	0	0	437	0	0	437	0	22	2	14	3	38	0	17	333	96	0	446	0	0	0	0	0	0	921
17:15	0	0	513	0	0	513	0	20	1	21	0	42	0	17	343	95	0	455	0	0	0	0	0	0	1010
17:30	0	0	479	2	1	481	0	21	3	22	0	46	0	14	301	96	0	411	0	0	0	0	0	0	938
17:45	0	0	474	2	0	476	0	40	4	46	0	90	0	21	308	58	0	387	0	0	0	0	2	0	953
Hourly Total	0	0	1903	4	1	1907	0	103	10	103	3	216	0	69	1285	345	0	1699	0	0	0	0	2	0	3822
18:00	0	0	348	5	0	353	0	60	4	42	0	106	2	21	284	40	0	347	0	0	0	0	0	0	806
18:15	0	0	330	0	0	330	0	66	6	88	0	160	0	14	273	22	0	309	0	0	0	0	0	0	799
Hourly Total	0	0	679	5	0	684	0	126	10	130	0	266	0	35	557	62	0	654	0	0	0	0	0	0	1604
Grand Total	0	0	7669	14	4	7683	0	1023	61	1008	7	2092	4	233	4903	982	0	6122	0	0	0	0	8	0	15897
Approach %	0.0%	0.0%	99.8%	0.2%	-	-	0.0%	48.9%	2.9%	48.2%	-	-	0.1%	3.8%	80.1%	16.0%	-	-	-	-	-	-	-	-	-
Total %	0.0%	0.0%	48.2%	0.1%	-	48.3%	0.0%	6.4%	0.4%	6.3%	-	13.2%	0.0%	1.5%	30.8%	6.2%	-	38.5%	0.0%	0.0%	0.0%	0.0%	-	0.0%	-
Lights	0	0	7522	14	-	7536	0	991	57	988	-	2036	6	231	4818	968	-	6023	0	0	0	0	-	0	15595
% Lights	-	-	98.1%	100.0%	-	98.1%	-	96.9%	93.4%	98.0%	-	97.3%	150.0%	99.1%	98.3%	98.6%	-	98.4%	-	-	-	-	-	-	98.1%
Buses	-	0	45	0	-	45	-	1	0	2	-	3	-	0	51	8	-	59	-	0	0	0	-	0	107
% Buses	-	-	0.6%	0.0%	-	0.6%	-	0.1%	0.0%	0.2%	-	0.1%	-	0.0%	1.0%	0.8%	-	1.0%	-	-	-	-	-	-	0.7%
Trucks	-	0	102	0	-	102	-	31	4	18	-	53	-	2	34	6	-	42	-	0	0	0	-	0	197
% Trucks	-	-	1.3%	-	-	1.3%	-	3.0%	6.6%	1.8%	-	2.5%	-	0.9%	0.7%	0.6%	-	0.7%	-	-	-	-	-	-	1.2%
Bicycles	-	-	-	-	0	0	-	-	-	-	1	1	-	-	-	-	0	0	-	-	-	-	0	0	1
Pedestrians	-	-	-	-	4	-	-	-	-	-	7	-	-	-	-	-	0	-	-	-	-	-	8	-	19



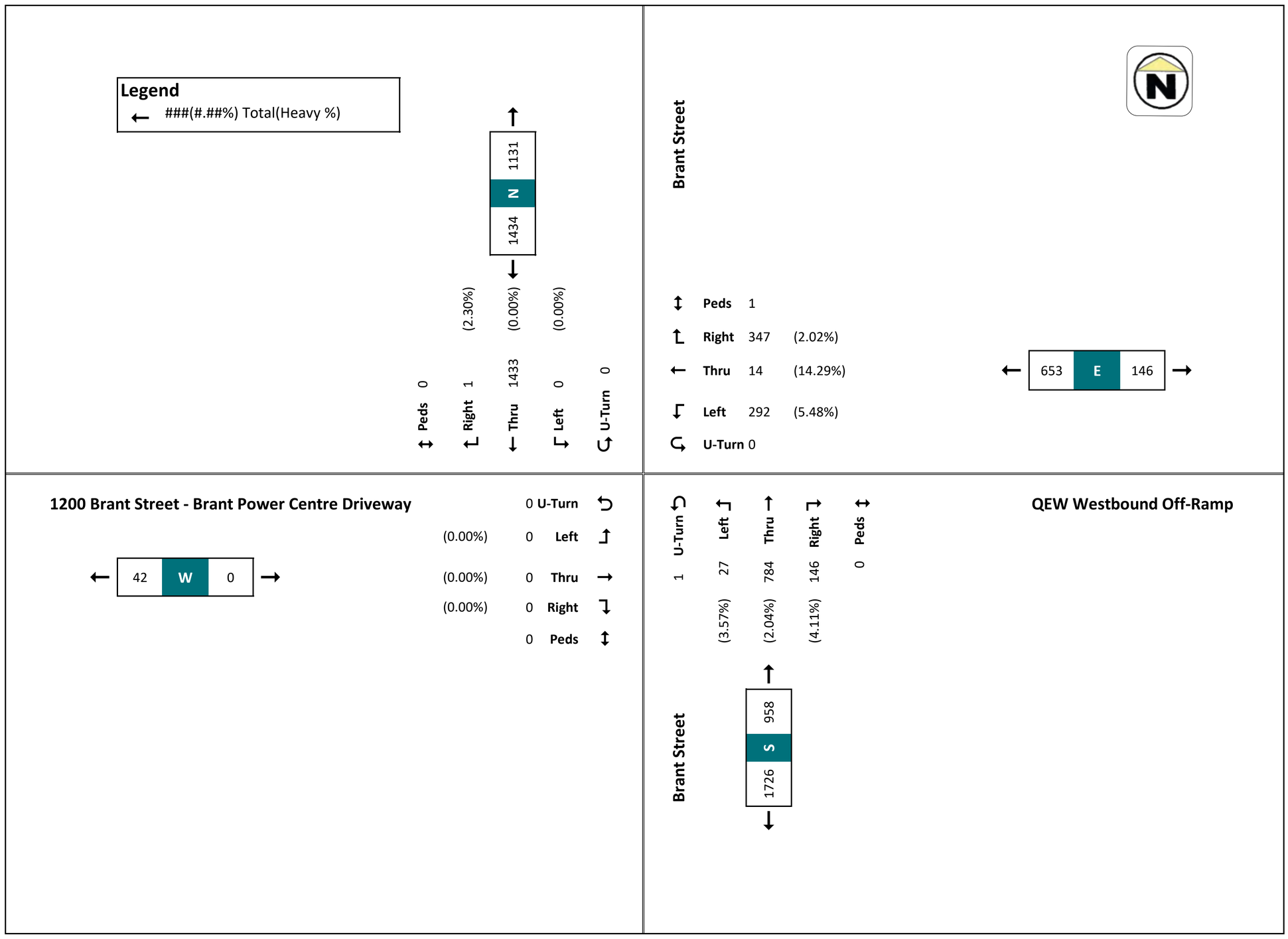
LEA Consulting Ltd.

625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

Intersection : Brant Street & QEW Westbound Off-Ramp
Survey Date : February 19, 2026
Project No. : 24224
Count ID : 25469

AM Peak Hour - Brant Street & QEW Westbound Off-Ramp

	Brant Street Southbound						QEW Westbound Off-Ramp Westbound						Brant Street Northbound						1200 Brant Street - Brant Power Centre Driveway Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
8:00	0	0	348	0	0	348	0	59	4	62	0	125	0	6	203	43	0	252	0	0	0	0	0	0	725
8:15	0	0	361	1	0	362	0	75	2	95	0	172	0	8	171	39	0	218	0	0	0	0	0	0	752
8:30	0	0	338	0	0	338	0	63	6	90	1	159	1	11	188	38	0	238	0	0	0	0	0	0	735
8:45	0	0	386	0	0	386	0	95	2	100	0	197	0	2	222	26	0	250	0	0	0	0	0	0	833
Hourly Total	0	0	1433	1	0	1434	0	292	14	347	1	653	1	27	784	146	0	958	0	0	0	0	0	0	3045
Approach %	0.0%	0.0%	99.9%	0.1%	-	-	0.0%	44.7%	2.1%	53.1%	-	-	0.1%	2.8%	81.8%	15.2%	-	-	-	-	-	-	-	-	-
Total %	0.0%	0.0%	47.1%	0.0%	-	47.1%	0.0%	9.6%	0.5%	11.4%	-	21.4%	0.0%	0.9%	25.7%	4.8%	-	31.5%	0.0%	0.0%	0.0%	0.0%	-	0.0%	-
PHF	0	0	0.93	0.25	-	0.93	0	0.77	0.58	0.87	-	0.83	0	0.61	0.88	0.85	-	0.95	0	0	0	0	-	0	0.91
Lights	0	0	1400	1	-	1401	0	276	12	340	-	628	1	26	768	140	-	935	0	0	0	0	-	0	2964
% Lights	-	-	97.7%	100.0%	-	97.7%	-	94.5%	85.7%	98.0%	-	96.2%	-	96.3%	98.0%	95.9%	-	97.6%	-	-	-	-	-	-	97.3%
Buses	-	0	8	0	-	8	-	0	0	1	-	1	-	0	8	4	-	12	-	0	0	0	-	0	21
% Buses	-	-	0.6%	0.0%	-	0.6%	-	0.0%	0.0%	0.3%	-	0.2%	-	0.0%	1.0%	2.7%	-	1.3%	-	-	-	-	-	-	0.7%
Trucks	-	0	25	0	-	25	-	16	2	6	-	24	-	1	8	2	-	11	-	0	0	0	-	0	60
% Trucks	-	-	1.7%	0.0%	-	1.7%	-	5.5%	14.3%	1.7%	-	3.7%	#VALUE!	3.7%	1.0%	1.4%	-	1.1%	-	-	-	-	-	-	2.0%
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	0
Pedestrians	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	0	-	2

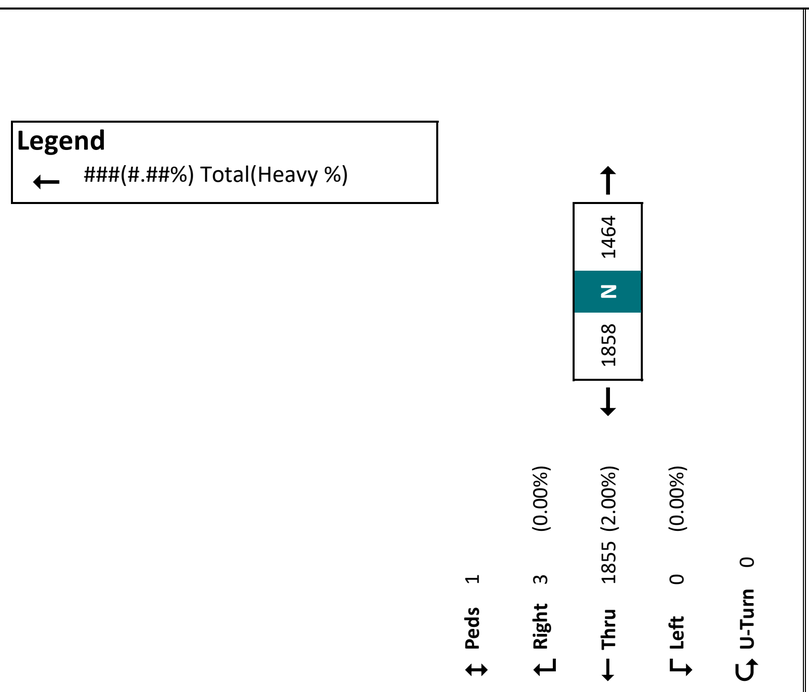


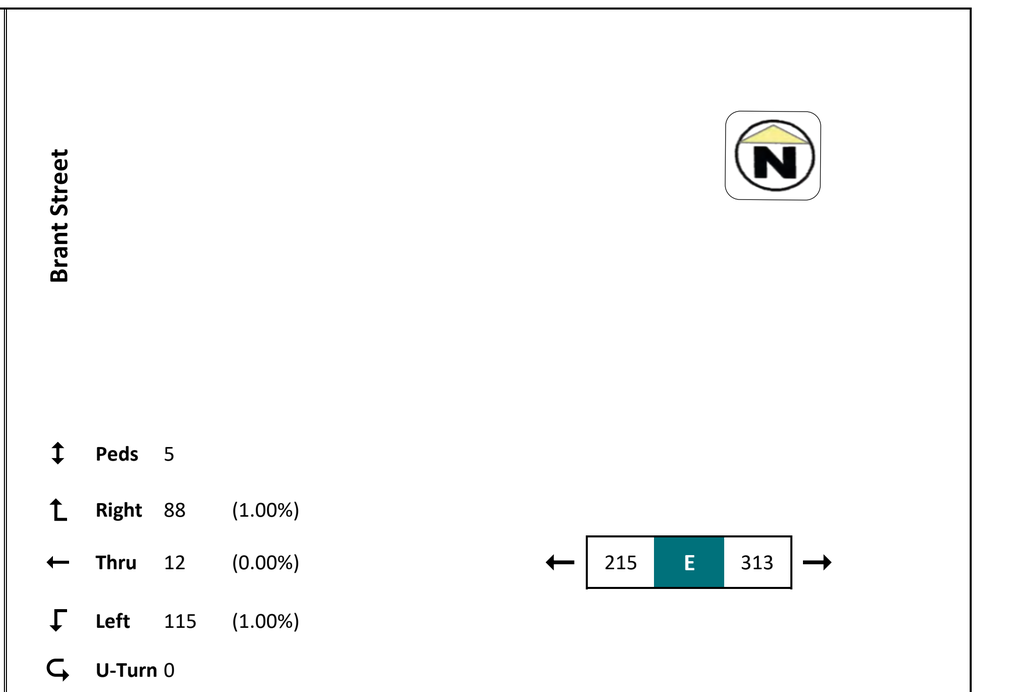
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625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

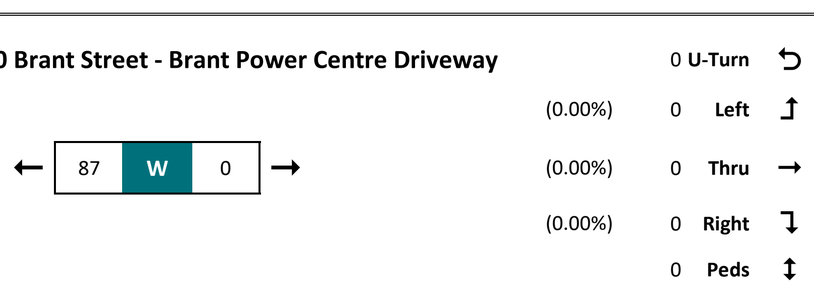
Intersection : Brant Street & QEW Westbound Off-Ramp
Survey Date : February 19, 2026
Project No. : 24224
Count ID : 25469

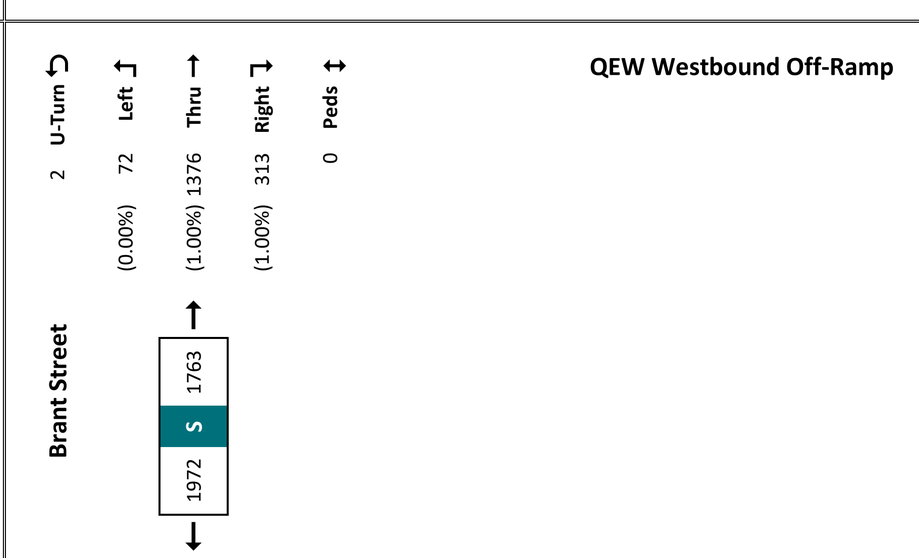
PM Peak Hour - Brant Street & QEW Westbound Off-Ramp

	Brant Street Southbound						QEW Westbound Off-Ramp Westbound						Brant Street Northbound						1200 Brant Street - Brant Power Centre Driveway Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
16:30	0	0	452	2	0	454	0	45	4	34	1	83	1	17	339	48	0	405	0	0	0	0	0	0	942
16:45	0	0	453	1	1	454	0	28	5	19	1	52	1	21	361	74	0	457	0	0	0	0	0	0	963
17:00	0	0	437	0	0	437	0	22	2	14	3	38	0	17	333	96	0	446	0	0	0	0	0	0	921
17:15	0	0	513	0	0	513	0	20	1	21	0	42	0	17	343	95	0	455	0	0	0	0	0	0	1010
Hourly Total	0	0	1855	3	1	1858	0	115	12	88	5	215	2	72	1376	313	0	1763	0	0	0	0	0	0	3836
Approach %	0.0%	0.0%	99.8%	0.2%	-	-	0.0%	53.5%	5.6%	40.9%	-	-	0.1%	4.1%	78.0%	17.8%	-	-	-	-	-	-	-	-	-
Total %	0.0%	0.0%	48.4%	0.1%	-	48.4%	0.0%	3.8%	0.4%	2.3%	-	5.6%	0.1%	2.4%	45.2%	10.3%	-	46.0%	0.0%	0.0%	0.0%	0.0%	-	0.0%	-
PHF	0	0	0.9	0.38	-	0.91	0	0.64	0.6	0.65	-	0.65	0	0.86	0.95	0.82	-	0.96	0	0	0	0	-	0	0.95
Lights	0	0	1822	3	-	1825	0	114	12	87	-	213	2	72	1361	311	-	1746	0	0	0	0	-	0	3784
% Lights	-	-	98.2%	100.0%	-	98.2%	-	99.1%	100.0%	98.9%	-	99.1%	-	100.0%	98.9%	99.4%	-	99.0%	-	-	-	-	-	-	98.6%
Buses	-	0	8	0	-	8	-	0	0	0	-	0	-	0	8	2	-	10	-	0	0	0	-	0	18
% Buses	-	-	0.4%	0.0%	-	0.4%	-	0.0%	0.0%	0.0%	-	0.0%	-	0.0%	0.6%	0.6%	-	0.6%	-	-	-	-	-	-	0.5%
Trucks	-	0	21	0	-	21	-	1	0	1	-	2	-	0	7	0	-	7	-	0	0	0	-	0	30
% Trucks	-	-	1.1%	0.0%	-	1.1%	-	0.9%	0.0%	1.1%	-	0.9%	-	0.0%	0.5%	0.0%	-	0.4%	-	-	-	-	-	-	0.8%
Bicycles	-	-	-	-	0	0	-	-	-	-	1	1	-	-	-	-	0	0	-	-	-	-	0	0	1
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	3









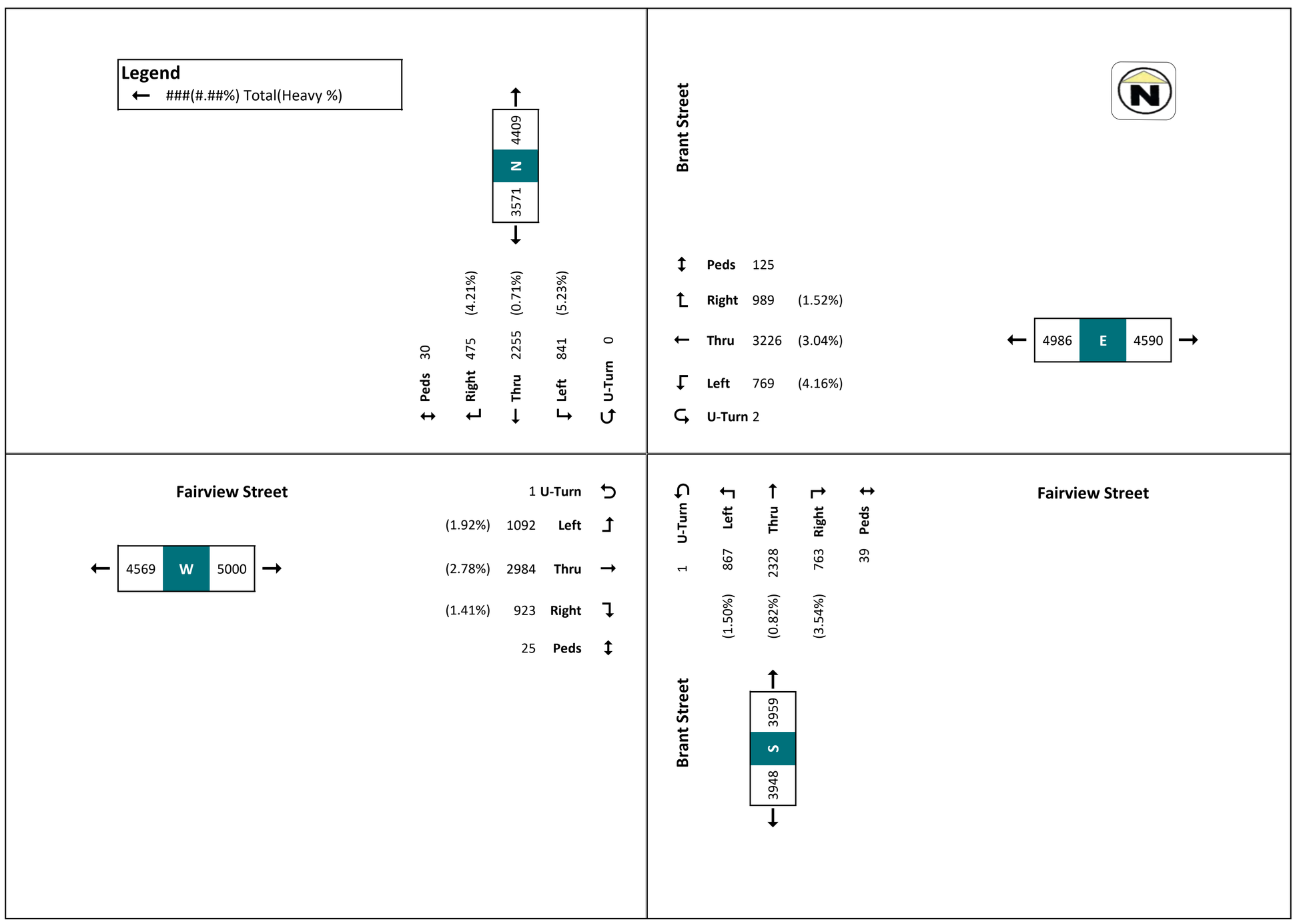
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625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

Intersection : Brant Street & Fairview Street
Survey Date : February 19, 2026
Project No. : 24224.01
Count ID : 25470

Turning Movement Count - Brant Street & Fairview Street

	Brant Street Southbound						Fairview Street Westbound						Brant Street Northbound						Fairview Street Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
7:00	0	18	27	7	1	52	1	19	41	20	2	81	0	14	71	32	3	117	0	69	123	11	0	203	453
7:15	0	30	36	8	3	74	0	15	51	27	7	93	0	25	83	34	0	142	0	70	154	30	1	254	563
7:30	0	42	77	17	1	136	0	28	75	29	2	132	0	29	83	36	0	148	0	88	172	28	3	288	704
7:45	0	30	119	9	0	158	0	35	79	25	5	139	0	36	92	42	2	170	0	68	181	53	2	302	769
Hourly Total	0	120	259	41	5	420	1	97	246	101	16	445	0	104	329	144	5	577	0	295	630	122	6	1047	2489
8:00	0	36	133	10	0	179	0	36	75	39	7	150	0	42	137	38	4	217	0	75	136	31	0	242	788
8:15	0	40	134	10	0	184	0	24	68	29	4	121	0	38	152	48	2	238	0	55	164	43	0	262	805
8:30	0	39	102	8	1	149	0	39	84	39	4	162	0	41	142	44	3	227	0	61	163	39	0	263	801
8:45	0	47	143	13	1	203	0	38	75	41	7	154	0	32	100	44	0	176	1	58	179	39	2	277	810
Hourly Total	0	162	512	41	2	715	0	137	302	148	22	587	0	153	531	174	9	858	1	249	642	152	2	1044	3204
9:00	0	27	119	15	1	161	0	38	82	49	6	169	0	34	107	34	1	175	0	44	151	42	1	237	742
9:15	0	37	128	18	0	183	0	24	65	32	5	121	0	33	114	36	0	183	0	49	136	50	0	235	722
Hourly Total	0	64	247	34	1	345	0	62	147	81	11	290	0	68	221	70	1	359	0	93	287	92	1	472	1466
* Break *																									
16:00	0	49	116	43	1	208	0	43	245	76	9	364	0	54	137	46	0	237	0	50	173	49	0	272	1081
16:15	0	60	107	38	5	205	0	50	220	70	8	340	0	67	155	48	1	270	0	42	142	47	2	231	1046
16:30	0	51	118	42	2	211	0	46	230	72	11	348	0	63	140	40	1	243	0	55	160	60	2	275	1077
16:45	0	57	138	46	6	241	0	63	288	83	11	434	0	60	149	31	3	240	0	41	138	61	2	240	1155
Hourly Total	0	217	479	169	14	865	0	202	983	301	39	1486	0	244	581	165	5	990	0	188	613	217	6	1018	4359
17:00	0	38	131	30	3	199	0	45	285	60	9	390	0	54	136	38	4	228	0	40	159	69	3	268	1085
17:15	0	55	129	27	1	211	1	50	291	72	12	414	1	48	104	38	8	191	0	48	154	65	2	267	1083
17:30	0	52	115	29	1	196	0	45	282	66	8	393	0	59	110	33	0	202	0	49	168	67	3	284	1075
17:45	0	52	144	44	3	240	0	52	239	62	7	353	0	53	122	40	3	215	0	42	118	56	2	216	1024
Hourly Total	0	197	519	130	8	846	1	192	1097	260	36	1550	1	214	472	149	15	836	0	179	599	257	10	1035	4267
18:00	0	36	114	26	0	176	0	34	194	59	1	287	0	44	88	35	2	167	0	49	108	47	0	204	834
18:15	0	45	125	33	0	203	0	45	257	39	0	341	0	39	106	26	2	171	0	39	105	36	0	180	895
Hourly Total	0	81	239	59	0	379	0	79	451	98	1	628	0	83	194	61	4	338	0	88	213	83	0	384	1729
Grand Total	0	841	2255	475	30	3571	2	769	3226	989	125	4986	1	867	2328	763	39	3959	1	1092	2984	923	25	5000	17516
Approach %	0.0%	23.6%	63.1%	13.3%	-	-	0.0%	15.4%	64.7%	19.8%	-	-	0.0%	21.9%	58.8%	19.3%	-	-	0.0%	21.8%	59.7%	18.5%	-	-	-
Total %	0.0%	4.8%	12.9%	2.7%	-	20.4%	0.0%	4.4%	18.4%	5.6%	-	28.5%	0.0%	4.9%	13.3%	4.4%	-	22.6%	0.0%	6.2%	17.0%	5.3%	-	28.5%	-
Lights	0	797	2239	455	-	3491	2	737	3128	940	-	4807	1	854	2309	736	-	3900	1	1071	2901	910	-	4883	17081
% Lights	-	94.8%	99.3%	95.8%	-	97.8%	100.0%	95.8%	97.0%	95.0%	-	96.4%	100.0%	98.5%	99.2%	96.5%	-	98.5%	100.0%	98.1%	97.2%	98.6%	-	97.7%	97.5%
Buses	-	36	2	0	-	38	-	22	58	43	-	123	-	1	3	21	-	25	-	1	56	1	-	58	244
% Buses	-	4.3%	0.1%	0.0%	-	1.1%	-	2.9%	1.8%	4.3%	-	2.5%	-	0.1%	0.1%	2.8%	-	0.6%	-	0.1%	1.9%	0.1%	-	1.2%	1.4%
Trucks	-	8	14	20	-	42	-	10	40	6	-	56	-	12	16	6	-	34	-	20	27	12	-	59	191
% Trucks	-	1.0%	0.6%	-	-	1.2%	-	1.3%	1.2%	0.6%	-	1.1%	-	1.4%	0.7%	0.8%	-	0.9%	-	1.8%	0.9%	1.3%	-	1.2%	1.1%
Bicycles	-	-	-	-	1	1	-	-	-	-	3	3	-	-	-	-	1	1	-	-	-	-	0	0	5
Pedestrians	-	-	-	-	30	-	-	-	-	-	125	-	-	-	-	-	39	-	-	-	-	-	25	-	219

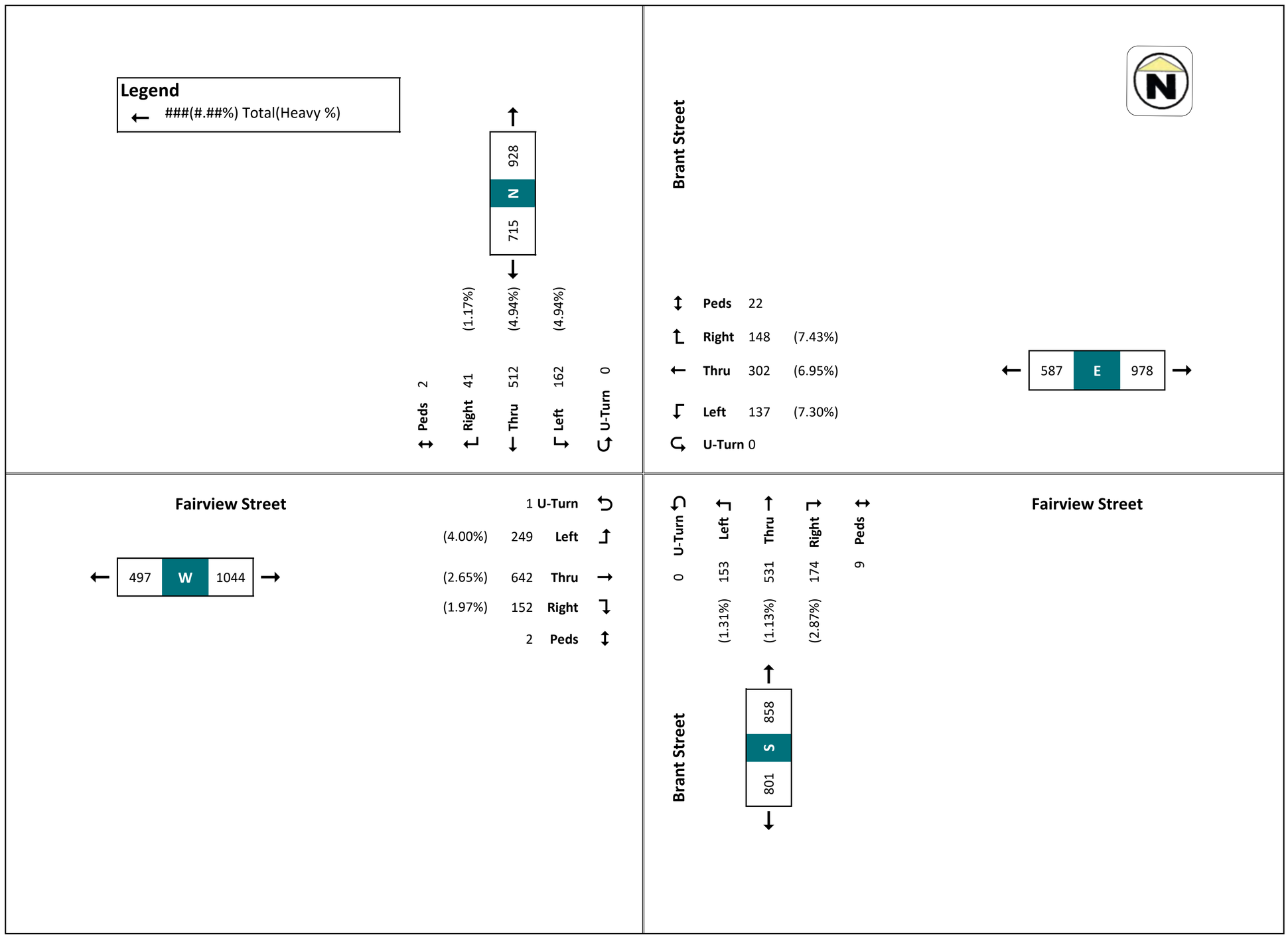


LEA Consulting Ltd.
625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

Intersection : Brant Street & Fairview Street
Survey Date : February 19, 2026
Project No. : 24224
Count ID : 25470

AM Peak Hour - Brant Street & Fairview Street

	Brant Street Southbound						Fairview Street Westbound						Brant Street Northbound						Fairview Street Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
8:00	0	36	133	10	0	179	0	36	75	39	7	150	0	42	137	38	4	217	0	75	136	31	0	242	788
8:15	0	40	134	10	0	184	0	24	68	29	4	121	0	38	152	48	2	238	0	55	164	43	0	262	805
8:30	0	39	102	8	1	149	0	39	84	39	4	162	0	41	142	44	3	227	0	61	163	39	0	263	801
8:45	0	47	143	13	1	203	0	38	75	41	7	154	0	32	100	44	0	176	1	58	179	39	2	277	810
Hourly Total	0	162	512	41	2	715	0	137	302	148	22	587	0	153	531	174	9	858	1	249	642	152	2	1044	3204
Approach %	0.0%	22.7%	71.6%	5.7%	-	-	0.0%	23.3%	51.4%	25.2%	-	-	0.0%	17.8%	61.9%	20.3%	-	-	0.1%	23.9%	61.5%	14.6%	-	-	-
Total %	0.0%	5.1%	16.0%	1.3%	-	22.3%	0.0%	4.3%	9.4%	4.6%	-	18.3%	0.0%	4.8%	16.6%	5.4%	-	26.8%	0.0%	7.8%	20.0%	4.7%	-	32.6%	-
PHF	0	0.86	0.9	0.79	-	0.88	0	0.88	0.9	0.9	-	0.91	0	0.91	0.87	0.91	-	0.9	0.25	0.83	0.9	0.88	-	0.94	0.99
Lights	0	154	506	37	-	697	0	127	281	137	-	545	0	151	525	169	-	845	1	239	625	149	-	1014	3101
% Lights	-	95.1%	98.8%	90.2%	-	97.5%	-	92.7%	93.0%	92.6%	-	92.8%	-	98.7%	98.9%	97.1%	-	98.5%	-	96.0%	97.4%	98.0%	-	97.1%	96.8%
Buses	-	7	0	0	-	7	-	4	10	8	-	22	-	0	1	3	-	4	-	0	12	1	-	13	46
% Buses	-	4.3%	0.0%	0.0%	-	1.0%	-	2.9%	3.3%	5.4%	-	3.7%	-	0.0%	0.2%	1.7%	-	0.5%	-	0.0%	1.9%	0.7%	-	1.2%	1.4%
Trucks	-	1	6	4	-	11	-	6	11	3	-	20	-	2	5	2	-	9	-	10	5	2	-	17	57
% Trucks	-	0.6%	1.2%	9.8%	-	1.5%	-	4.4%	3.6%	2.0%	-	3.4%	-	1.3%	0.9%	1.1%	-	1.0%	-	4.0%	0.8%	1.3%	-	1.6%	1.8%
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	0
Pedestrians	-	-	-	-	2	-	-	-	-	-	22	-	-	-	-	-	0	-	-	-	-	-	2	-	26

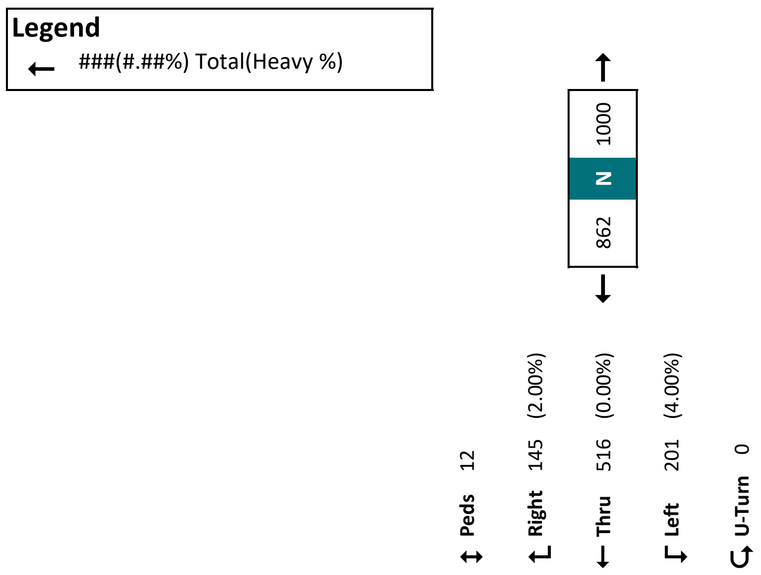


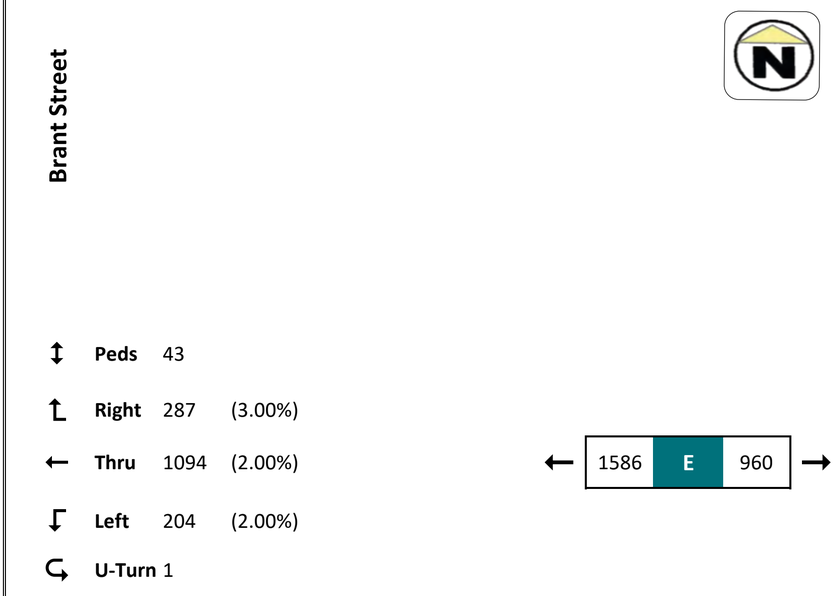
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625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

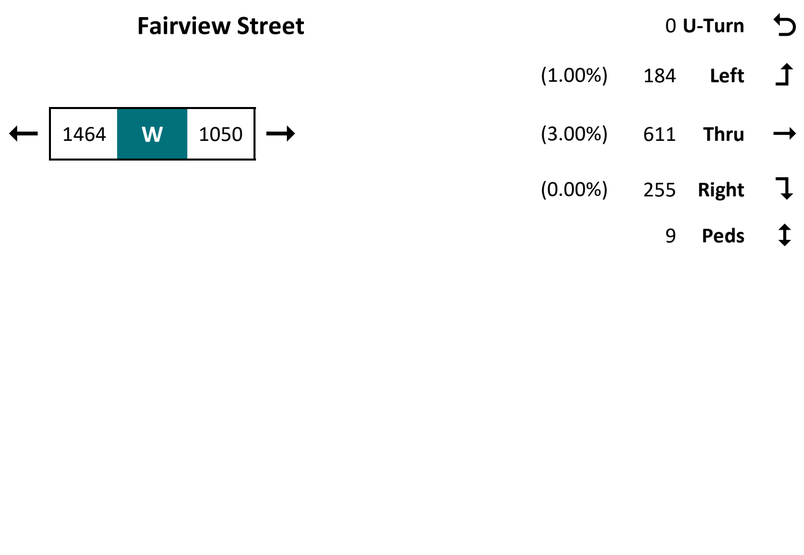
Intersection : Brant Street & Fairview Street
Survey Date : February 19, 2026
Project No. : 24224
Count ID : 25470

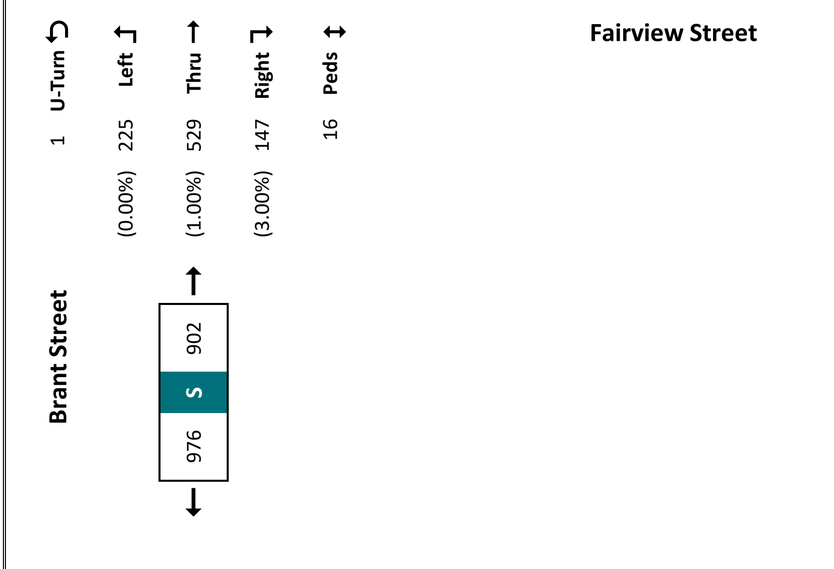
PM Peak Hour - Brant Street & Fairview Street

	Brant Street Southbound						Fairview Street Westbound						Brant Street Northbound						Fairview Street Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
16:30	0	51	118	42	2	211	0	46	230	72	11	348	0	63	140	40	1	243	0	55	160	60	2	275	1077
16:45	0	57	138	46	6	241	0	63	288	83	11	434	0	60	149	31	3	240	0	41	138	61	2	240	1155
17:00	0	38	131	30	3	199	0	45	285	60	9	390	0	54	136	38	4	228	0	40	159	69	3	268	1085
17:15	0	55	129	27	1	211	1	50	291	72	12	414	1	48	104	38	8	191	0	48	154	65	2	267	1083
Hourly Total	0	201	516	145	12	862	1	204	1094	287	43	1586	1	225	529	147	16	902	0	184	611	255	9	1050	4400
Approach %	0.0%	23.3%	59.9%	16.8%	-	-	0.1%	12.9%	69.0%	18.1%	-	-	0.1%	24.9%	58.6%	16.3%	-	-	0.0%	17.5%	58.2%	24.3%	-	-	-
Total %	0.0%	4.6%	11.7%	3.3%	-	19.6%	0.0%	6.4%	34.1%	6.5%	-	36.0%	0.0%	7.0%	16.5%	4.6%	-	20.5%	0.0%	5.7%	19.1%	8.0%	-	23.9%	-
PHF	0	0.88	0.93	0.79	-	0.89	0.25	0.81	0.94	0.86	-	0.91	0	0.89	0.89	0.92	-	0.93	0	0.84	0.95	0.92	-	0.95	0.95
Lights	0	192	514	142	-	848	1	200	1074	278	-	1553	1	224	524	142	-	891	0	182	595	255	-	1032	4324
% Lights	-	95.5%	99.6%	97.9%	-	98.4%	-	98.0%	98.2%	96.9%	-	97.9%	-	99.6%	99.1%	96.6%	-	98.8%	-	98.9%	97.4%	100.0%	-	98.3%	98.3%
Buses	-	8	0	0	-	8	-	4	13	9	-	26	-	0	0	5	-	5	-	0	14	0	-	14	53
% Buses	-	4.0%	0.0%	0.0%	-	0.9%	-	2.0%	1.2%	3.1%	-	1.6%	-	0.0%	0.0%	3.4%	-	0.6%	-	0.0%	2.3%	0.0%	-	1.3%	1.2%
Trucks	-	1	1	3	-	5	-	0	7	0	-	7	-	1	5	0	-	6	-	2	2	0	-	4	22
% Trucks	-	0.5%	0.2%	2.1%	-	0.6%	-	0.0%	0.6%	0.0%	-	0.4%	-	0.4%	0.9%	0.0%	-	0.7%	-	1.1%	0.3%	0.0%	-	0.4%	0.5%
Bicycles	-	-	-	-	1	1	-	-	-	-	1	1	-	-	-	-	0	0	-	-	-	-	0	0	2
Pedestrians	-	-	-	-	12	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	0	-	14









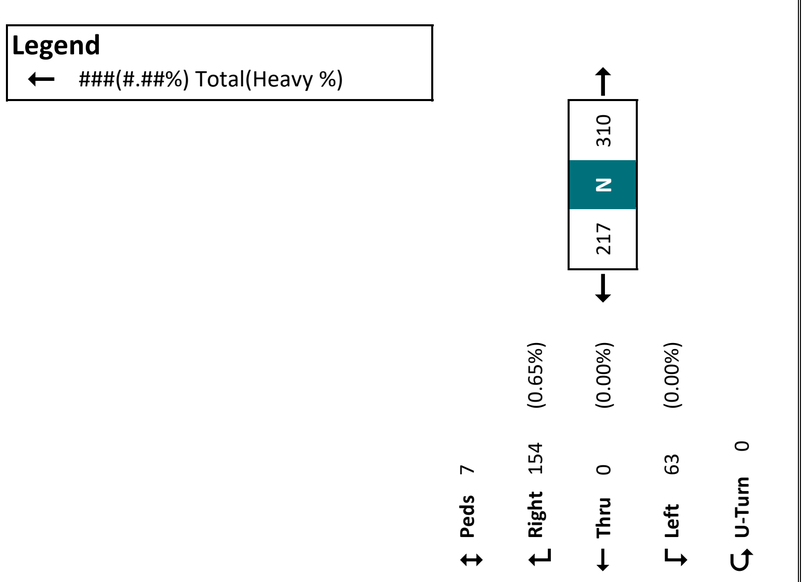
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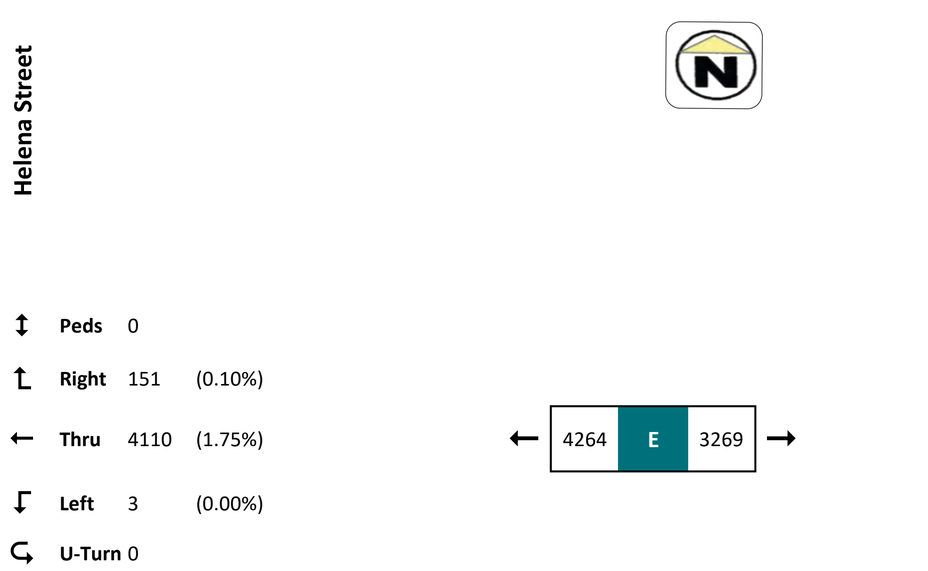
625 Cochrane Drive, 5th Floor
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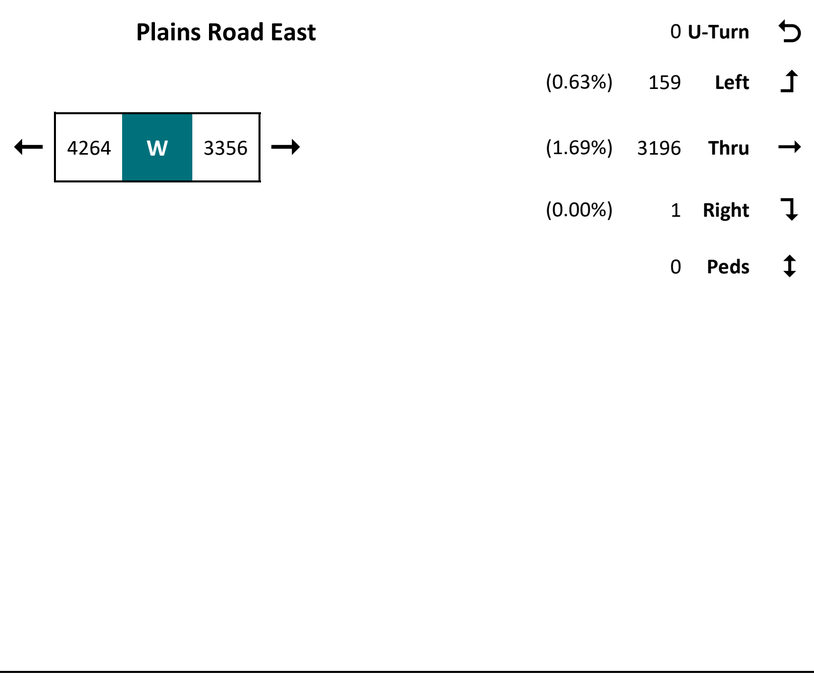
Intersection : Helena Street & Plains Road East
Survey Date : February 19, 2026
Project No. : 24224.01
Count ID : 25471

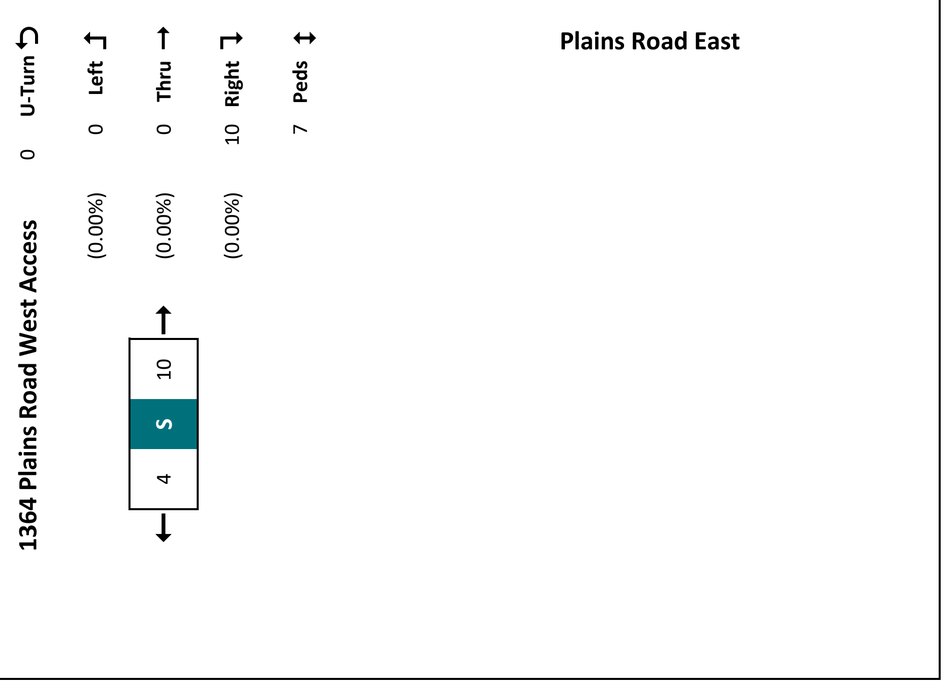
Turning Movement Count - Helena Street & Plains Road East

	Helena Street Southbound						Plains Road East Westbound						1364 Plains Road West Access Northbound						Plains Road East Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
7:00	0	1	0	3	0	4	0	0	67	0	0	67	0	0	0	0	0	0	0	0	150	0	0	150	221
7:15	0	3	0	8	0	11	0	0	100	1	0	101	0	0	0	0	0	0	0	1	164	0	0	165	277
7:30	0	4	0	4	0	8	0	0	92	3	0	95	0	0	0	0	0	0	0	2	186	0	0	188	291
7:45	0	7	0	11	0	18	0	0	124	3	0	127	0	0	0	0	0	0	0	5	170	0	0	175	320
Hourly Total	0	15	0	26	0	41	0	0	383	7	0	390	0	0	0	0	0	0	0	8	670	0	0	678	1109
8:00	0	2	0	8	1	10	0	0	85	4	0	89	0	0	0	0	0	0	0	2	160	0	0	162	261
8:15	0	5	0	7	0	12	0	0	100	7	0	107	0	0	0	0	0	0	0	4	140	0	0	144	263
8:30	0	2	0	7	0	9	0	0	130	5	0	135	0	0	0	0	0	0	0	1	156	0	0	157	301
8:45	0	6	0	8	0	14	0	0	168	11	0	179	0	0	0	0	0	0	0	6	169	0	0	175	368
Hourly Total	0	15	0	30	1	45	0	0	483	27	0	510	0	0	0	0	0	0	0	13	625	0	0	638	1193
9:00	0	4	0	9	0	13	0	0	124	5	0	129	0	0	0	0	0	0	0	9	137	0	0	146	288
9:15	0	2	0	8	1	10	0	0	146	6	0	152	0	0	0	0	2	0	0	6	121	0	0	127	289
Hourly Total	0	6	0	17	1	23	0	0	270	11	0	281	0	0	0	0	2	0	0	15	258	0	0	273	577
* Break *																									
16:00	0	2	0	9	0	11	0	1	295	12	0	308	0	0	0	3	0	3	0	14	203	0	0	217	539
16:15	0	3	0	8	0	11	0	1	316	11	0	328	0	0	0	1	0	1	0	11	182	0	0	193	533
16:30	0	3	0	14	0	17	0	0	297	10	0	307	0	0	0	0	1	0	0	14	185	1	0	200	524
16:45	0	4	0	9	1	13	0	0	327	17	0	344	0	0	0	0	0	0	0	13	153	0	0	166	523
Hourly Total	0	12	0	40	1	52	0	2	1235	50	0	1287	0	0	0	4	1	4	0	52	723	1	0	776	2119
17:00	0	1	0	9	0	10	0	0	300	12	0	312	0	0	0	1	3	1	0	12	162	0	0	174	497
17:15	0	5	0	6	0	11	0	0	273	13	0	286	0	0	0	2	0	2	0	10	176	0	0	186	485
17:30	0	4	0	2	0	6	0	0	328	9	0	337	0	0	0	1	0	1	0	17	145	0	0	162	506
17:45	0	3	0	8	4	11	0	0	304	9	0	313	0	0	0	1	0	1	0	7	150	0	0	157	482
Hourly Total	0	13	0	25	4	38	0	0	1205	43	0	1248	0	0	0	5	3	5	0	46	633	0	0	679	1970
18:00	0	1	0	11	0	12	0	0	268	5	0	273	0	0	0	1	0	1	0	11	143	0	0	154	440
18:15	0	1	0	5	0	6	0	1	266	8	0	275	0	0	0	0	1	0	0	14	144	0	0	158	439
Hourly Total	0	2	0	16	0	18	0	1	534	13	0	548	0	0	0	1	1	1	0	25	287	0	0	312	879
Grand Total	0	63	0	154	7	217	0	3	4110	151	0	4264	0	0	0	10	7	10	0	159	3196	1	0	3356	7847
Approach %	0.0%	29.0%	0.0%	71.0%	-	-	0.0%	0.1%	96.4%	3.5%	-	-	0.0%	0.0%	0.0%	100.0%	-	-	0.0%	4.7%	95.2%	0.0%	-	-	-
Total %	0.0%	0.8%	0.0%	2.0%	-	2.8%	0.0%	0.0%	52.4%	1.9%	-	54.3%	0.0%	0.0%	0.0%	0.1%	-	0.1%	0.0%	2.0%	40.7%	0.0%	-	42.8%	-
Lights	0	63	0	153	-	216	0	3	4038	147	-	4188	0	0	0	10	-	10	0	158	3142	1	-	3301	7715
% Lights	-	100.0%	-	99.4%	-	99.5%	-	100.0%	98.2%	97.4%	-	98.2%	-	-	-	100.0%	-	100.0%	-	99.4%	98.3%	100.0%	-	98.4%	98.3%
Buses	-	0	0	0	-	0	-	0	11	2	-	13	-	0	0	0	-	0	-	0	8	0	-	8	21
% Buses	-	0.0%	-	0.0%	-	0.0%	-	0.0%	0.3%	1.3%	-	0.3%	-	-	-	0.0%	-	0.0%	-	0.0%	0.3%	0.0%	-	0.2%	0.3%
Trucks	-	0	0	1	-	1	-	0	61	2	-	63	-	0	0	0	-	0	-	1	46	0	-	47	111
% Trucks	-	0.0%	-	-	-	0.5%	-	0.0%	1.5%	1.3%	-	1.5%	-	-	-	0.0%	-	0.0%	-	0.6%	1.4%	0.0%	-	1.4%	1.4%
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	0
Pedestrians	-	-	-	-	7	-	-	-	-	-	0	-	-	-	-	-	7	-	-	-	-	-	0	-	14







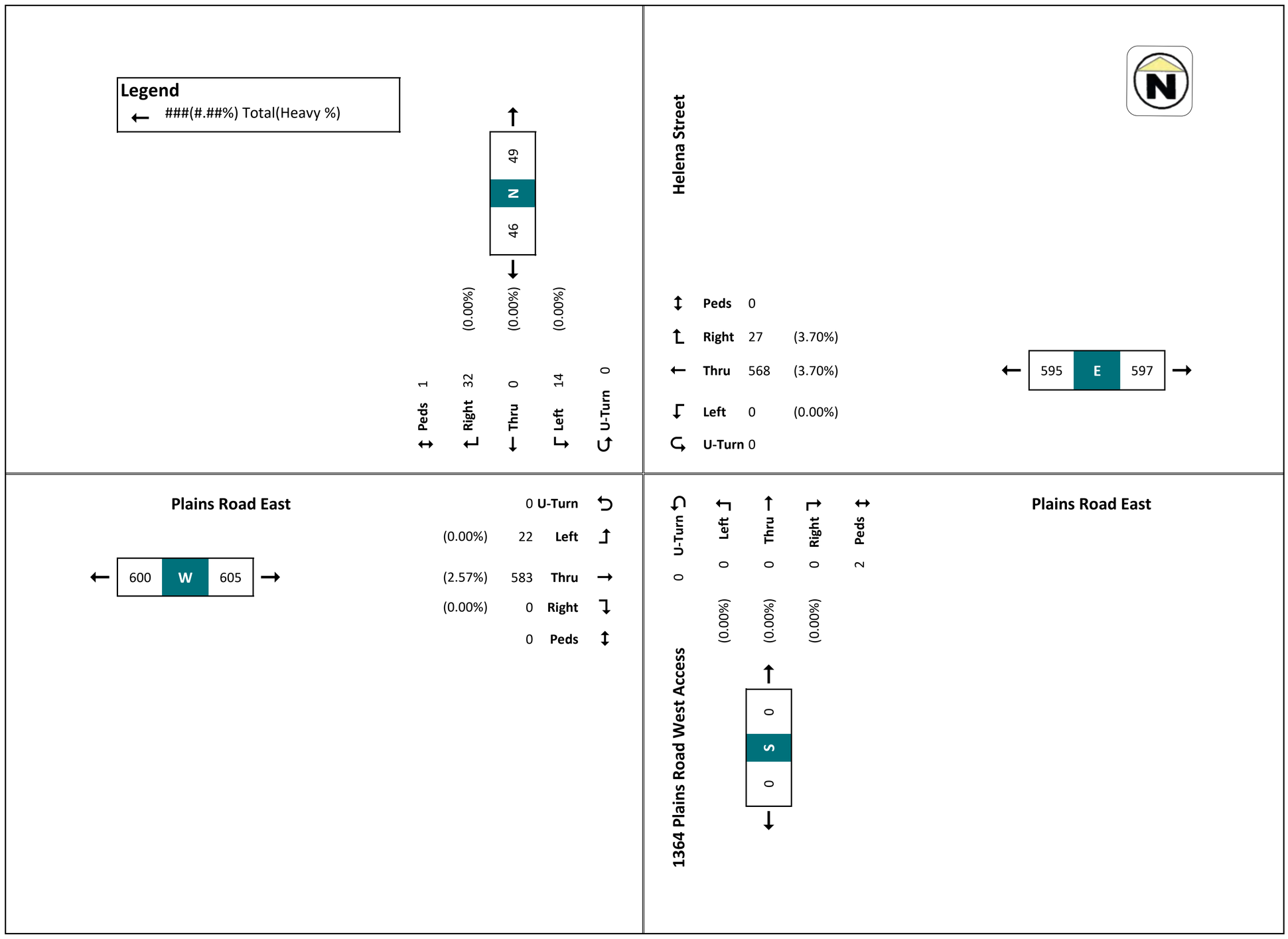


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625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

Intersection : Helena Street & Plains Road East
Survey Date : February 19, 2026
Project No. : 24224
Count ID : 25471

AM Peak Hour - Helena Street & Plains Road East

	Helena Street Southbound						Plains Road East Westbound						1364 Plains Road West Access Northbound						Plains Road East Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
8:30	0	2	0	7	0	9	0	0	130	5	0	135	0	0	0	0	0	0	0	1	156	0	0	157	301
8:45	0	6	0	8	0	14	0	0	168	11	0	179	0	0	0	0	0	0	0	6	169	0	0	175	368
9:00	0	4	0	9	0	13	0	0	124	5	0	129	0	0	0	0	0	0	0	9	137	0	0	146	288
9:15	0	2	0	8	1	10	0	0	146	6	0	152	0	0	0	0	2	0	0	6	121	0	0	127	289
Hourly Total	0	14	0	32	1	46	0	0	568	27	0	595	0	0	0	0	2	0	0	22	583	0	0	605	1246
Approach %	0.0%	30.4%	0.0%	69.6%	-	-	0.0%	0.0%	95.5%	4.5%	-	-	-	-	-	-	-	-	0.0%	3.6%	96.4%	0.0%	-	-	-
Total %	0.0%	1.1%	0.0%	2.6%	-	3.7%	0.0%	0.0%	45.6%	2.2%	-	47.8%	0.0%	0.0%	0.0%	0.0%	-	0.0%	0.0%	1.8%	46.8%	0.0%	-	48.6%	-
PHF	0	0.58	0	0.89	-	0.82	0	0	0.85	0.61	-	0.83	0	0	0	0	-	0	0	0.61	0.86	0	-	0.86	0.85
Lights	0	14	0	31	-	45	0	0	547	26	-	573	0	0	0	0	-	0	0	22	568	0	-	590	1208
% Lights	-	100.0%	-	96.9%	-	97.8%	-	-	96.3%	96.3%	-	96.3%	-	-	-	-	-	-	-	100.0%	97.4%	-	-	97.5%	97.0%
Buses	-	0	0	0	-	0	-	0	2	1	-	3	-	0	0	0	-	0	-	0	3	0	-	3	6
% Buses	-	0.0%	-	0.0%	-	0.0%	-	-	0.4%	3.7%	-	0.5%	-	-	-	-	-	-	-	0.0%	0.5%	-	-	0.5%	0.5%
Trucks	-	0	0	1	-	1	-	0	19	0	-	19	-	0	0	0	-	0	-	0	12	0	-	12	32
% Trucks	-	0.0%	-	3.1%	-	2.2%	-	-	3.3%	0.0%	-	3.2%	-	-	-	-	-	-	-	0.0%	2.1%	-	-	2.0%	2.6%
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	0
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	1

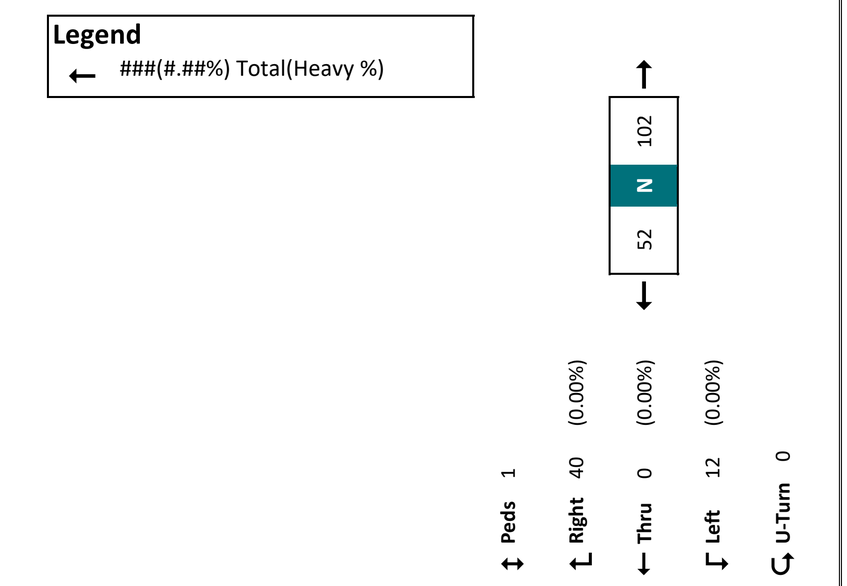


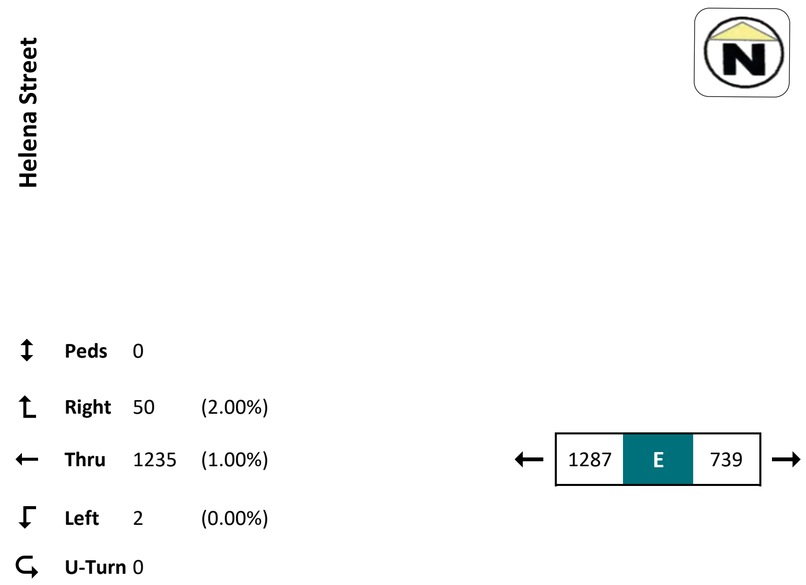
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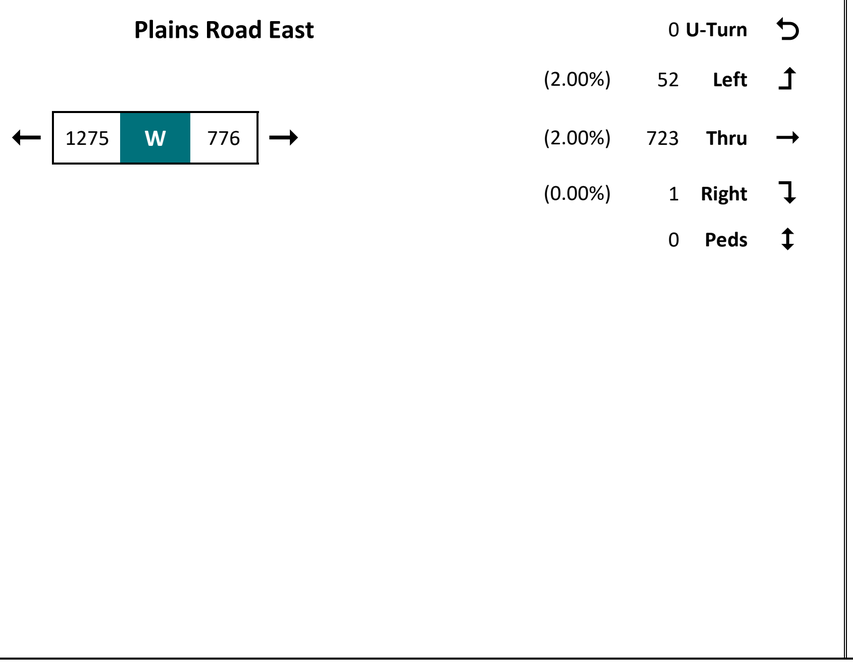
Intersection : Helena Street & Plains Road East
Survey Date : February 19, 2026
Project No. : 24224
Count ID : 25471

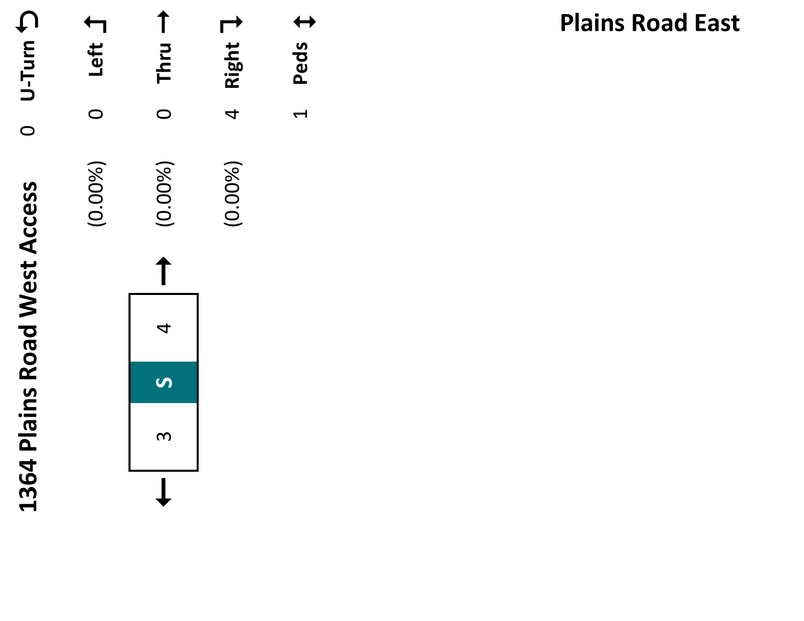
PM Peak Hour - Helena Street & Plains Road East

	Helena Street Southbound						Plains Road East Westbound						1364 Plains Road West Access Northbound						Plains Road East Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
16:00	0	2	0	9	0	11	0	1	295	12	0	308	0	0	0	3	0	3	0	14	203	0	0	217	539
16:15	0	3	0	8	0	11	0	1	316	11	0	328	0	0	0	1	0	1	0	11	182	0	0	193	533
16:30	0	3	0	14	0	17	0	0	297	10	0	307	0	0	0	0	1	0	0	14	185	1	0	200	524
16:45	0	4	0	9	1	13	0	0	327	17	0	344	0	0	0	0	0	0	0	13	153	0	0	166	523
Hourly Total	0	12	0	40	1	52	0	2	1235	50	0	1287	0	0	0	4	1	4	0	52	723	1	0	776	2119
Approach %	0.0%	23.1%	0.0%	76.9%	-	-	0.0%	0.2%	96.0%	3.9%	-	-	0.0%	0.0%	0.0%	100.0%	-	-	0.0%	6.7%	93.2%	0.1%	-	-	-
Total %	0.0%	0.6%	0.0%	1.9%	-	2.5%	0.0%	0.2%	99.1%	2.4%	-	60.7%	0.0%	0.0%	0.0%	0.3%	-	0.2%	0.0%	4.2%	58.0%	0.1%	-	36.6%	-
PHF	0	0.75	0	0.71	-	0.76	0	0.5	0.94	0.74	-	0.94	0	0	0	0.33	-	0.33	0	0.93	0.89	0.25	-	0.89	0.98
Lights	0	12	0	40	-	52	0	2	1223	49	-	1274	0	0	0	4	-	4	0	51	710	1	-	762	2092
% Lights	-	100.0%	-	100.0%	-	100.0%	-	100.0%	99.0%	98.0%	-	99.0%	-	-	-	100.0%	-	100.0%	-	98.1%	98.2%	100.0%	-	98.2%	98.7%
Buses	-	0	0	0	-	0	-	0	2	0	-	2	-	0	0	0	-	0	-	0	1	0	-	1	3
% Buses	-	0.0%	-	0.0%	-	0.0%	-	0.0%	0.2%	0.0%	-	0.2%	-	-	-	0.0%	-	0.0%	-	0.0%	0.1%	0.0%	-	0.1%	0.1%
Trucks	-	0	0	0	-	0	-	0	10	1	-	11	-	0	0	0	-	0	-	1	12	0	-	13	24
% Trucks	-	0.0%	-	0.0%	-	0.0%	-	0.0%	0.8%	2.0%	-	0.9%	-	-	-	0.0%	-	0.0%	-	1.9%	1.7%	0.0%	-	1.7%	1.1%
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	0
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	1









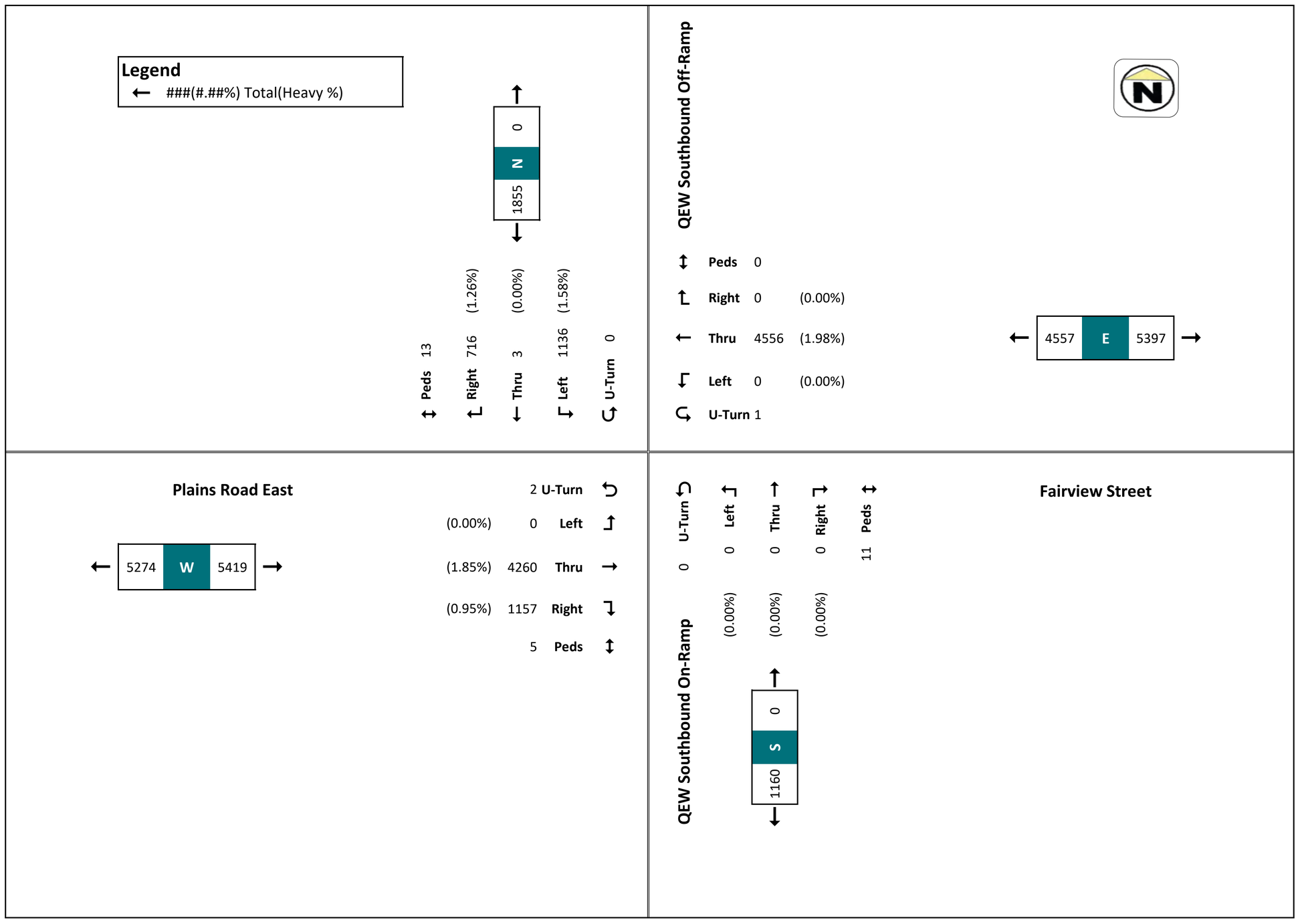
LEA Consulting Ltd.

625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

Intersection : QEW Southbound Off-Ramp & Fairview Street
Survey Date : February 19, 2026
Project No. : 24224.01
Count ID : 25471

Turning Movement Count - QEW Southbound Off-Ramp & Fairview Street

	QEW Southbound Off-Ramp Southbound						Fairview Street Westbound						QEW Southbound On-Ramp Northbound						Plains Road East Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
7:30	0	24	1	9	0	34	0	0	103	0	0	103	0	0	0	0	0	0	0	0	203	52	0	255	392
7:45	0	19	0	7	1	26	0	0	126	0	0	126	0	0	0	0	0	0	0	0	219	53	0	272	424
Hourly Total	0	74	1	29	2	104	0	0	366	0	0	366	0	0	0	0	0	0	0	0	734	168	0	902	1372
8:00	0	18	0	15	0	33	0	0	126	0	0	126	0	0	0	0	1	0	0	0	221	46	0	267	426
8:15	0	21	0	19	1	40	0	0	127	0	0	127	0	0	0	0	0	0	0	0	223	44	0	267	434
8:30	0	28	0	16	0	44	0	0	151	0	0	151	0	0	0	0	0	0	1	0	277	55	0	333	528
8:45	0	58	0	25	2	83	0	0	177	0	0	177	0	0	0	0	0	0	0	0	239	60	0	299	559
Hourly Total	0	125	0	75	3	200	0	0	581	0	0	581	0	0	0	0	1	0	1	0	960	205	0	1166	1947
9:00	0	29	0	19	0	48	0	0	142	0	0	142	0	0	0	0	0	0	0	0	194	37	0	231	421
9:15	0	48	1	18	1	67	0	0	166	0	0	166	0	0	0	0	0	0	0	0	232	44	0	276	509
Hourly Total	0	77	1	37	1	115	0	0	308	0	0	308	0	0	0	0	0	0	0	0	426	81	0	507	930
* Break *																									
16:00	0	82	0	39	0	121	0	0	315	0	0	315	0	0	0	0	1	0	0	0	252	82	0	334	770
16:15	0	80	0	60	0	140	0	0	319	0	0	319	0	0	0	0	1	0	0	0	216	85	2	301	760
16:30	0	103	0	53	1	156	0	0	360	0	0	360	0	0	0	0	1	0	0	0	222	88	0	310	826
16:45	0	97	0	70	1	167	0	0	360	0	0	360	0	0	0	0	2	0	0	0	217	71	2	288	815
Hourly Total	0	362	0	222	2	584	0	0	1354	0	0	1354	0	0	0	0	5	0	0	0	907	326	4	1233	3171
17:00	0	91	0	53	1	144	0	0	348	0	0	348	0	0	0	0	1	0	1	0	217	84	0	302	794
17:15	0	91	0	53	2	144	0	0	317	0	0	317	0	0	0	0	2	0	0	0	231	56	1	287	748
17:30	0	111	0	58	0	169	0	0	304	0	0	304	0	0	0	0	2	0	0	0	213	65	0	278	751
17:45	0	97	0	57	0	154	1	0	336	0	0	337	0	0	0	0	0	0	0	0	198	50	0	248	739
Hourly Total	0	390	0	221	3	611	1	0	1305	0	0	1306	0	0	0	0	5	0	1	0	859	255	1	1115	3032
18:00	0	61	1	61	1	123	0	0	323	0	0	323	0	0	0	0	0	0	0	0	191	65	0	256	702
18:15	0	47	0	71	1	118	0	0	319	0	0	319	0	0	0	0	0	0	0	0	183	57	0	240	677
Hourly Total	0	108	1	132	2	241	0	0	642	0	0	642	0	0	0	0	0	0	0	0	374	122	0	496	1379
Grand Total	0	1136	3	716	13	1855	1	0	4556	0	0	4557	0	0	0	0	11	0	2	0	4260	1157	5	5419	11831
Approach %	0.0%	61.2%	0.2%	38.6%	-	-	0.0%	0.0%	100.0%	0.0%	-	-	-	-	-	-	-	-	0.0%	0.0%	78.6%	21.4%	-	-	-
Total %	0.0%	9.6%	0.0%	6.1%	-	15.7%	0.0%	0.0%	38.5%	0.0%	-	38.5%	0.0%	0.0%	0.0%	0.0%	-	0.0%	0.0%	0.0%	36.0%	9.8%	-	45.8%	-
Lights	0	1118	3	707	-	1828	1	0	4466	0	-	4467	0	0	0	0	-	0	2	0	4181	1146	-	5329	11624
% Lights	-	98.4%	100.0%	98.7%	-	98.5%	100.0%	-	98.0%	-	-	98.0%	-	-	-	-	-	-	100.0%	-	98.1%	99.0%	-	98.3%	98.3%
Buses	-	5	0	4	-	9	-	0	37	0	-	37	-	0	0	0	-	0	-	0	33	0	-	33	79
% Buses	-	0.4%	0.0%	0.6%	-	0.5%	-	-	0.8%	-	-	0.8%	-	-	-	-	-	-	-	-	0.8%	0.0%	-	0.6%	0.7%
Trucks	-	13	0	5	-	18	-	0	53	0	-	53	-	0	0	0	-	0	-	0	46	11	-	57	128
% Trucks	-	1.1%	0.0%	-	-	1.0%	-	-	1.2%	-	-	1.2%	-	-	-	-	-	-	-	-	1.1%	1.0%	-	1.1%	1.1%
Bicycles	-	-	-	-	1	1	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	1
Pedestrians	-	-	-	-	13	-	-	-	-	-	0	-	-	-	-	-	11	-	-	-	-	-	5	-	29

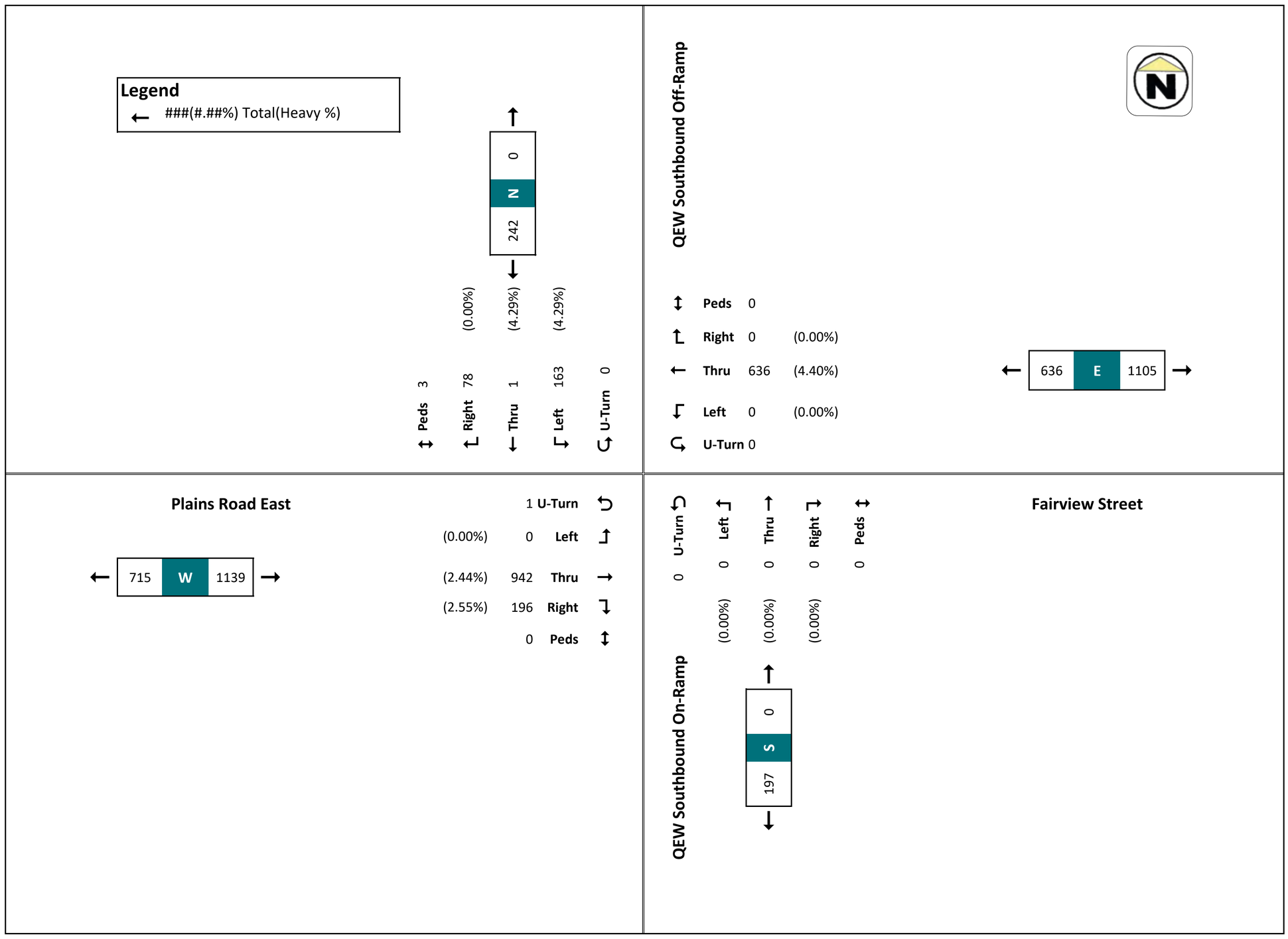


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Markham, ON L3R 9R9

Intersection : QEW Southbound Off-Ramp & Fairview Street
Survey Date : February 19, 2026
Project No. : 24224
Count ID : 25471

AM Peak Hour - QEW Southbound Off-Ramp & Fairview Street

	QEW Southbound Off-Ramp Southbound						Fairview Street Westbound						QEW Southbound On-Ramp Northbound						Plains Road East Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
8:30	0	28	0	16	0	44	0	0	151	0	0	151	0	0	0	0	0	0	1	0	277	55	0	333	528
8:45	0	58	0	25	2	83	0	0	177	0	0	177	0	0	0	0	0	0	0	0	239	60	0	299	559
9:00	0	29	0	19	0	48	0	0	142	0	0	142	0	0	0	0	0	0	0	0	194	37	0	231	421
9:15	0	48	1	18	1	67	0	0	166	0	0	166	0	0	0	0	0	0	0	0	232	44	0	276	509
Hourly Total	0	163	1	78	3	242	0	0	636	0	0	636	0	0	0	0	0	0	1	0	942	196	0	1139	2017
Approach %	0.0%	67.4%	0.4%	32.2%	-	-	0.0%	0.0%	100.0%	0.0%	-	-	-	-	-	-	-	-	0.1%	0.0%	82.7%	17.2%	-	-	-
Total %	0.0%	8.1%	0.0%	3.9%	-	12.0%	0.0%	0.0%	31.5%	0.0%	-	31.5%	0.0%	0.0%	0.0%	0.0%	-	0.0%	0.0%	0.0%	46.7%	9.7%	-	56.5%	-
PHF	0	0.7	0.25	0.78	-	0.73	0	0	0.9	0	-	0.9	0	0	0	0	-	0	0.25	0	0.85	0.82	-	0.86	0.9
Lights	0	156	1	76	-	233	0	0	608	0	-	608	0	0	0	0	-	0	1	0	919	191	-	1111	1952
% Lights	-	95.7%	100.0%	97.4%	-	96.3%	-	-	95.6%	-	-	95.6%	-	-	-	-	-	-	-	-	97.6%	97.4%	-	97.5%	96.8%
Buses	-	1	0	0	-	1	-	0	4	0	-	4	-	0	0	0	-	0	-	0	6	0	-	6	11
% Buses	-	0.6%	0.0%	0.0%	-	0.4%	-	-	0.6%	-	-	0.6%	-	-	-	-	-	-	-	-	0.6%	0.0%	-	0.5%	0.5%
Trucks	-	6	0	2	-	8	-	0	24	0	-	24	-	0	0	0	-	0	-	0	17	5	-	22	54
% Trucks	-	3.7%	0.0%	2.6%	-	3.3%	-	-	3.8%	-	-	3.8%	-	-	-	-	-	-	-	-	1.8%	2.6%	-	1.9%	2.7%
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	0
Pedestrians	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	3



LEA Consulting Ltd.
625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

Intersection : QEW Southbound Off-Ramp & Fairview Street
Survey Date : February 19, 2026
Project No. : 24224
Count ID : 25471

PM Peak Hour - QEW Southbound Off-Ramp & Fairview Street

	QEW Southbound Off-Ramp Southbound						Fairview Street Westbound						QEW Southbound On-Ramp Northbound						Plains Road East Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
16:15	0	80	0	60	0	140	0	0	319	0	0	319	0	0	0	0	1	0	0	0	216	85	2	301	760
16:30	0	103	0	53	1	156	0	0	360	0	0	360	0	0	0	0	1	0	0	0	222	88	0	310	826
16:45	0	97	0	70	1	167	0	0	360	0	0	360	0	0	0	0	2	0	0	0	217	71	2	288	815
17:00	0	91	0	53	1	144	0	0	348	0	0	348	0	0	0	0	1	0	1	0	217	84	0	302	794
Hourly Total	0	371	0	236	3	607	0	0	1387	0	0	1387	0	0	0	0	5	0	1	0	872	328	4	1201	3195
Approach %	0.0%	61.1%	0.0%	38.9%	-	-	0.0%	0.0%	100.0%	0.0%	-	-	-	-	-	-	-	-	0.1%	0.0%	72.6%	27.3%	-	-	-
Total %	0.0%	11.6%	0.0%	7.4%	-	19.0%	0.0%	0.0%	68.8%	0.0%	-	43.4%	0.0%	0.0%	0.0%	0.0%	-	0.0%	0.0%	0.0%	43.2%	16.3%	-	37.6%	-
PHF	0	0.9	0	0.84	-	0.91	0	0	0.96	0	-	0.96	0	0	0	0	-	0	0.25	0	0.98	0.93	-	0.97	0.97
Lights	0	368	0	236	-	604	0	0	1367	0	-	1367	0	0	0	0	-	0	1	0	859	327	-	1187	3158
% Lights	-	99.2%	-	100.0%	-	99.5%	-	-	98.6%	-	-	98.6%	-	-	-	-	-	-	-	-	98.5%	99.7%	-	98.8%	98.8%
Buses	-	1	0	0	-	1	-	0	12	0	-	12	-	0	0	0	-	0	-	0	8	0	-	8	21
% Buses	-	0.3%	-	0.0%	-	0.2%	-	-	0.9%	-	-	0.9%	-	-	-	-	-	-	-	-	0.9%	0.0%	-	0.7%	0.7%
Trucks	-	2	0	0	-	2	-	0	8	0	-	8	-	0	0	0	-	0	-	0	5	1	-	6	16
% Trucks	-	0.5%	-	0.0%	-	0.3%	-	-	0.6%	-	-	0.6%	-	-	-	-	-	-	-	-	0.6%	0.3%	-	0.5%	0.5%
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	0
Pedestrians	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	4



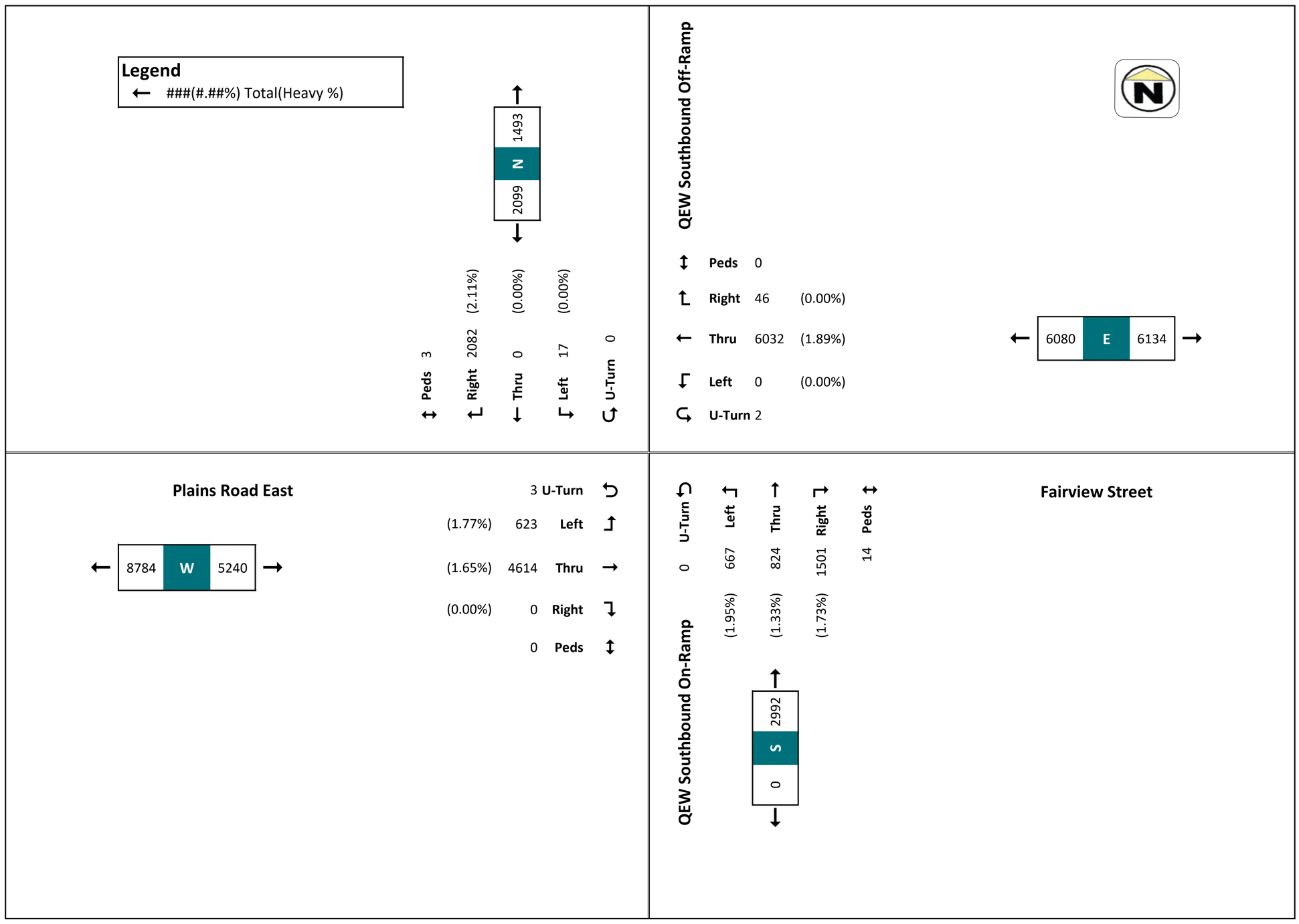
LEA Consulting Ltd.

625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

Intersection : QEW Southbound Off-Ramp & Fairview Street
Survey Date : February 19, 2026
Project No. : 24224.01
Count ID : 25471

Turning Movement Count - QEW Southbound Off-Ramp & Fairview Street

	QEW Southbound Off-Ramp Southbound						Fairview Street Westbound						QEW Southbound On-Ramp Northbound						Plains Road East Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
7:00	0	1	0	37	0	38	0	0	82	1	0	83	0	12	52	97	0	161	0	13	120	0	0	133	415
7:15	0	0	0	70	0	70	0	0	113	2	0	115	0	16	88	109	0	213	0	25	166	0	0	191	589
7:30	0	0	0	63	0	63	0	0	165	1	0	166	0	19	63	105	0	187	1	30	198	0	0	229	645
7:45	0	0	0	72	0	72	0	0	149	0	0	149	0	23	48	109	0	180	0	30	236	0	0	266	667
Hourly Total	0	1	0	242	0	243	0	0	509	4	0	513	0	70	251	420	0	741	1	98	720	0	0	819	2316
8:00	0	0	0	55	0	55	0	0	164	1	0	165	0	26	39	70	1	135	0	30	189	0	0	219	574
8:15	0	0	0	66	0	66	0	0	171	2	0	173	0	16	33	79	0	128	0	32	206	0	0	238	605
8:30	0	1	0	80	0	81	0	0	165	1	0	166	0	24	45	73	0	142	0	42	232	0	0	274	663
8:45	0	1	0	87	1	88	0	0	167	1	0	168	0	17	35	58	0	110	0	39	248	0	0	287	653
Hourly Total	0	2	0	288	1	290	0	0	667	5	0	672	0	83	152	280	1	515	0	143	875	0	0	1018	2495
9:00	0	1	0	70	0	71	0	0	155	1	0	156	0	9	31	61	0	101	0	27	198	0	0	225	553
9:15	0	1	0	80	1	81	0	0	149	0	0	149	0	20	25	55	0	100	0	33	227	0	0	260	590
Hourly Total	0	2	0	150	1	152	0	0	304	1	0	305	0	29	56	116	0	201	0	60	425	0	0	485	1143
* Break *																									
16:00	0	1	0	150	0	151	0	0	440	4	0	444	0	26	40	55	2	121	1	43	286	0	0	330	1046
16:15	0	2	0	142	0	144	1	0	404	2	0	407	0	46	40	71	2	157	0	32	262	0	0	294	1002
16:30	0	0	0	137	0	137	0	0	423	1	0	424	0	54	42	87	3	183	0	35	274	0	0	309	1053
16:45	0	3	0	146	0	149	0	0	489	6	0	495	0	52	39	69	0	160	0	27	266	0	0	293	1097
Hourly Total	0	6	0	575	0	581	1	0	1756	13	0	1770	0	178	161	282	7	621	1	137	1088	0	0	1226	4198
17:00	0	2	0	141	1	143	0	0	485	6	0	491	0	52	41	77	2	170	0	36	261	0	0	297	1101
17:15	0	0	0	147	0	147	0	0	446	4	0	450	0	46	43	76	2	165	0	30	275	0	0	305	1067
17:30	0	1	0	138	0	139	0	0	485	5	0	490	0	45	31	68	1	144	0	29	288	0	0	317	1090
17:45	0	0	0	147	0	147	0	0	480	3	0	483	0	46	37	72	0	155	0	28	272	0	0	300	1085
Hourly Total	0	3	0	573	1	576	0	0	1896	18	0	1914	0	189	152	293	5	634	0	123	1096	0	0	1219	4343
18:00	0	2	0	134	0	136	0	0	461	3	0	464	0	60	19	60	1	139	0	33	212	0	0	245	984
18:15	0	1	0	120	0	121	1	0	439	2	0	442	0	58	33	50	0	141	1	29	198	0	0	228	932
Hourly Total	0	3	0	254	0	257	1	0	900	5	0	906	0	118	52	110	1	280	1	62	410	0	0	473	1916
Grand Total	0	17	0	2082	3	2099	2	0	6032	46	0	6080	0	667	824	1501	14	2992	3	623	4614	0	0	5240	16411
Approach %	0.0%	0.8%	0.0%	99.2%	-	-	0.0%	0.0%	99.2%	0.8%	-	-	0.0%	22.3%	27.5%	50.2%	-	-	0.1%	11.9%	88.1%	0.0%	-	-	-
Total %	0.0%	0.1%	0.0%	12.7%	-	12.8%	0.0%	0.0%	36.8%	0.3%	-	37.0%	0.0%	4.1%	5.0%	9.1%	-	18.2%	0.0%	3.8%	28.1%	0.0%	-	31.9%	-
Lights	0	17	0	2038	-	2055	2	0	5918	46	-	5966	0	654	813	1475	-	2942	3	612	4538	0	-	5153	16116
% Lights	-	100.0%	-	97.9%	-	97.9%	100.0%	-	98.1%	100.0%	-	98.1%	-	98.1%	98.7%	98.3%	-	98.3%	100.0%	98.2%	98.4%	-	-	98.3%	98.2%
Buses	-	0	0	4	-	4	-	0	43	0	-	43	-	0	2	8	-	10	-	4	36	0	-	40	97
% Buses	-	0.0%	-	0.2%	-	0.2%	-	-	0.7%	0.0%	-	0.7%	-	0.0%	0.2%	0.5%	-	0.3%	-	0.6%	0.8%	-	-	0.8%	0.6%
Trucks	-	0	0	40	-	40	-	0	71	0	-	71	-	13	9	18	-	40	-	7	40	0	-	47	198
% Trucks	-	0.0%	-	-	-	1.9%	-	-	1.2%	0.0%	-	1.2%	-	1.9%	1.1%	1.2%	-	1.3%	-	1.1%	0.9%	-	-	0.9%	1.2%
Bicycles	-	-	-	-	1	1	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	1
Pedestrians	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	14	-	-	-	-	-	0	-	17

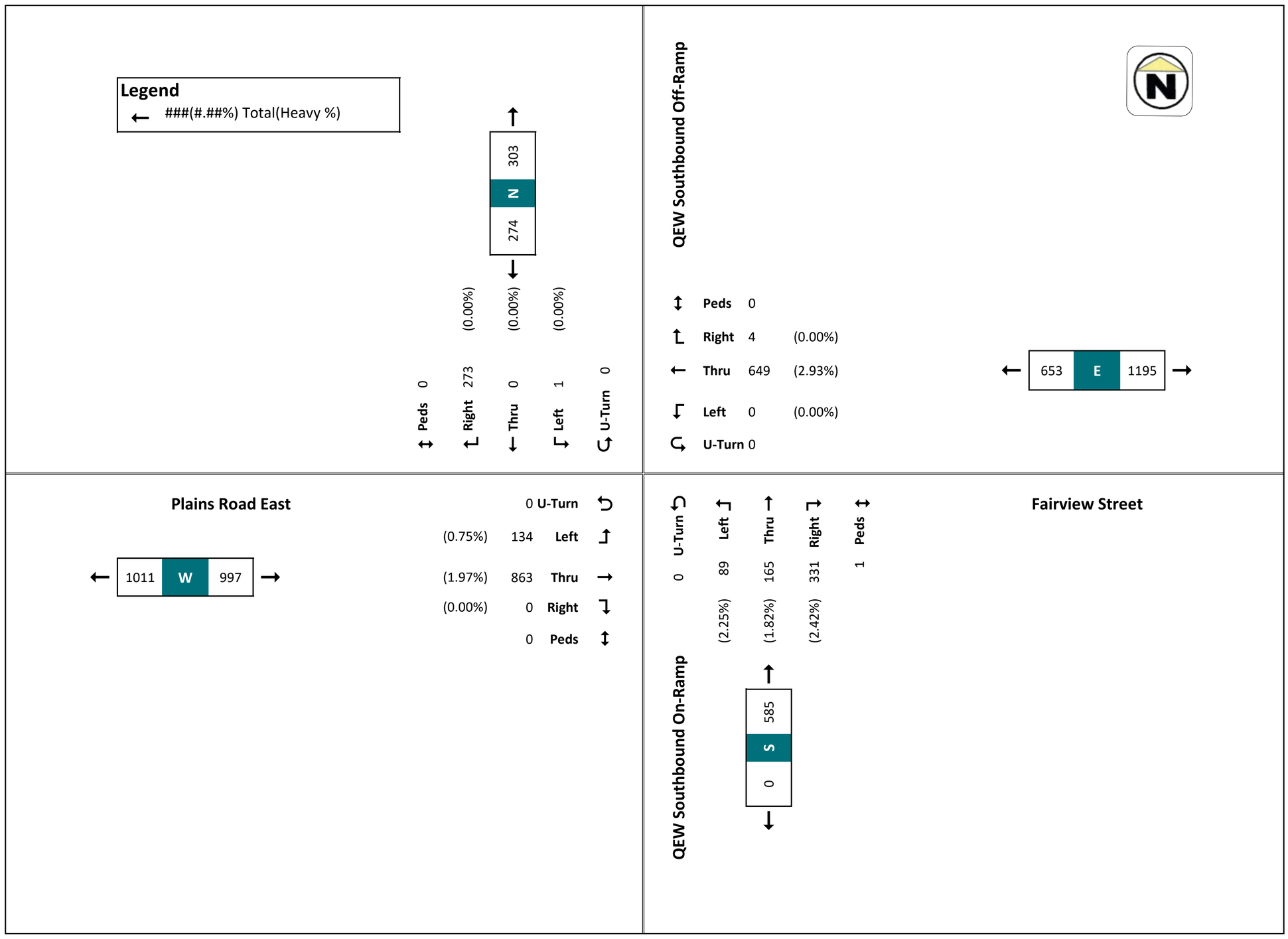


LEA Consulting Ltd.
625 Cochrane Drive, 5th Floor
Markham, ON L3R 9R9

Intersection : QEW Southbound Off-Ramp & Fairview Street
Survey Date : February 19, 2026
Project No. : 24224
Count ID : 25471

AM Peak Hour - QEW Southbound Off-Ramp & Fairview Street

	QEW Southbound Off-Ramp Southbound						Fairview Street Westbound						QEW Southbound On-Ramp Northbound						Plains Road East Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
7:45	0	0	0	72	0	72	0	0	149	0	0	149	0	23	48	109	0	180	0	30	236	0	0	266	667
8:00	0	0	0	55	0	55	0	0	164	1	0	165	0	26	39	70	1	135	0	30	189	0	0	219	574
8:15	0	0	0	66	0	66	0	0	171	2	0	173	0	16	33	79	0	128	0	32	206	0	0	238	605
8:30	0	1	0	80	0	81	0	0	165	1	0	166	0	24	45	73	0	142	0	42	232	0	0	274	663
Hourly Total	0	1	0	273	0	274	0	0	649	4	0	653	0	89	165	331	1	585	0	134	863	0	0	997	2509
Approach %	0.0%	0.4%	0.0%	99.6%	-	-	0.0%	0.0%	99.4%	0.6%	-	-	0.0%	15.2%	28.2%	56.6%	-	-	0.0%	13.4%	86.6%	0.0%	-	-	-
Total %	0.0%	0.0%	0.0%	10.9%	-	10.9%	0.0%	0.0%	25.9%	0.2%	-	26.0%	0.0%	3.5%	6.6%	13.2%	-	23.3%	0.0%	5.3%	34.4%	0.0%	-	39.7%	-
PHF	0	0.25	0	0.85	-	0.85	0	0	0.95	0.5	-	0.94	0	0.86	0.86	0.76	-	0.81	0	0.8	0.91	0	-	0.91	0.94
Lights	0	1	0	267	-	268	0	0	630	4	-	634	0	87	162	323	-	572	0	133	846	0	-	979	2453
% Lights	-	100.0%	-	97.8%	-	97.8%	-	-	97.1%	100.0%	-	97.1%	-	97.8%	98.2%	97.6%	-	97.8%	-	99.3%	98.0%	-	-	98.2%	97.8%
Buses	-	0	0	1	-	1	-	0	7	0	-	7	-	0	0	0	-	0	-	0	6	0	-	6	14
% Buses	-	0.0%	-	0.4%	-	0.4%	-	-	1.1%	0.0%	-	1.1%	-	0.0%	0.0%	0.0%	-	0.0%	-	0.0%	0.7%	-	-	0.6%	0.6%
Trucks	-	0	0	5	-	5	-	0	12	0	-	12	-	2	3	8	-	13	-	1	11	0	-	12	42
% Trucks	-	0.0%	-	1.8%	-	1.8%	-	-	1.8%	0.0%	-	1.8%	-	2.2%	1.8%	2.4%	-	2.2%	-	0.7%	1.3%	-	-	1.2%	1.7%
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	0

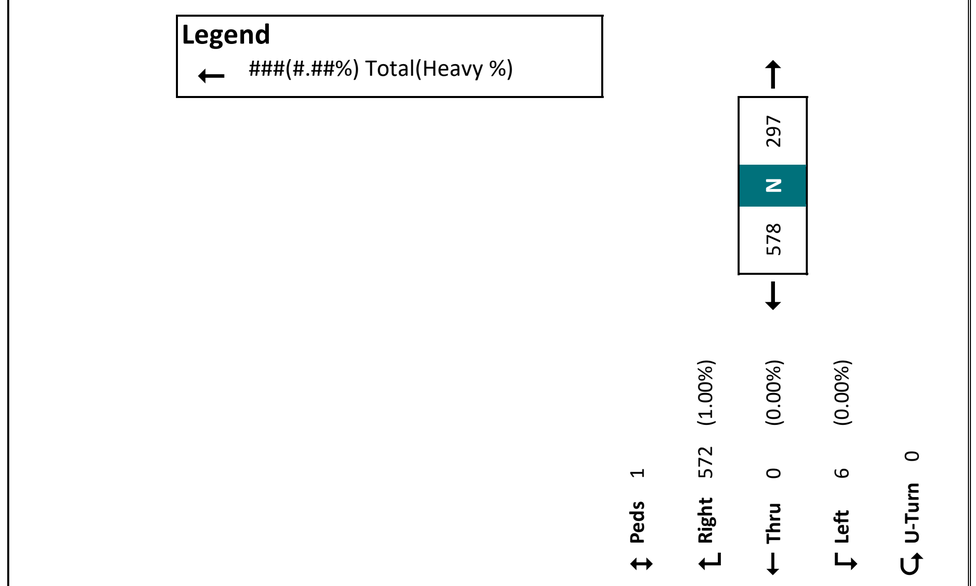


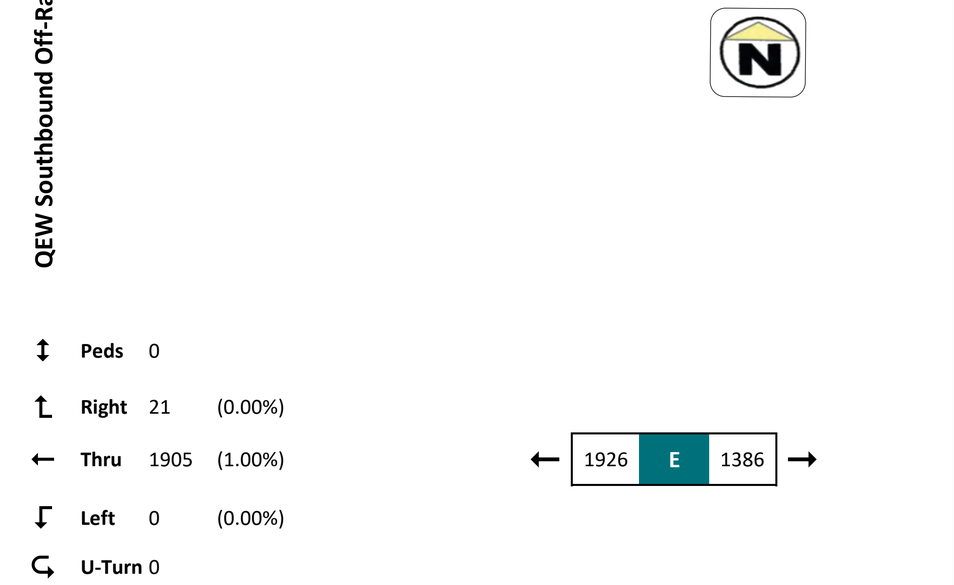
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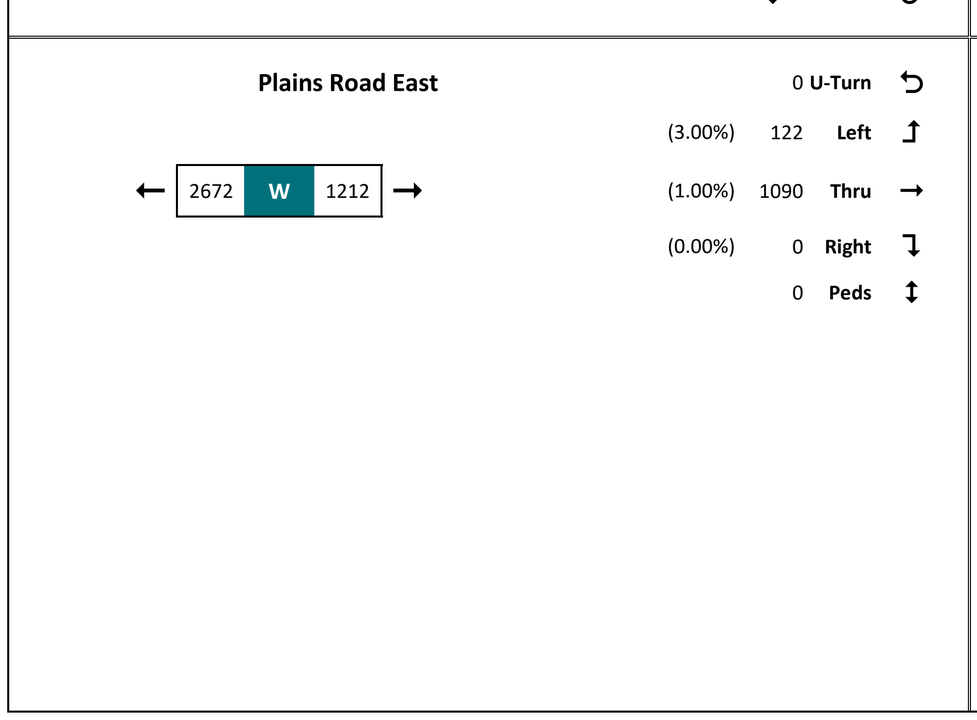
Intersection : QEW Southbound Off-Ramp & Fairview Street
Survey Date : February 19, 2026
Project No. : 24224
Count ID : 25471

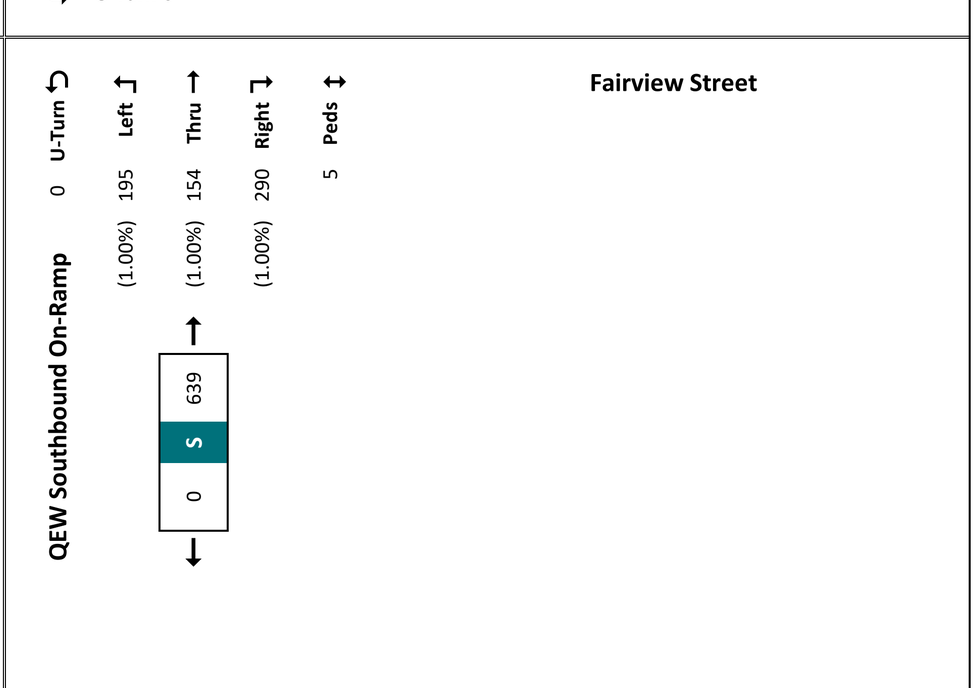
PM Peak Hour - QEW Southbound Off-Ramp & Fairview Street

	QEW Southbound Off-Ramp Southbound						Fairview Street Westbound						QEW Southbound On-Ramp Northbound						Plains Road East Eastbound						
Start Time	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Grand Total
16:45	0	3	0	146	0	149	0	0	489	6	0	495	0	52	39	69	0	160	0	27	266	0	0	293	1097
17:00	0	2	0	141	1	143	0	0	485	6	0	491	0	52	41	77	2	170	0	36	261	0	0	297	1101
17:15	0	0	0	147	0	147	0	0	446	4	0	450	0	46	43	76	2	165	0	30	275	0	0	305	1067
17:30	0	1	0	138	0	139	0	0	485	5	0	490	0	45	31	68	1	144	0	29	288	0	0	317	1090
Hourly Total	0	6	0	572	1	578	0	0	1905	21	0	1926	0	195	154	290	5	639	0	122	1090	0	0	1212	4355
Approach %	0.0%	1.0%	0.0%	99.0%	-	-	0.0%	0.0%	98.9%	1.1%	-	-	0.0%	30.5%	24.1%	45.4%	-	-	0.0%	10.1%	89.9%	0.0%	-	-	-
Total %	0.0%	0.1%	0.0%	13.1%	-	13.3%	0.0%	0.0%	75.9%	0.5%	-	44.2%	0.0%	7.8%	6.1%	11.6%	-	14.7%	0.0%	4.9%	43.4%	0.0%	-	27.8%	-
PHF	0	0.5	0	0.97	-	0.97	0	0	0.97	0.88	-	0.97	0	0.94	0.9	0.94	-	0.94	0	0.85	0.95	0	-	0.96	0.99
Lights	0	6	0	565	-	571	0	0	1883	21	-	1904	0	193	152	287	-	632	0	118	1079	0	-	1197	4304
% Lights	-	100.0%	-	98.8%	-	98.8%	-	-	98.8%	100.0%	-	98.9%	-	99.0%	98.7%	99.0%	-	98.9%	-	96.7%	99.0%	-	-	98.8%	98.8%
Buses	-	0	0	0	-	0	-	0	10	0	-	10	-	0	0	2	-	2	-	2	8	0	-	10	22
% Buses	-	0.0%	-	0.0%	-	0.0%	-	-	0.5%	0.0%	-	0.5%	-	0.0%	0.0%	0.7%	-	0.3%	-	1.6%	0.7%	-	-	0.8%	0.5%
Trucks	-	0	0	7	-	7	-	0	12	0	-	12	-	2	2	1	-	5	-	2	3	0	-	5	29
% Trucks	-	0.0%	-	1.2%	-	1.2%	-	-	0.6%	0.0%	-	0.6%	-	1.0%	1.3%	0.3%	-	0.8%	-	1.6%	0.3%	-	-	0.4%	0.7%
Bicycles	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	-	-	-	-	0	0	0
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	1









Intersection Name:	TS ID:	Line No:	Model:	IP address:	Controller Make:
Brant St @ Fairview St	151	1	ACS/3	172.22.66.2	Econolite

Type of Operation: 8 Phase Semi-Actuated

*-Start from Main Menu

No	Date			Description	Prepared by
	Y	M	D		MA
1	2016	12	6	Timing Changed(optimization) Amber & Allred changed as per OTM Book 12	

PHASE DESCRIPTION

Ph1	SBLT- Brant Street	Ph5	NBLT- Brant Street
Ph2	NB- Brant Street	Ph6	SB- Brant Street
Ph3	WBLT-Fairview Street	Ph7	EBLT-Fairview Street
Ph4	EB-Fairview Street	Ph8	WB-Fairview Street

PHASE IN USE/EXCLUSIVE PED (MM) *- 1 - 2

Phase:	1	2	3	4	5	6	7	8
Phase in Use	X	X	X	X	X	X	X	X
Exclusive PED								

CONTROLLER TIMING DATA - VEHICLE TIMING * - 2 - 1

Timing Plan: 1

	Phase: 1	2	3	4	5	6	7	8
Minimum Green	7	8	7	8	7	8	7	8
Walk		7		7		7		7
Ped. Clearance		17		17		17		17
Pedestrian Carry Over								
Vehicle Extension	3	3	3	3	3	3	3	3
MAX 1	15	40	15	35	15	40	15	35
MAX 2	15	40	15	35	15	40	15	35
Yellow Change	3	3.3	3	3.7	3	3.3	3	3.7
Red Clearance	1	3.2	1	2.7	1	3.2	1	2.7
Phase Minimum:	12	31.5	12	31.4	12	31.5	12	31.4

PHASE DATA - VEHICLE AND PEDESTRIAN RECALLS * - 2 - 8

Phase:	1	2	3	4	5	6	7	8
Lock Detector								
Vehicle Recall								
Pedestrian Recall		X				X		
MAX Recall		X				X		
Min Recall								

COORDINATION: COORDINATOR PATTERN, SPLIT PATTERN *** - 3 - 2, - 3 - 3**

Coordinator Pattern (CP)	Cycle Length	Offset (sec)	Timing Plan	Split Pattern	Phases (sec)							
					1	2	3	4	5	6	7	8
1	110	107	1	1	18	36	12	44	12	42	21	35
2	110	70	1	2	19	34	12	45	19	34	17	40
3	120	89	1	3	22	36	20	42	22	36	13	49
4	100	0	1	4	15	36	15	34	15	36	15	34
5	120	0	1	5	17	37	19	47	17	37	14	52
10	0	0	1	10	0	0	0	0	0	0	0	0

TIME BASE: ACTION PLAN, DAY PLAN *** - 5 - 2, - 5 - 3, -5 - 4**

Day Plan	Sched. #	Action Plan	Time Period	Pattern	Timing Plan
1	1	1	06:00	1	1
1	1	2	09:00	2	1
1	1	3	15:15	3	1
1	1	5	17:15	5	1
1	1	3	17:30	3	1
1	1	5	18:00	5	1
1	1	3	18:15	3	1
1	1	2	19:00	2	1
1	1	10	21:30	254	1
2	2	4	07:00	4	1
2	2	1	08:30	1	1
2	2	4	17:30	4	1
2	2	10	23:00	254	1
3	3	4	07:30	4	1
3	3	1	12:00	1	1
3	3	4	17:30	4	1
3	3	10	22:00	254	1

Schedule 1 = Day Plan 1
Schedule 2 = Day Plan 2
Schedule 3 = Day Plan 3

Day Plan 1 (Weekday)
Day Plan 2 (Saturday)
Day Plan 3 (Sunday, Holidays)

Action Plan 10 = free (254)

Special Programming:

TIME BASE DATA - TIME OF YEAR EVENTS *** - 5 - 5**

Events	Exception Day		MON/ MON	DOW/ DOW	WOM/ Year	Day Plan
New Year's Day	1	Fixed	1	1	0	3
Family Day	2	Float	2	2	3	3
Good Friday	3	Float	4	6	1	3
Victoria Day	4	Float	5	2	3	3
Canada Day	5	Fixed	7	1	0	3
Civic Day	6	Float	8	2	1	3
Labour Day	7	Float	9	2	1	3
Thanksgiving	8	Float	10	2	2	3
Christmas Day	9	Fixed	12	25	0	3

Sum of 1&2		Sum of 3&4		Calculated	
				Total 1-4	Total 5-8
				Actual	Actual
1&2	5&6	3&4	7&8		
54	54	56	56	110	110
53	53	57	57	110	110
58	58	62	62	120	120
51	51	49	49	100	100
54	54	66	66	120	120
0	0	0	0	0	0
0	0	0	0	0	0

Intersection Name:	TS ID:	Line No:	Model:	IP address:	Controller Make:
Brant St @ Plains Rd	161	1	ACS/3	172.22.68.2	Econolite

Type of Operation: 8 Phase Semi-Actuated

*-Start from Main Menu

No	Date			Description	Prepared by
	Y	M	D		BP
4	2018	3	9	equipment repaired, timing reverted back to orginial	

PHASE DESCRIPTION

Ph1	SBLT- Brant Street	Ph5	NBLT- Brant Street
Ph2	NB- Brant Street	Ph6	SB- Brant Street
Ph3	WBLT-Plains Rd	Ph7	EBLT-Plains Rd
Ph4	EB-Plains Rd	Ph8	WB-Plains Rd

PHASE IN USE/EXCLUSIVE PED (MM) *- 1 - 2

Phase:	1	2	3	4	5	6	7	8
Phase in Use	X	X	X	X	X	X	X	X
Exclusive PED								

CONTROLLER TIMING DATA - VEHICLE TIMING * - 2 - 1

Timing Plan: 1	Phase: 1	2	3	4	5	6	7	8
Minimum Green	7	8	7	8	7	8	7	8
Walk		7		7		7		7
Ped. Clearance		18		18		18		18
Pedestrian Carry Over								
Vehicle Extension	3	3	3	3	3	3	3	3
MAX 1	15	40	20	25	10	40	20	25
MAX 2	15	40	20	25	10	40	20	25
Yellow Change	3	3.7	3	3.7	3	3.7	3	3.7
Red Clearance	1	2.3	2	2.6	1	2.3	2	2.6
Phase Minimum:	**12**	**32**	**12**	**32.3**	**12**	**32**	**12**	**32.3**

PHASE DATA - VEHICLE AND PEDESTRIAN RECALLS * - 2 - 8

Phase:	1	2	3	4	5	6	7	8
Lock Detector								
Vehicle Recall								
Pedestrian Recall		X				X		
MAX Recall		X				X		
Min Recall								

COORDINATION: COORDINATOR PATTERN, SPLIT PATTERN *** - 3 - 2, - 3 - 3**

Coordinator Pattern (CP)	Cycle Length	Offset (sec)	Timing Plan	Split Pattern	Phases (sec)							
					1	2	3	4	5	6	7	8
1	110	40	1	1	20	35	14	41	12	43	25	30
2	110	30	1	2	12	41	21	36	12	41	26	31
3	120	45	1	3	14	48	24	34	14	48	24	34
4	100	0	1	4	14	42	15	29	14	42	23	21
5	120	45	1	5	13	42	29	36	13	42	29	36
6	120	44	1	6	21	39	15	45	12	47	24	37
10	0	0	1	10	0	0	0	0	0	0	0	0

TIME BASE: ACTION PLAN, DAY PLAN *** - 5 - 2, - 5 - 3, -5 - 4**

Day Plan	Sched. #	Action Plan	Time Period	Pattern	Timing Plan
1	1	1	06:00	1	1
1	1	2	09:00	2	1
1	1	3	15:15	3	1
1	1	5	16:15	5	1
1	1	3	16:45	3	1
1	1	2	19:00	2	1
1	1	10	21:30	254	1
2	2	4	07:00	4	1
2	2	6	08:30	6	1
2	2	4	17:30	4	1
2	2	10	23:00	254	1
3	3	4	07:30	4	1
3	3	6	12:00	6	1
3	3	4	17:30	4	1
3	3	10	22:00	254	1

Schedule 1 = Day Plan 1
Schedule 2 = Day Plan 2
Schedule 3 = Day Plan 3

Day Plan 1 (Weekday)
Day Plan 2 (Saturday)
Day Plan 3 (Sunday, Holidays)

Action Plan 10 = free (254)

Special Programming:

Intersection Name:	TS ID:	Group NO:	IP address:
Brant St @ South Ramp	163		172.24.71.2
Controller Make:	**Model:**	**Firmware Rev. No:**	
Econolite	ACS/3		

Type of Operation 8 Phase Semi-Actuated

Revision

NO	Date Y	Date M	Date D	Description	Prepared by
2	2021	10	4	Mofified to match Centracs	PH

*- Start From Main Menu

PHASE DESCRIPTION

Ph1		Ph5	
Ph2	NB - Brant St.	PH6	SB - Brant St.
Ph3		Ph7	
Ph4	EB- South Ramp	Ph8	

CONTROLLER TIMING DATA - VEHICLE TIMINGS (4 available) *** - 2 - 1**

Timing Plan: 1

Phase:	1	2	3	4	5	6	7	8
Minimum Green :		8		8		8		
Conditional Service Min. Green :								
Walk :		7		7		7		
Ped. Clearance :		15		23		15		
Pedestrians Carry Over :								
Vehicle Extension :		3		3		3		
MAX 1 :		45		25		45		
MAX 2 :		45		25		45		
Yellow Change :		4		4		4		
Red Clearance :		2		3		2		

PHASE DATA - VEHICLE AND PEDESTRIAN RECALLS *** - 2 - 8**

Phase:	1	2	3	4	5	6	7	8
Lock Detector :								
Vehicle Recall :								
Pedestrian Recall :		X				X		
MAX Recall :		X				X		
Soft Recall :								

COORDINATION: COORDINATOR PATTERN, SPLIT PATTERN *** - 3 - 2, - 3 - 3**

Coordinator Pattern (CP)	Cycle Length	Offset (sec)	Timing Plan	Split Pattern	Phases (sec) 1	2	3	4	5	6	7	8
1	110	6	1	1		67		43		67		
2	110	105	1	2		67		43		67		
3	120	49	1	3		77		43		77		
4	100	0	1	4		75		25		75		
10	0	0	1	10		0		0		0		

Intersection Name:	TS ID:	Group NO:	IP address:
Brant St @ South Ramp	163		172.24.71.2
Controller Make:	**Model:**	**Firmware Rev. No:**	
Econolite	ACS/3		

CP # 1, 2,3,4& 10	Phase:	1	2	3	4	5	6	7	8
Coord Phase	:		X				X		
Vehicle Recall	:								
Pedestrian Recall *(3-3, 5-2)	:		X				X		
Recall to MAX Time	:								
Phase Omit	:								
Special Function Outputs	:								

Coordinator Pattern #	Prefer.	Phase							
		1	2	3	4	5	6	7	8
	1								
	2								

X - select "." deselect

TIME BASE: ACTION PLAN, DAY PLAN *** - 5 - 2, - 5 - 3, - 5 - 4**

Day Plan	Sched. #	Action Plan	Time Period	Pattern	Timing Plan
1	1	1	06:00	1	1
1	1	2	09:00	2	1
1	1	3	15:15	3	1
1	1	2	19:00	2	1
1	1	10	21:30	254	1
2	2	4	07:00	4	1
2	2	1	08:30	1	1
2	2	4	17:30	4	1
2	2	10	23:00	254	1
3	3	4	07:30	4	1
3	3	1	12:00	1	1
3	3	4	17:30	4	1
3	3	10	22:00	254	1

Schedule 1 = Day Plan 1
Schedule 2 = Day Plan 2
Schedule 3 = Day Plan 3

Day Plan 1 (Weekday)
Day Plan 2 (Saturday)
Day Plan 3 (Sunday, Holidays)

Action Plan 10 = free (254)

TIME BASE DATA - TIME OF YEAR EVENTS *** - 5 - 5**

Events	Exception Day		MON/ MON	DOW/ DOM	WOM/ Year	Day Plan
New Year's Day	1	Fixed	01	1	0	3
Family Day	2	Float	2	2	3	3
Good Friday	3	Float	04	6	1	3
Victoria Day	4	Float	05	2	3	3
Canada Day	5	Fixed	07	1	0	3
Civic Day	6	Float	08	2	1	3
Labour Day	7	Float	09	2	1	3
Thanksgiving	8	Float	10	2	2	3
Christmas Day	9	Fixed	12	25	0	3

Intersection Name:	TS ID:	Group NO:	IP address:
Brant St @ North Ramp	164		172.22.72.2
Controller Make: Econolite	**Model:** ACS/3	**Firmware Rev. No:**	

Type of Operation 8 Phase Semi-Actuated

Revision

NO	Date Y	Date M	Date D	Description	Prepared by
1	2015	11	24	Removed overnight CC	MA

*- Start From Main Menu

PHASE DESCRIPTION

Ph1		Ph5	NBL-Brant St
Ph2	NB - Brant St.	PH6	SB - Brant St.
Ph3		Ph7	
Ph4	EB- Duplicate Phase	Ph8	WB- North Ramp

CONTROLLER TIMING DATA - VEHICLE TIMINGS (4 available) * - 2 - 1

Timing Plan: 1	Phase:	1	2	3	4	5	6	7	8
Minimum Green	:		8			7	8		8
Conditional Service Min. Green	:								
Walk	:		7				7		7
Ped. Clearance	:		15				15		23
Pedestrians Carry Over	:								
Vehicle Extension	:		3			3	3		3
MAX 1	:		50			12	50		30
MAX 2	:		50			12	50		30
Yellow Change	:		4			3	4		4
Red Clearance	:		2			1	2		3

PHASE DATA - VEHICLE AND PEDESTRIAN RECALLS * - 2 - 8

Phase:	1	2	3	4	5	6	7	8
Lock Detector :								
Vehicle Recall :		X				X		
Pedestrian Recall :		X				X		
MAX Recall :								
Soft Recall :								

COORDINATION: COORDINATOR PATTERN, SPLIT PATTERN * - 3 - 2, - 3 - 3

Coordinator Pattern (CP)	Cycle Length	Offset (sec)	Timing Plan	Split Pattern	Phases (sec) 1	2	3	4	5	6	7	8
1	110	100	1	1		67			12	55		43
2	110	100	1	2		67			12	55		43
3	120	31	1	3		77			11	66		43
4	100	0	1	4		70			12	58		30
10	0	0	1	10		0			0	0		0

Intersection Name:	TS ID:	Group NO:	IP address:
Brant St @ North Ramp	164		172.22.72.2
Controller Make:	**Model:**	**Firmware Rev. No:**	
Econolite	ACS/3		

CP # 1, 2,3,4& 10	Phase:	1	2	3	4	5	6	7	8
Coord Phase	:		X				X		
Vehicle Recall	:								
Pedestrian Recall *(3-3, 5-2)	:		X				X		
Recall to MAX Time	:								
Phase Omit	:								
Special Function Outputs	:								

Coordinator Pattern #	Prefer.	Phase 1	2	3	4	5	6	7	8
	1								
	2								

X - select "." deselect

TIME BASE: ACTION PLAN, DAY PLAN *** - 5 - 2, - 5 - 3, - 5 - 4**

Day Plan	Sched. #	Action Plan	Time Period	Pattern	Timing Plan
1	1	1	06:00	1	1
1	1	2	09:00	2	1
1	1	3	15:15	3	1
1	1	2	19:00	2	1
1	1	10	21:30	254	1
2	2	4	07:00	4	1
2	2	1	08:30	1	1
2	2	4	17:30	4	1
2	2	10	23:00	254	1
3	3	4	07:30	4	1
3	3	1	12:00	1	1
3	3	4	17:30	4	1
3	3	10	22:00	254	1

Schedule 1 = Day Plan 1
Schedule 2 = Day Plan 2
Schedule 3 = Day Plan 3

Day Plan 1 (Weekday)
Day Plan 2 (Saturday)
Day Plan 3 (Sunday, Holidays)

Action Plan 10 = free (254)

TIME BASE DATA - TIME OF YEAR EVENTS *** - 5 - 5**

Events	Exception Day		MON/ MON	DOW/ DOM	WOM/ Year	Day Plan
New Year's Day	1	Fixed	01	1	0	3
Family Day	2	Float	2	2	3	3
Good Friday	3	Float	04	6	1	3
Victoria Day	4	Float	05	2	3	3
Canada Day	5	Fixed	07	1	0	3
Civic Day	6	Float	08	2	1	3
Labour Day	7	Float	09	2	1	3
Thanksgiving	8	Float	10	2	2	3
Christmas Day	9	Fixed	12	25	0	3

Intersection Name:	TS ID:	Model:	IP address:	Controller Make:
Fairview @ QEW East Ramp	120	EOS	172.24.24.2	Econolite

Type of Operation: 8 Phase Semi-Actuated

No	Date			Description	Prepared by:
	Y	M	D		
9	2024	10	25	New TSP Plan	SE

*-Start from Main Menu

PHASE DESCRIPTION

Ph1		Ph5	EBLT - Fairview St
Ph2	EB - Fairview St	Ph6	WB - Fairview St
Ph3		Ph7	
Ph4	NB - QEW East Ramp	Ph8	SB- Plains Rd

CONFIGURATION (PHASE SEQ): PHASE IN USE/EXCLUSIVE PED (MM) *- 1 - 6

Phase:	1	2	3	4	5	6	7	8
Phase in Use		X		X	X	X		X
Exclusive PED								

CONTROLLER TIMING PLAN * - 2 - 1

Timing Plan: 1

	Phase: 1	2	3	4	5	6	7	8
Minimum Green		8		8	6	8		8
Pedestrian								
Walk		15		8		15		8
Clear		14		22		14		22
Delay								
Passage		3		3	3	3		3
Max Green								
MAX 1		35		25	15	35		25
MAX 2		35		25	15	35		25
Clearance								
Yellow		3.3		3.3	3	3.3		3.3
Red		2.8		3.1	0	2.8		3.1
Phase Minimum:	0	35.1	0	36.4	9	35.1	0	36.4

PHASE DATA - VEHICLE AND PEDESTRIAN RECALLS * - 2 - 1-6

Phase:	1	2	3	4	5	6	7	8
Lock Detector								
Vehicle Recall								
Pedestrian Recall		X				X		
MAX Recall		X				X		
Min Recall								

SCP STRATEGY PLAN * - 4 -3

PLAN 1									
TIME TO LIVE	130 SECONDS								
SCP PHASE	1	2	3	4	5	6	7	8	
ENABLE	NO	YES	NO	NO	NO	YES	NO	NO	

PLAN 2									
TIME TO LIVE									
SCP PHASE	1	2	3	4	5	6	7	8	
ENABLE									

PLAN 3									
TIME TO LIVE									
SCP PHASE	1	2	3	4	5	6	7	8	
ENABLE									

PLAN 4									
TIME TO LIVE	130 SECONDS								
SCP PHASE	1	2	3	4	5	6	7	8	
ENABLE									

TSP/SCP SPLIT PATTERN * 4 -4 ,

Cycle Length	Plan		Phases							
			1	2	3	4	5	6	7	8
110	1	Max Reduction		11		11		11		11
		Max Extension		11		0		11		0
110	2	Max Reduction		11		11		11		11
		Max Extension		11		0		11		0
130	3	Max Reduction		13		13		13		13
		Max Extension		13		0		13		0
100	4	Max Reduction		10		10		10		10
		Max Extension		10		10		10		0
0	10	Max Reduction		0		0		0		0
		Max Extension		20		0		20		0

EVENT PLAN * - 5 - 2

Event plan	Cycle Length	Offset (sec)	Phases (sec)							
			1	2	3	4	5	6	7	8
1	110	100		77		33	16	61		33
2	110	97		80		30	17	63		30
3	130	119		93		37	16	77		37
4	100	19		70		30	12	58		30
10	0	0		0		0	0	0		0

DAY PLAN

* - 5 - 3, -5 - 4

Day Plan	Name	Event Plan	Time Period
1	1	1	06:00
1	1	2	09:00
1	1	3	15:00
1	1	4	19:00
1	1	10	22:00
2	2	4	08:00
2	2	3	11:30
2	2	4	19:00
2	2	10	22:00
3	3	4	09:00
3	3	10	20:00

Dayplan	
1	Weekday
2	Saturday
3	Sunday & Holiday

Special Programming:

TIME BASE DATA - TIME OF YEAR EVENTS

* - 5 - 5

Events	Exception Day		MON/ MON	DOW/ DOW	WOM/ Year	Day Plan
New Year's Day	1	Fixed	1	1	0	3
Family Day	2	Float	2	2	3	3
Good Friday	3	Float	4	18	0	0
Victoria Day	4	Float	5	2	4	3
Canada Day	5	Fixed	7	1	0	3
Civic Day	6	Float	8	2	1	3
Labour Day	7	Float	9	2	1	3
Thanksgiving	8	Float	10	2	2	3
Christmas Day	9	Fixed	12	25	0	3

Intersection Name:	TS ID:	Line No:	Model:	IP address:	Controller Make:
Plains Rd @ QEW West Ramp	120	1	ACS/3	172.22.23.2	Econolite

Type of Operation: 4 Phase Semi-Actuated

*-Start from Main Menu

No	Date			Description	Prepared by
	Y	M	D		MA
3	2019	5	15	Timing changes from Plains Road Optimization	

PHASE DESCRIPTION

Ph1		Ph5		
Ph2	EB - Plains Road	Ph6	WB - Plains Road	
Ph3		Ph7		
Ph4		Ph8	NB /SB- QEW West Ramp	

PHASE IN USE/EXCLUSIVE PED (MM) *- 1 - 2

Phase:	1	2	3	4	5	6	7	8
Phase in Use		X				X		X
Exclusive PED								

CONTROLLER TIMING DATA - VEHICLE TIMING * - 2 - 1

Timing Plan: 1	Phase: 1	2	3	4	5	6	7	8
Minimum Green		8				8		8
Walk		25				25		8
Ped. Clearance		9				9		21
Pedestrian Carry Over								
Vehicle Extension		3				3		5
MAX 1		35				35		25
MAX 2		35				35		25
Yellow Change		4				4		4
Red Clearance		3				3		3
Phase Minimum:	**1**	**42**	**1**	**1**	**1**	**42**	**1**	**37**

PHASE DATA - VEHICLE AND PEDESTRIAN RECALLS * - 2 - 8

Phase:	1	2	3	4	5	6	7	8
Lock Detector								
Vehicle Recall								
Pedestrian Recall		X				X		
MAX Recall		X				X		
Min Recall								

COORDINATION: COORDINATOR PATTERN, SPLIT PATTERN *** - 3 - 2, - 3 - 3**

Coordinator Pattern (CP)	Cycle Length	Offset (sec)	Timing Plan	Split Pattern	Phases (sec)							
					1	2	3	4	5	6	7	8
1	100	66	1	1		75				75		25
2	100	31	1	2		75				75		25
3	130	34	1	3		100				100		30
4	100	56	1	4		60				60		40
10	0	0	1	10		0				0		0

TIME BASE: ACTION PLAN, DAY PLAN *** - 5 - 2, - 5 - 3, -5 - 4**

Day Plan	Sched. #	Action Plan	Time Period	Pattern	Timing Plan
1	1	1	06:00	1	1
1	1	2	09:00	2	1
1	1	3	15:30	3	1
1	1	4	19:00	4	1
1	1	10	22:00	254	1
2	2	4	08:00	4	1
2	2	3	11:30	3	1
2	2	4	19:00	4	1
2	2	10	22:00	254	1
3	3	4	09:00	4	1
3	3	10	20:00	254	1

Schedule 1 = Day Plan 1
Schedule 2 = Day Plan 2
Schedule 3 = Day Plan 3

Day Plan 1 (Weekday)
Day Plan 2 (Saturday)
Day Plan 3 (Sunday, Holidays)

Action Plan 10 = free (254)

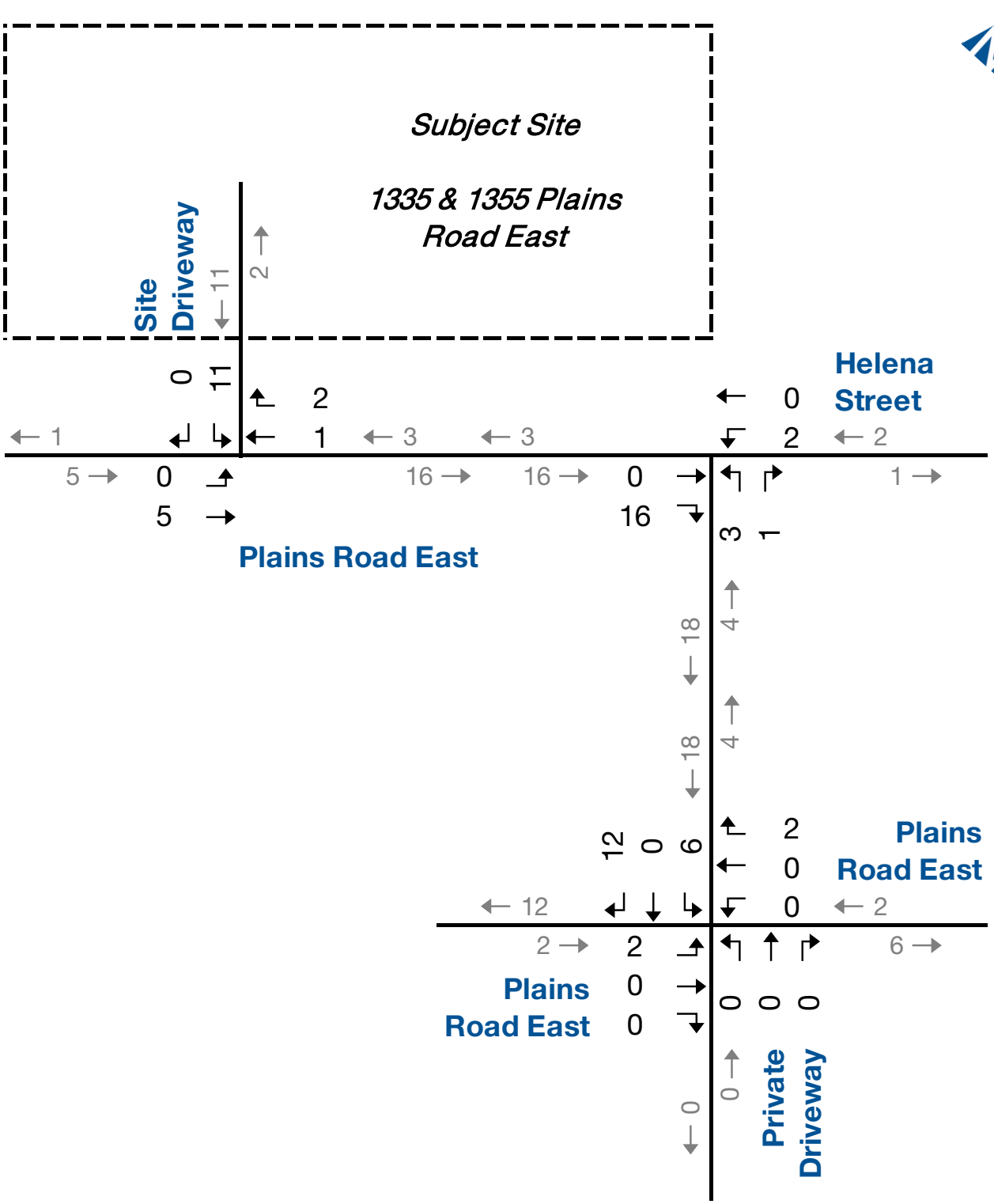
Special Programming:

TIME BASE DATA - TIME OF YEAR EVENTS *** - 5 - 5**

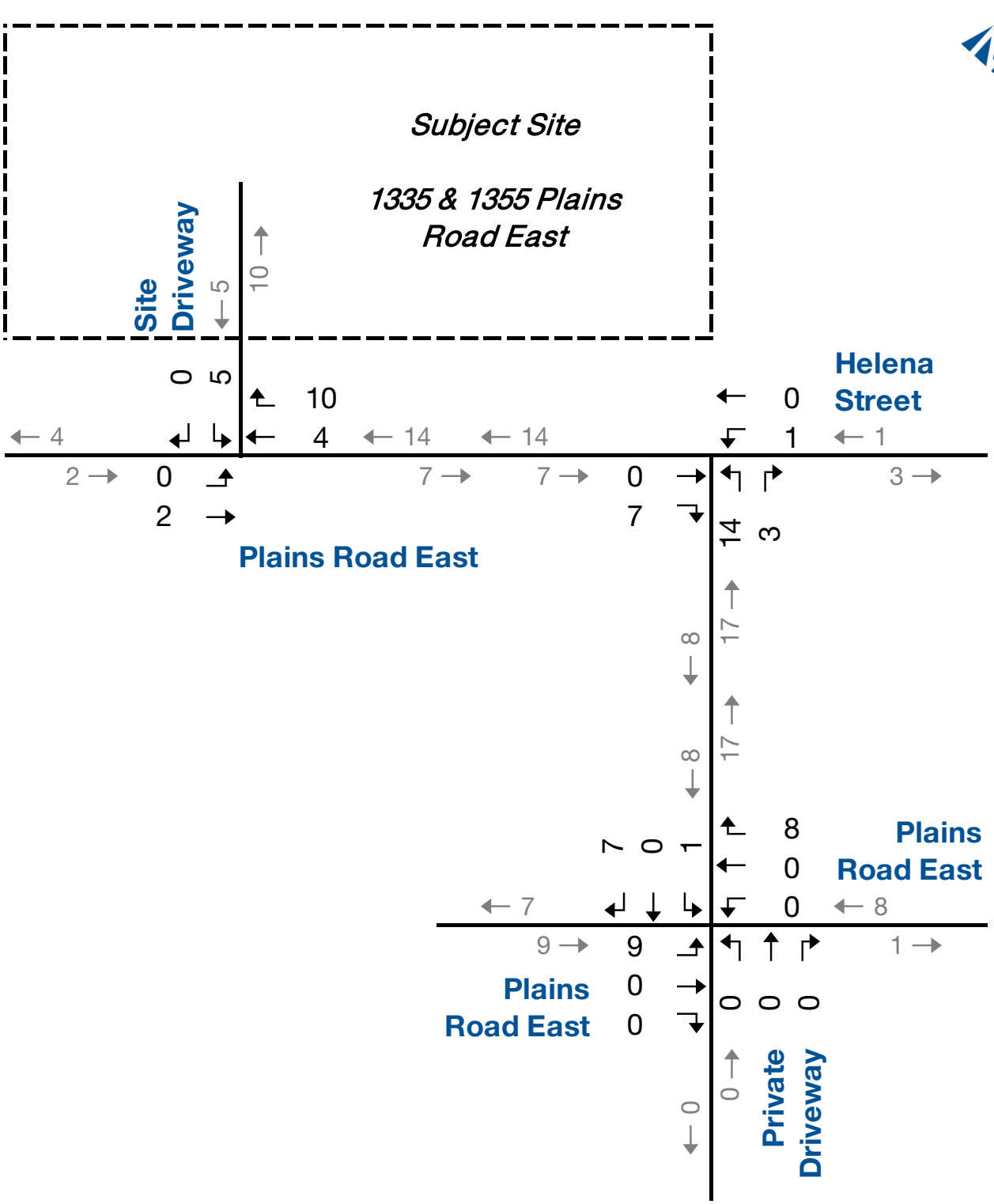
Events	Exception Day		MON/ MON	DOW/ DOW	WOM/ Year	Day Plan
New Year's Day	1	Fixed	1	1	0	3
Family Day	2	Float	2	2	3	3
Good Friday	3	Float	4	6	1	3
Victoria Day	4	Float	5	2	3	3
Canada Day	5	Fixed	7	1	0	3
Civic Day	6	Float	8	2	1	3
Labour Day	7	Float	9	2	1	3
Thanksgiving	8	Float	10	2	2	3
Christmas Day	9	Fixed	12	25	0	3

APPENDIX C

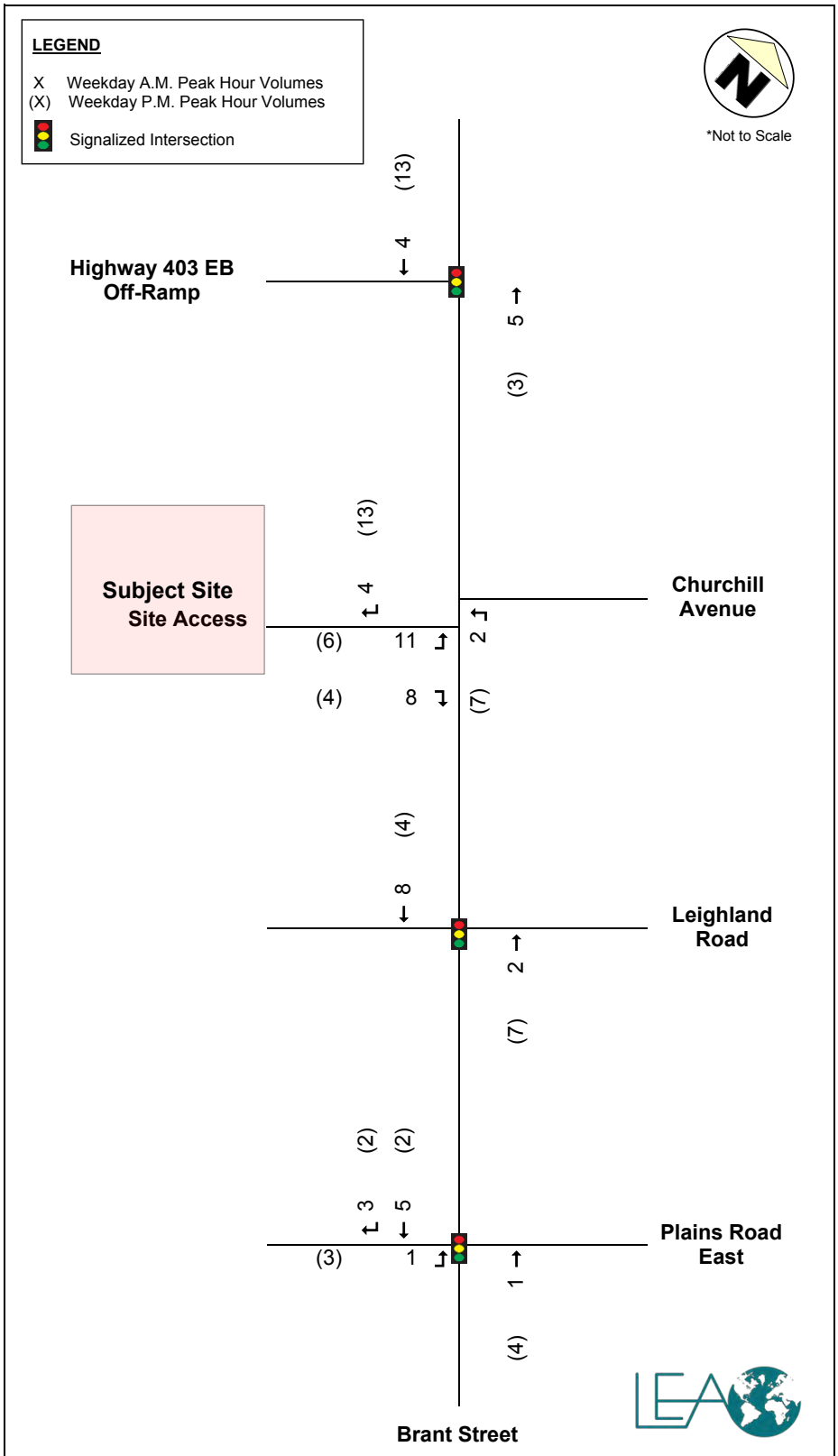
Background Developments



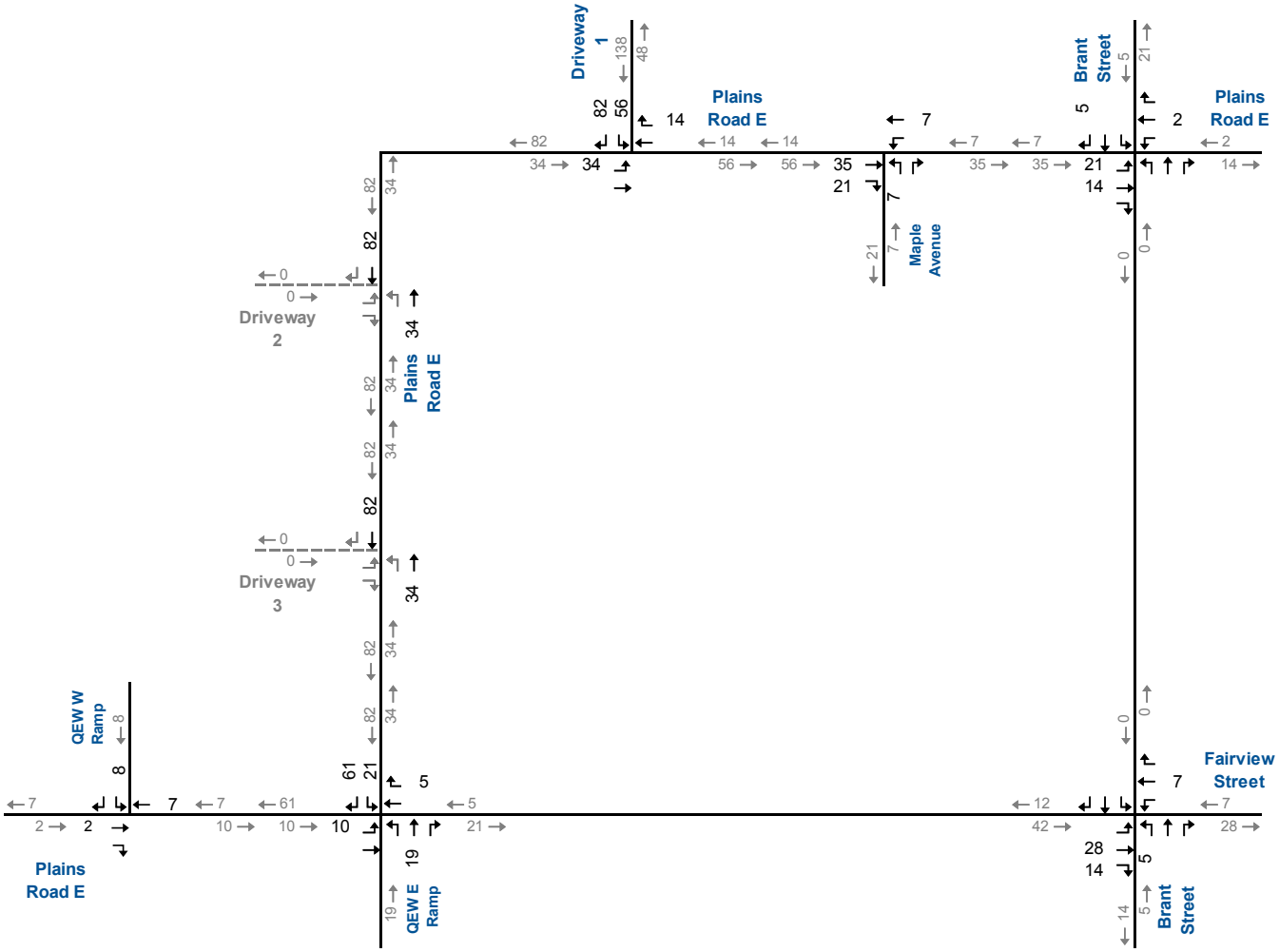
Site Generated Traffic Forecast
AM Peak Hour



Site Generated Traffic Forecast
PM Peak Hour



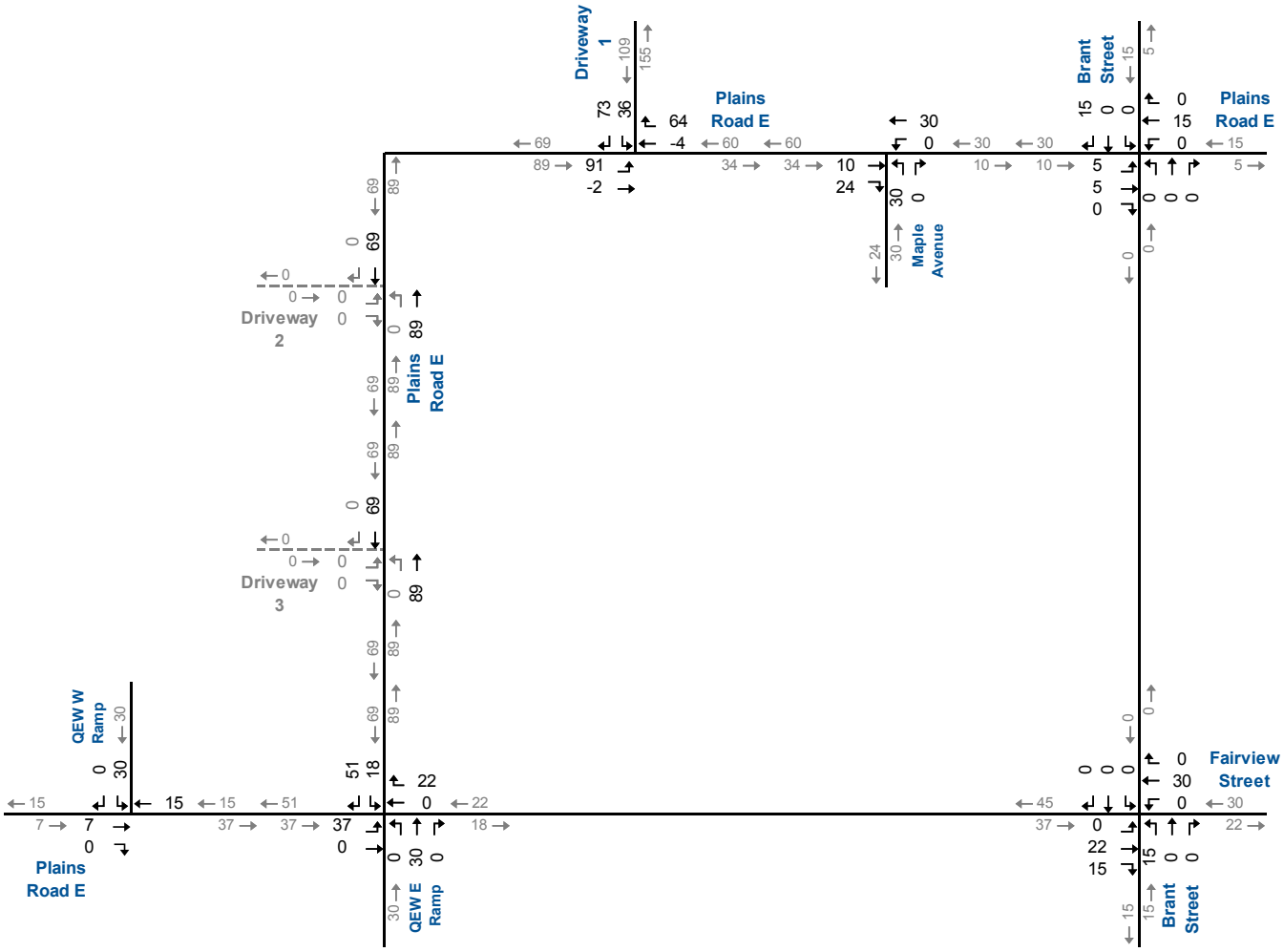
RESIDENTIAL SITE TRAFFIC
Proposed Residential Development
1060 Brant Street, Burlington



Phase 1 Site Generated Traffic Volumes AM Peak Hour

1134 & 1167 Plains Road East TIS
200402

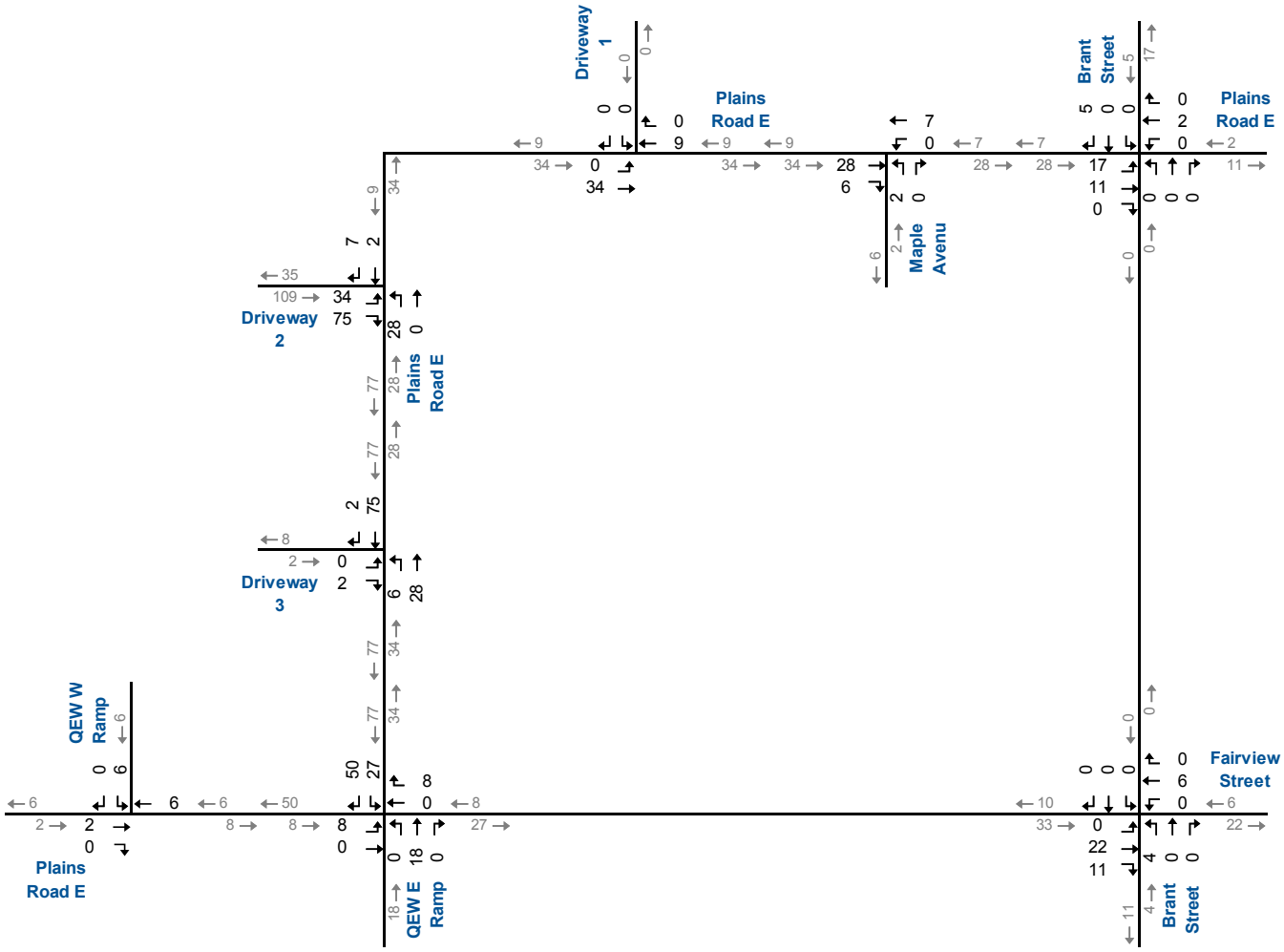
Figure 3.2A



Phase 1 Site Generated Traffic Volumes PM Peak Hour

1134 & 1167 Plains Road East TIS
200402

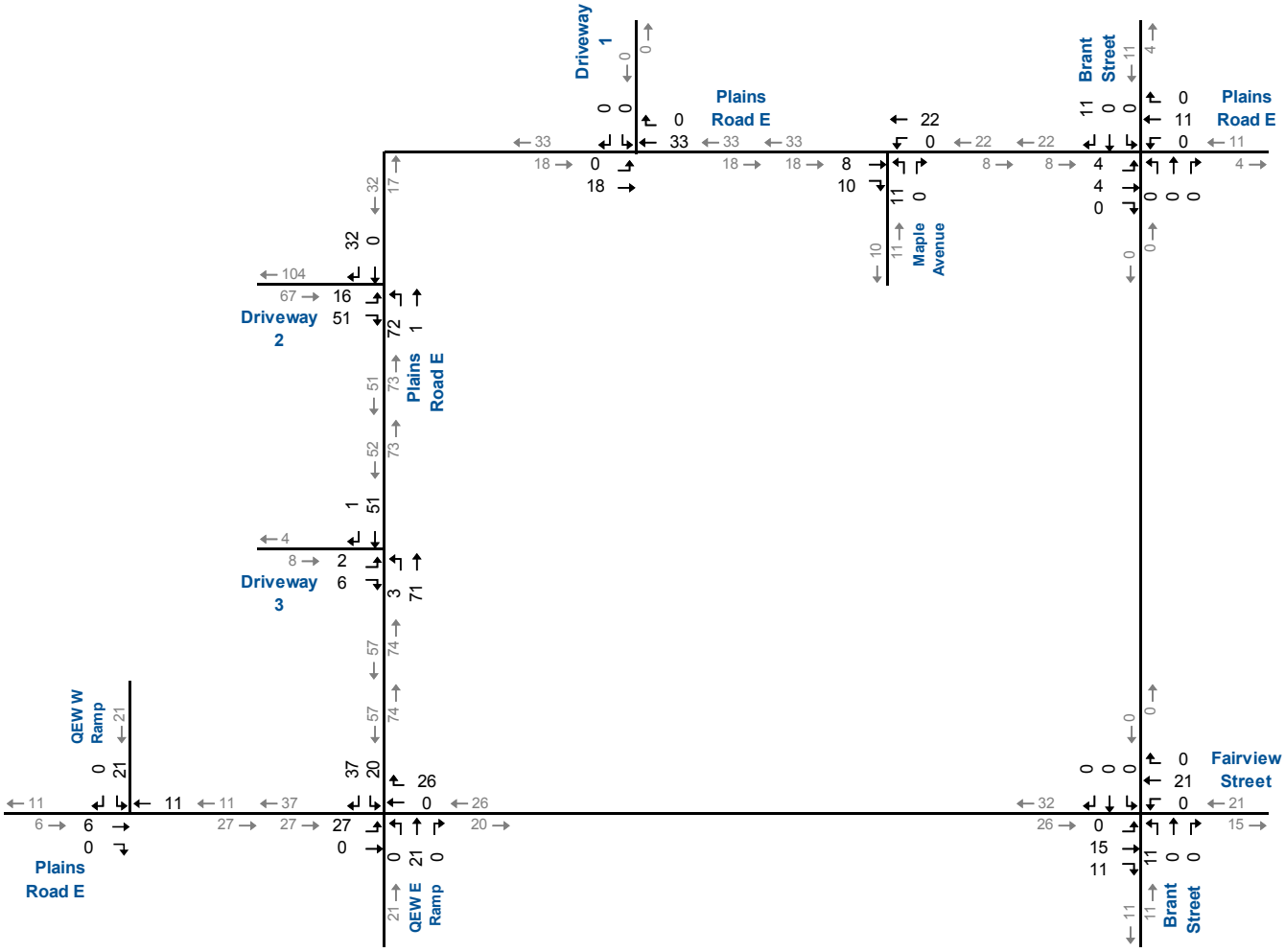
Figure 3.2B



Phase 2 Site Generated Traffic Volumes AM Peak Hour

1134 & 1167 Plains Road East TIS
200402

Figure 3.3A



Phase 2 Site Generated Traffic Volumes PM Peak Hour

1134 & 1167 Plains Road East TIS
200402

Figure 3.3B

APPENDIX D

TTS Mode Split and Distribution Data

Table 4-5: Proposed Target Mode Share for Daily Trip Origins in Burlington by Neighbourhood

Notes: A=Auto, T=Transit, B=Bicycle, and W=Walk

No.	Neighborhood	Character Type	Existing Mode Share				Mode Share Targets			
			A	T	B	W	A	T	B	W
1	Elizabeth Gardens	Older Built-Up	92%	3%	1%	5%	73%	15%	3%	9%
2	Pinedale	Business Park	89%	3%	1%	7%	71%	15%	5%	9%
3	Shore Acres	Older Built-Up	87%	4%	4%	5%	70%	15%	6%	9%
4	Longmoor	Business Park	85%	4%	1%	10%	70%	13%	5%	12%
5	Roseland	Older Built-Up	85%	3%	3%	8%	67%	15%	6%	12%
6	Dynes	Business Park	94%	3%	1%	3%	79%	13%	5%	3%
7	Central	Downtown	90%	3%	2%	4%	50%	20%	11%	19%
8	Plains	Residential	92%	5%	0%	3%	72%	17%	5%	6%
9	Corporate	Business Park	89%	3%	0%	7%	75%	11%	5%	9%
10	The Orchard	Residential	88%	4%	0%	8%	70%	15%	5%	10%
11	Tansley	Business Park	96%	1%	1%	2%	80%	13%	5%	2%
12	Millcroft	Residential	93%	2%	1%	4%	74%	14%	5%	7%
13	Alton Village	Residential	85%	3%	1%	11%	67%	15%	5%	13%
14	Palmer	Business Park	90%	2%	1%	7%	75%	13%	5%	7%
15	Headon Forest	Residential	87%	3%	1%	10%	69%	14%	5%	12%
16	Mountainside	Residential	97%	1%	0%	2%	77%	13%	5%	5%
17	Brant Hills	Residential	88%	4%	0%	8%	70%	15%	5%	10%
18	Tyandaga	Residential	96%	3%	0%	1%	77%	15%	5%	3%
19	Aldershot	Residential	95%	2%	1%	3%	72%	17%	5%	6%
20	Aldershot N	Rural	98%	1%	1%	0%	97%	2%	1%	0%
21	Rural Burlington	Rural	97%	3%	0%	0%	95%	4%	1%	0%
		Downtown	90%	3%	2%	4%	50%	20%	11%	19%
		Residential	91%	3%	0%	5%	72%	15%	5%	8%
		Rural / Developing	98%	2%	0%	0%	96%	3%	1%	0%
		Older Built-Up Area	88%	3%	3%	6%	70%	15%	5%	10%
		Business Park	91%	3%	1%	6%	75%	13%	5%	7%
		Global	91%	3%	1%	5%	70%	15%	6%	9%



Wed Dec 17 2025 14:29:08 GMT-0500 (Eastern Standard Time) - Run Time: 4398ms

Cross Tabulation Query Form - Trip - 2022

Row: Type of dwelling unit - dwell_type
Column: Primary travel mode of trip - mode_prime
Table: No. of vehicles in household - n_vehicle

RowG:
ColG:
TblG:(0)(1-99)

Filters:
Planning district of household - pd_hhld In 40,
and
Trip purpose - trip_purp In 1-2

Trip 2022
Table: 1

	Transit exc	Auto driver	Joint GO ra	Auto passe	School bus	Walk	
House	75	36	20	0	0	0	
Apartment	334	0	27	108	0	36	
Townhouse	103	0	0	0	235	0	
	512	36	47	108	235	36	739

Auto Drive	5%
Auto Passe	15%
Rideshare	0%
Transit	76%
Walk	5%
Cycle	0%

Trip 2022
Table: 2

	Transit exc	Cycle	Auto drive	E-scooter	GO rail onl	Joint GO ra	Motorcycle	Other	Auto passe	School bus	Taxi passer	Paid ridesh	Walk	
House	1288	2168	55815	9	796	741	63	33	17254	9203	57	135	12291	
Apartment	585	65	12790	0	155	144	0	0	706	258	0	28	1629	
Townhouse	899	409	13320	0	269	309	0	0	4768	1651	0	92	2736	
	2772	2642	81925	9	1220	1194	63	33	22728	11112	57	255	16656	129554

Auto Drive	64%
Auto passe	18%
Rideshare	0%
Transit	3%
Walk	13%
Cycle	2%

Mon Mar 03 2025 15:51:53 GMT-0500 (Eastern Standard Time) - Ru

Cross Tabulation Query Form - Trip - 2022

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

Filters:
2006 GTA zone of destination - gta06_dest In 4057-4059
and
Start time of trip - start_time In 1500-1900
and
2022 Trip purpose of destination - purp_dest2022 In 80
and
Primary travel mode of trip - mode_prime In D,M,P,T,U

Pull for Burlington only:

Mon Mar 03 2025 16:08:18 GMT-0500 (Eastern Standard Time) - Run Time: 3382ms

Cross Tabulation Query Form - Trip - 2022

Row: 2006 GTA zone of origin - gta06_orig
Column: 2006 GTA zone of destination - gta06_dest

Filters:
2006 GTA zone of destination - gta06_dest In 4057-4059
and
Start time of trip - start_time In 1500-1900
and
2022 Trip purpose of destination - purp_dest2022 In 80
and
Primary travel mode of trip - mode_prime In D,M,P,T,U
and
Planning district of origin - pd_orig In 40

Trip 2022
Table:

Origin	Destination			Trips from Origin
	4057	4058	4059	
PD 1 of Toronto	0	76	0	76
PD 3 of Toronto	38	0	0	38
PD 7 of Toronto	28	0	0	28
PD 10 of Toronto	11	0	37	48
PD 16 of Toronto	0	58	0	58
Markham	0	0	36	36
Brampton	49	0	0	49
Mississauga	166	0	116	282
Halton Hills	0	0	32	32
Milton	50	14	69	133
Oakville	287	0	95	382
Flamborough	1958	352	1321	3631
Ancaster	111	0	0	111
Glanbrook	45	0	0	45
Stoney Creek	113	0	0	113
Hamilton	155	0	126	281
Lincoln	38	0	0	38
St. Catherines	70	0	0	70
Kitchener	0	0	27	27
Guelph	0	0	20	20
Brantford	0	0	52	52
4051	26	0	0	26
4052	0	0	25	25
4053	53	0	9	62
4054	28	0	39	67
4056	0	0	44	44
4057	434	127	87	648
4058	37	0	0	37
4059	265	116	27	408
4060	135	0	103	238
4062	89	0	21	110
4063	269	4	323	596
4064	0	0	155	155
4068	39	0	108	147
4069	74	0	0	74
4076	32	0	0	32
4077	133	0	74	207
4078	12	0	16	28
4079	14	0	0	14
4080	49	0	0	49

4081	25	30	93	148
4082	78	0	51	129
4084	0	76	17	93
4087	16	0	50	66
4088	23	0	0	23
4089	56	0	40	96
4091	18	0	0	18
4096	17	0	9	26
4189	38	0	24	62
4190	0	0	6	6
				9184

Tue Mar 04 2025 12:06:18 GMT-0500 (Eastern Standard Time) - Run T

Cross Tabulation Query Form - Trip - 2022

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

Filters:
2006 GTA zone of origin - gta06_orig In 4057-4059
and
Start time of trip - start_time In 600-1000
and
2022 Trip Purpose of Origin - purp_orig2022 In 80
and
Primary travel mode of trip - mode_prime In D,M,P,T,U

Pull for Burlington only:

Tue Mar 04 2025 12:19:55 GMT-0500 (Eastern Standard Time) - Run Time: 3268ms

Cross Tabulation Query Form - Trip - 2022

Row: 2006 GTA zone of destination - gta06_dest
Column: 2006 GTA zone of origin - gta06_orig

Filters:
2006 GTA zone of origin - gta06_orig In 4057-4059
and
Start time of trip - start_time In 600-1000
and
2022 Trip Purpose of Origin - purp_orig2022 In 80
and
Primary travel mode of trip - mode_prime In D,M,P,T,U
and
Planning district of destination - pd_dest In 40

Trip 2022
Table:

Destination	Origin			Trips to Destination
	4057	4058	4059	
PD 1 of Toronto	0	76	0	76
PD 3 of Toronto	38	0	0	38
PD 7 of Toronto	28	0	0	28
PD 10 of Toronto	29	0	37	66
PD 16 of Toronto	0	58	0	58
Markham	0	0	36	36
Brampton	49	0	0	49
Mississauga	146	0	76	222
Halton Hills	0	0	32	32
Milton	150	76	95	321
Oakville	441	58	173	672
Flamborough	103	0	0	103
Ancaster	108	0	12	120
Glanbrook	65	0	0	65
Stoney Creek	109	0	20	129
Hamilton	287	58	24	369
Lincoln	38	0	0	38
St. Catherines	77	41	0	118
Kitchener	0	0	27	27
Cambridge	0	0	48	48
North Dumfries	10	0	0	10
Guelph	13	0	0	13
Ramara	0	0	32	32
Brantford	0	0	52	52
4051	107	0	11	118
4052	31	0	7	38
4053	77	0	143	220
4054	28	0	0	28
4056	10	0	38	48
4057	141	51	0	192
4058	14	0	0	14
4059	185	130	130	445
4060	84	0	33	117
4061	28	0	33	61
4062	0	0	10	10
4063	207	18	57	282
4064	30	0	310	340
4068	64	0	108	172
4069	62	0	0	62
4077	133	0	90	223
4078	107	76	0	183
4080	37	0	0	37
4081	25	0	154	179
4082	36	0	28	64
4084	28	0	0	28
4086	38	0	0	38

4087	49	0	0	49
4088	55	0	22	77
4091	36	0	0	36
4093	0	0	6	6
4096	0	0	9	9
4189	22	0	0	22
4190	109	0	0	109
				5929

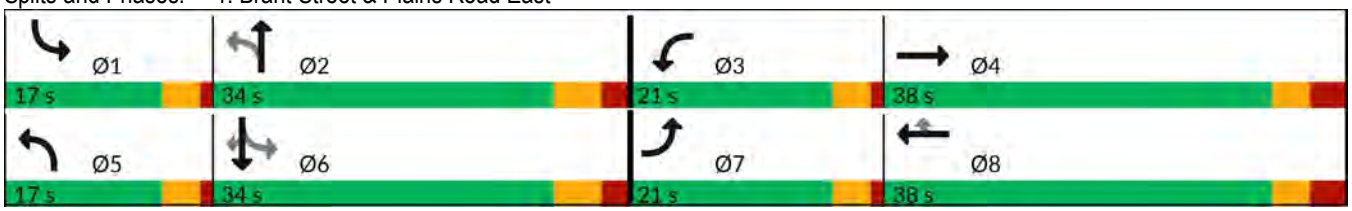
APPENDIX E

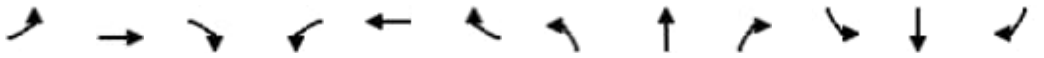
Existing Intersection Capacity Analysis

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	358	246	62	136	73	31	602	155	777	438
Future Volume (vph)	358	246	62	136	73	31	602	155	777	438
Lane Group Flow (vph)	369	293	64	140	75	32	756	160	801	452
Turn Type	Prot	NA	Prot	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8	2		6		6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	7.0	8.0	7.0	8.0	8.0	7.0	8.0	7.0	8.0	8.0
Minimum Split (s)	11.0	38.0	11.0	38.0	38.0	11.0	33.0	11.0	33.0	33.0
Total Split (s)	21.0	38.0	21.0	38.0	38.0	17.0	34.0	17.0	34.0	34.0
Total Split (%)	19.1%	34.5%	19.1%	34.5%	34.5%	15.5%	30.9%	15.5%	30.9%	30.9%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	3.0	1.0	3.0	3.0	1.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	6.0	4.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	Max	None	Max	Max
v/c Ratio	0.69	0.65	0.37	0.26	0.25	0.09	0.49	0.44	0.39	0.55
Control Delay (s/veh)	42.8	37.4	45.0	33.7	4.6	14.1	25.0	17.3	21.0	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	42.8	37.4	45.0	33.7	4.6	14.1	25.0	17.3	21.0	6.9
Queue Length 50th (m)	30.8	46.3	10.6	11.6	0.0	2.6	35.9	14.2	38.1	5.2
Queue Length 95th (m)	54.1	79.8	25.8	20.7	5.6	9.0	60.7	33.2	62.1	36.0
Internal Link Dist (m)		240.4		173.9			422.3		394.1	
Turn Bay Length (m)	65.0		60.0		75.0	60.0		55.0		40.0
Base Capacity (vph)	621	669	326	1252	571	458	1546	409	2067	826
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.44	0.20	0.11	0.13	0.07	0.49	0.39	0.39	0.55

Intersection Summary
Cycle Length: 110
Actuated Cycle Length: 87.2
Natural Cycle: 95
Control Type: Semi Act-Uncoord

Splits and Phases: 1: Brant Street & Plains Road East





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	358	246	38	62	136	73	31	602	131	155	777	438
Future Volume (vph)	358	246	38	62	136	73	31	602	131	155	777	438
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	0.97	1.00		1.00	0.95	1.00	1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3143	1788		1652	3368	1352	1684	4666		1635	4980	1422
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.34	1.00		0.26	1.00	1.00
Satd. Flow (perm)	3143	1788		1652	3368	1352	598	4666		451	4980	1422
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	369	254	39	64	140	75	32	621	135	160	801	452
RTOR Reduction (vph)	0	5	0	0	0	63	0	28	0	0	0	242
Lane Group Flow (vph)	369	288	0	64	140	12	32	728	0	160	801	210
Confl. Peds. (#/hr)	2					2	4		5	5		4
Confl. Bikes (#/hr)									1			5
Heavy Vehicles (%)	4%	3%	3%	2%	6%	10%	0%	7%	5%	3%	3%	4%
Turn Type	Prot	NA		Prot	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8	2			6		6
Actuated Green, G (s)	14.8	21.9		7.5	14.6	14.6	34.3	30.2		44.3	36.2	36.2
Effective Green, g (s)	14.8	21.9		7.5	14.6	14.6	34.3	30.2		44.3	36.2	36.2
Actuated g/C Ratio	0.16	0.24		0.08	0.16	0.16	0.38	0.34		0.49	0.40	0.40
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	518	436		138	548	220	278	1570		356	2009	573
v/s Ratio Prot	c0.12	c0.16		0.04	0.04		0.01	0.16		c0.05	0.16	
v/s Ratio Perm						0.01	0.04			c0.17		0.15
v/c Ratio	0.71	0.66		0.46	0.26	0.06	0.12	0.46		0.45	0.40	0.37
Uniform Delay, d1	35.4	30.5		39.2	32.8	31.7	17.4	23.4		13.3	19.0	18.7
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.6	3.6		2.5	0.2	0.1	0.2	1.0		0.9	0.6	1.8
Delay (s)	40.0	34.1		41.6	33.0	31.8	17.6	24.4		14.2	19.6	20.5
Level of Service	D	C		D	C	C	B	C		B	B	C
Approach Delay (s/veh)		37.4			34.7			24.1			19.3	
Approach LOS		D			C			C			B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	25.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	89.7	Sum of lost time (s)	20.0
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		

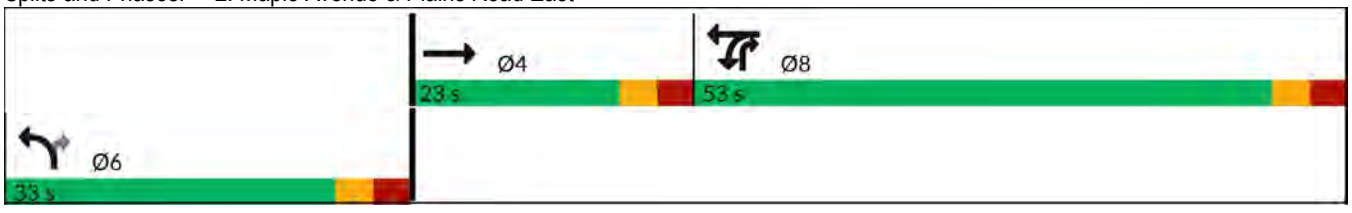
c Critical Lane Group

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	276	247	353	7	329
Future Volume (vph)	276	247	353	7	329
Lane Group Flow (vph)	306	257	368	7	343
Turn Type	NA	Split	NA	Prot	pm+ov
Protected Phases	4	8	8	6	8
Permitted Phases					6
Detector Phase	4	8	8	6	8
Switch Phase					
Minimum Initial (s)	8.0	8.0	8.0	7.0	8.0
Minimum Split (s)	14.0	33.0	33.0	33.0	33.0
Total Split (s)	23.0	53.0	53.0	33.0	53.0
Total Split (%)	21.1%	48.6%	48.6%	30.3%	48.6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	Max	None	None	None	None
v/c Ratio	0.25	0.25	0.61	0.03	0.58
Control Delay (s/veh)	13.6	12.5	18.3	23.1	11.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	13.6	12.5	18.3	23.1	11.8
Queue Length 50th (m)	8.3	7.4	23.6	0.5	15.4
Queue Length 95th (m)	28.3	19.1	60.7	4.4	30.9
Internal Link Dist (m)	259.0		484.0	228.5	
Turn Bay Length (m)		85.0			
Base Capacity (vph)	1238	2861	1709	986	1351
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.25	0.09	0.22	0.01	0.25

Intersection Summary

Cycle Length: 109
Actuated Cycle Length: 48
Natural Cycle: 80
Control Type: Semi Act-Uncoord
Description: STP from video

Splits and Phases: 2: Maple Avenue & Plains Road East



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	276	17	247	353	7	329
Future Volume (vph)	276	17	247	353	7	329
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.0	3.0	3.5	3.0	3.0
Total Lost time (s)	6.0		6.0	6.0	6.0	6.0
Lane Util. Factor	0.95		0.97	1.00	1.00	1.00
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3353		3054	1824	1685	1436
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3353		3054	1824	1685	1436
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	288	18	257	368	7	343
RTOR Reduction (vph)	3	0	0	0	0	64
Lane Group Flow (vph)	303	0	257	368	7	279
Heavy Vehicles (%)	5%	14%	7%	3%	0%	5%
Turn Type	NA		Split	NA	Prot	pm+ov
Protected Phases	4		8	8	6	8
Permitted Phases						6
Actuated Green, G (s)	17.7		16.0	16.0	1.0	17.0
Effective Green, g (s)	17.7		16.0	16.0	1.0	17.0
Actuated g/C Ratio	0.34		0.30	0.30	0.02	0.32
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1126		927	553	31	626
v/s Ratio Prot	c0.09		0.08	c0.20	0.00	c0.14
v/s Ratio Perm						0.06
v/c Ratio	0.27		0.28	0.67	0.23	0.45
Uniform Delay, d1	12.8		14.0	16.0	25.5	14.1
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6		0.2	3.0	3.7	0.5
Delay (s)	13.4		14.1	19.0	29.2	14.6
Level of Service	B		B	B	C	B
Approach Delay (s/veh)	13.4			17.0	14.9	
Approach LOS	B			B	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	15.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	52.7	Sum of lost time (s)	18.0
Intersection Capacity Utilization	38.5%	ICU Level of Service	A
Analysis Period (min)	15		
Description: STP from video			
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	583	5	9	563	6	1	0	2	4	0	11
Future Vol, veh/h	10	583	5	9	563	6	1	0	2	4	0	11
Conflicting Peds, #/hr	18	0	4	4	0	18	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	15	-	-	15	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	5	0	0	4	0	0	0	0	0	0	0
Mvmt Flow	11	614	5	9	593	6	1	0	2	4	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	617	0	0	623	0	0	958	1278	314	961	1277	318
Stage 1	-	-	-	-	-	-	643	643	-	632	632	-
Stage 2	-	-	-	-	-	-	315	635	-	329	645	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	973	-	-	968	-	-	215	168	688	214	168	684
Stage 1	-	-	-	-	-	-	433	472	-	440	477	-
Stage 2	-	-	-	-	-	-	676	476	-	664	471	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	959	-	-	965	-	-	207	162	686	207	162	674
Mov Cap-2 Maneuver	-	-	-	-	-	-	207	162	-	207	162	-
Stage 1	-	-	-	-	-	-	427	465	-	429	466	-
Stage 2	-	-	-	-	-	-	658	465	-	654	464	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.1	0.1	14.4	13.9
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	387	959	-	-	965	-	-	421
HCM Lane V/C Ratio	0.008	0.011	-	-	0.01	-	-	0.038
HCM Ctrl Dly (s/v)	14.4	8.8	-	-	8.8	-	-	13.9
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q (veh)	0	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	596	1	6	578	0	0	0	2	0	0	0
Future Vol, veh/h	0	596	1	6	578	0	0	0	2	0	0	0
Conflicting Peds, #/hr	9	0	3	3	0	9	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	15	-	-	15	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	5	0	0	4	0	0	0	0	0	0	0
Mvmt Flow	0	634	1	6	615	0	0	0	2	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	624	0	0	638	0	0	958	1274	321	953	1274	317
Stage 1	-	-	-	-	-	-	638	638	-	636	636	-
Stage 2	-	-	-	-	-	-	320	636	-	317	638	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	967	-	-	956	-	-	215	169	681	217	169	685
Stage 1	-	-	-	-	-	-	436	474	-	437	475	-
Stage 2	-	-	-	-	-	-	672	475	-	674	474	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	960	-	-	954	-	-	213	166	679	214	166	680
Mov Cap-2 Maneuver	-	-	-	-	-	-	213	166	-	214	166	-
Stage 1	-	-	-	-	-	-	435	473	-	434	469	-
Stage 2	-	-	-	-	-	-	668	469	-	672	473	-

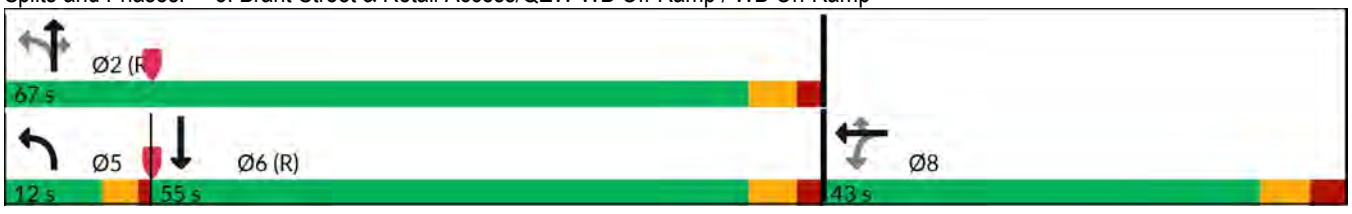
Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0.1	10.3	0
HCM LOS			B	A

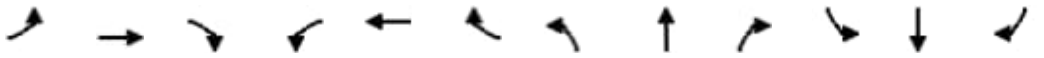
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	679	960	-	-	954	-	-	-
HCM Lane V/C Ratio	0.003	-	-	-	0.007	-	-	-
HCM Ctrl Dly (s/v)	10.3	0	-	-	8.8	-	-	0
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q (veh)	0	0	-	-	0	-	-	-

Lane Group	WBL	WBT	WBR	NBL	NBT	NBR	SBT
Lane Configurations							
Traffic Volume (vph)	292	14	347	28	784	146	1433
Future Volume (vph)	292	14	347	28	784	146	1433
Lane Group Flow (vph)	173	175	394	32	891	166	1629
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	NA
Protected Phases		8		5	2		6
Permitted Phases	8		8	2		2	
Detector Phase	8	8	8	5	2	2	6
Switch Phase							
Minimum Initial (s)	8.0	8.0	8.0	7.0	8.0	8.0	8.0
Minimum Split (s)	37.0	37.0	37.0	11.5	28.0	28.0	28.0
Total Split (s)	43.0	43.0	43.0	12.0	67.0	67.0	55.0
Total Split (%)	39.1%	39.1%	39.1%	10.9%	60.9%	60.9%	50.0%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	4.0	6.0	6.0	6.0
Lead/Lag				Lead			Lag
Lead-Lag Optimize?				Yes			Yes
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max
v/c Ratio	0.47	0.45	0.86	0.16	0.28	0.17	0.57
Control Delay (s/veh)	38.4	37.6	44.7	15.6	14.9	7.4	17.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	38.4	37.6	44.7	15.6	14.9	7.4	17.9
Queue Length 50th (m)	34.8	35.1	58.7	3.4	41.3	0.0	90.1
Queue Length 95th (m)	50.2	50.0	85.4	9.7	56.9	18.9	122.1
Internal Link Dist (m)		133.1			264.9		193.7
Turn Bay Length (m)				60.0		130.0	
Base Capacity (vph)	494	523	571	212	3217	975	2881
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.33	0.69	0.15	0.28	0.17	0.57

Intersection Summary
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 100 (91%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Description: action plan 2 for am, 3 for pm

Splits and Phases: 5: Brant Street & Retail Access/QEW WB Off-Ramp / WB On-Ramp





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	292	14	347	28	784	146	0	1433	1
Future Volume (vph)	0	0	0	292	14	347	28	784	146	0	1433	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)				7.0	7.0	7.0	4.0	6.0	6.0		6.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.91	1.00		0.91	
Frpb, ped/bikes				1.00	1.00	1.00	1.00	1.00	0.98		1.00	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00	1.00		1.00	
Frt				1.00	1.00	0.85	1.00	1.00	0.85		1.00	
Flt Protected				0.95	0.96	1.00	0.95	1.00	1.00		1.00	
Satd. Flow (prot)				1510	1600	1478	1620	5029	1431		4980	
Flt Permitted				0.95	0.96	1.00	0.09	1.00	1.00		1.00	
Satd. Flow (perm)				1510	1600	1478	162	5029	1431		4980	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	0	0	0	332	16	394	32	891	166	0	1628	1
RTOR Reduction (vph)	0	0	0	0	0	99	0	0	60	0	0	0
Lane Group Flow (vph)	0	0	0	173	175	295	32	891	106	0	1629	0
Confl. Peds. (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	6%	14%	2%	4%	2%	3%	0%	3%	0%
Turn Type				Perm	NA	Perm	pm+pt	NA	Perm		NA	
Protected Phases					8		5	2			6	
Permitted Phases				8		8	2		2			
Actuated Green, G (s)				26.6	26.6	26.6	70.4	70.4	70.4		62.1	
Effective Green, g (s)				26.6	26.6	26.6	70.4	70.4	70.4		62.1	
Actuated g/C Ratio				0.24	0.24	0.24	0.64	0.64	0.64		0.56	
Clearance Time (s)				7.0	7.0	7.0	4.0	6.0	6.0		6.0	
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)				365	386	357	160	3218	915		2811	
v/s Ratio Prot							0.01	c0.18			c0.33	
v/s Ratio Perm				0.11	0.11	c0.20	0.12		0.07			
v/c Ratio				0.47	0.45	0.83	0.20	0.28	0.12		0.58	
Uniform Delay, d1				35.7	35.5	39.5	9.8	8.7	7.7		15.5	
Progression Factor				1.00	1.00	1.00	1.57	1.51	3.93		1.00	
Incremental Delay, d2				1.0	0.8	14.5	0.6	0.2	0.3		0.9	
Delay (s)				36.7	36.4	54.0	15.9	13.3	30.5		16.4	
Level of Service				D	D	D	B	B	C		B	
Approach Delay (s/veh)		0.0			45.8			16.0			16.4	
Approach LOS		A			D			B			B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	22.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	50.7%	ICU Level of Service	A
Analysis Period (min)	15		
Description: action plan 2 for am, 3 for pm			

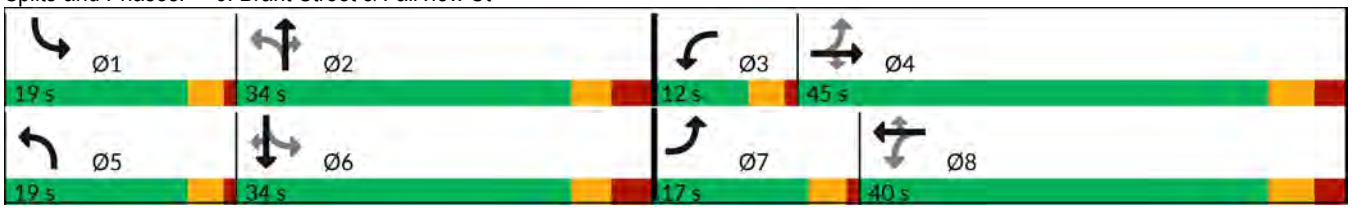
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	642	152	137	302	148	153	531	174	162	512	41
Future Volume (vph)	250	642	152	137	302	148	153	531	174	162	512	41
Lane Group Flow (vph)	253	648	154	138	305	149	155	536	176	164	517	41
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	8.0	8.0	7.0	8.0	8.0	7.0	8.0	8.0	7.0	8.0	8.0
Minimum Split (s)	12.0	31.4	31.4	12.0	31.4	31.4	12.0	31.5	31.5	12.0	31.5	31.5
Total Split (s)	17.0	45.0	45.0	12.0	40.0	40.0	19.0	34.0	34.0	19.0	34.0	34.0
Total Split (%)	15.5%	40.9%	40.9%	10.9%	36.4%	36.4%	17.3%	30.9%	30.9%	17.3%	30.9%	30.9%
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.3	3.3	3.0	3.3	3.3
All-Red Time (s)	1.0	2.7	2.7	1.0	2.7	2.7	1.0	3.2	3.2	1.0	3.2	3.2
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)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.5	6.5	4.0	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
v/c Ratio	0.53	0.70	0.31	0.47	0.43	0.36	0.41	0.66	0.39	0.45	0.63	0.10
Control Delay (s/veh)	20.1	31.6	6.4	21.6	30.3	7.6	17.8	33.2	7.4	18.7	32.5	0.5
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 (s/veh)	20.1	31.6	6.4	21.6	30.3	7.6	17.8	33.2	7.4	18.7	32.5	0.5
Queue Length 50th (m)	25.1	48.5	0.0	12.7	22.4	0.0	14.4	40.7	0.0	15.4	39.0	0.0
Queue Length 95th (m)	53.0	79.5	14.4	29.8	40.0	14.6	30.9	68.6	16.3	32.6	65.8	0.0
Internal Link Dist (m)		607.3			241.7			325.5			422.3	
Turn Bay Length (m)	300.0		140.0	60.0		100.0	84.0		70.0	45.0		60.0
Base Capacity (vph)	496	1728	794	297	1434	677	462	1255	611	446	1268	569
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.38	0.19	0.46	0.21	0.22	0.34	0.43	0.29	0.37	0.41	0.07

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 79.9
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Description: pattern 2 for AM, 3 for PM (sched 1)

Splits and Phases: 6: Brant Street & Fairview St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	642	152	137	302	148	153	531	174	162	512	41
Future Volume (vph)	250	642	152	137	302	148	153	531	174	162	512	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.5	6.5	4.0	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.97	1.00	1.00	0.99
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	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1634	3466	1440	1574	3305	1362	1635	3535	1415	1600	3570	1326
Flt Permitted	0.46	1.00	1.00	0.34	1.00	1.00	0.35	1.00	1.00	0.34	1.00	1.00
Satd. Flow (perm)	789	3466	1440	556	3305	1362	601	3535	1415	566	3570	1326
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	253	648	154	138	305	149	155	536	176	164	517	41
RTOR Reduction (vph)	0	0	113	0	0	117	0	0	135	0	0	32
Lane Group Flow (vph)	253	648	41	138	305	32	155	536	41	164	517	9
Confl. Peds. (#/hr)	3		4	4		3	3		22	22		3
Heavy Vehicles (%)	3%	3%	3%	7%	8%	9%	3%	1%	3%	5%	0%	12%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	33.3	21.3	21.3	25.1	17.1	17.1	29.2	18.4	18.4	29.0	18.3	18.3
Effective Green, g (s)	33.3	21.3	21.3	25.1	17.1	17.1	29.2	18.4	18.4	29.0	18.3	18.3
Actuated g/C Ratio	0.42	0.27	0.27	0.32	0.22	0.22	0.37	0.23	0.23	0.37	0.23	0.23
Clearance Time (s)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.5	6.5	4.0	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)	461	930	386	278	712	293	362	820	328	346	823	306
v/s Ratio Prot	c0.08	c0.19		0.05	0.09		0.06	c0.15		c0.06	0.14	
v/s Ratio Perm	0.15		0.03	0.11		0.02	0.10		0.03	0.11		0.01
v/c Ratio	0.55	0.70	0.11	0.50	0.43	0.11	0.43	0.65	0.12	0.47	0.63	0.03
Uniform Delay, d1	15.9	26.1	21.8	20.4	26.9	25.0	17.6	27.6	24.1	18.0	27.4	23.6
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	1.3	2.3	0.1	1.4	0.4	0.2	0.8	1.9	0.2	1.0	1.5	0.0
Delay (s)	17.3	28.4	22.0	21.8	27.3	25.2	18.5	29.4	24.3	19.0	28.9	23.7
Level of Service	B	C	C	C	C	C	B	C	C	B	C	C
Approach Delay (s/veh)		24.8			25.5			26.4			26.4	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	25.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	79.3	Sum of lost time (s)	20.9
Intersection Capacity Utilization	69.5%	ICU Level of Service	C
Analysis Period (min)	15		
Description: pattern 2 for AM, 3 for PM (sched 1)			

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	22	583	568	27	14	32
Future Vol, veh/h	22	583	568	27	14	32
Conflicting Peds, #/hr	1	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	40	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	3	4	4	0	3
Mvmt Flow	26	686	668	32	16	38

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	701	0	-	0	1080	351
Stage 1	-	-	-	-	685	-
Stage 2	-	-	-	-	395	-
Critical Hdwy	4.1	-	-	-	6.8	6.96
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.33
Pot Cap-1 Maneuver	905	-	-	-	216	642
Stage 1	-	-	-	-	467	-
Stage 2	-	-	-	-	656	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	904	-	-	-	209	642
Mov Cap-2 Maneuver	-	-	-	-	335	-
Stage 1	-	-	-	-	453	-
Stage 2	-	-	-	-	655	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.3	0	12.6
HCM LOS			B

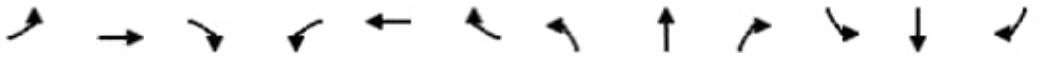
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	904	-	-	-	335	642
HCM Lane V/C Ratio	0.029	-	-	-	0.049	0.059
HCM Ctrl Dly (s/v)	9.1	-	-	-	16.3	11
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q (veh)	0.1	-	-	-	0.2	0.2

Lane Group	EBT	EBR	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	943	196	636	163	79
Future Volume (vph)	943	196	636	163	79
Lane Group Flow (vph)	1048	218	707	181	88
Turn Type	NA	Perm	NA	Perm	Perm
Protected Phases	2		6		
Permitted Phases		2		8	8
Detector Phase	2	2	6	8	8
Switch Phase					
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	41.0	41.0	41.0	25.0	25.0
Total Split (s)	75.0	75.0	75.0	25.0	25.0
Total Split (%)	75.0%	75.0%	75.0%	25.0%	25.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	C-Max	None	None
v/c Ratio	0.28	0.19	0.19	0.52	0.37
Control Delay (s/veh)	4.4	1.0	4.0	46.9	13.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	4.4	1.0	4.0	46.9	13.3
Queue Length 50th (m)	20.5	0.0	12.8	18.2	0.0
Queue Length 95th (m)	29.5	5.9	19.1	28.4	14.0
Internal Link Dist (m)	279.6		287.3		
Turn Bay Length (m)		70.0			
Base Capacity (vph)	3765	1150	3693	565	335
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.28	0.19	0.19	0.32	0.26

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 31 (31%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Description: Pattern 2 for AM, 3 for PM

Splits and Phases: 8: QEW SB On-Ramp/QEW SB Off-Ramp & Plains Rd E





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	943	196	0	636	0	0	0	0	163	0	79
Future Volume (vph)	0	943	196	0	636	0	0	0	0	163	0	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)		7.0	7.0		7.0					7.0		7.0
Lane Util. Factor		0.91	1.00		0.91					0.97		1.00
Frpb, ped/bikes		1.00	1.00		1.00					1.00		1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00		1.00
Frt		1.00	0.85		1.00					1.00		0.85
Flt Protected		1.00	1.00		1.00					0.95		1.00
Satd. Flow (prot)		5029	1463		4932					3143		1463
Flt Permitted		1.00	1.00		1.00					0.95		1.00
Satd. Flow (perm)		5029	1463		4932					3143		1463
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)	0	1048	218	0	707	0	0	0	0	181	0	88
RTOR Reduction (vph)	0	0	55	0	0	0	0	0	0	0	0	78
Lane Group Flow (vph)	0	1048	163	0	707	0	0	0	0	181	0	10
Confl. Peds. (#/hr)	3					3						
Heavy Vehicles (%)	0%	2%	3%	0%	4%	0%	0%	0%	0%	4%	0%	3%
Turn Type		NA	Perm		NA					Perm		Perm
Protected Phases		2			6							
Permitted Phases			2							8		8
Actuated Green, G (s)		74.9	74.9		74.9					11.1		11.1
Effective Green, g (s)		74.9	74.9		74.9					11.1		11.1
Actuated g/C Ratio		0.75	0.75		0.75					0.11		0.11
Clearance Time (s)		7.0	7.0		7.0					7.0		7.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0		3.0
Lane Grp Cap (vph)		3766	1095		3694					348		162
v/s Ratio Prot		c0.21			0.14							
v/s Ratio Perm			0.11							c0.06		0.01
v/c Ratio		0.28	0.15		0.19					0.52		0.06
Uniform Delay, d1		4.0	3.5		3.7					41.9		39.8
Progression Factor		1.00	1.00		1.00					1.00		1.00
Incremental Delay, d2		0.2	0.3		0.1					1.4		0.2
Delay (s)		4.2	3.8		3.8					43.3		39.9
Level of Service		A	A		A					D		D
Approach Delay (s/veh)		4.1			3.8			0.0			42.2	
Approach LOS		A			A			A			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	8.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		
Description: Pattern 2 for AM, 3 for PM			

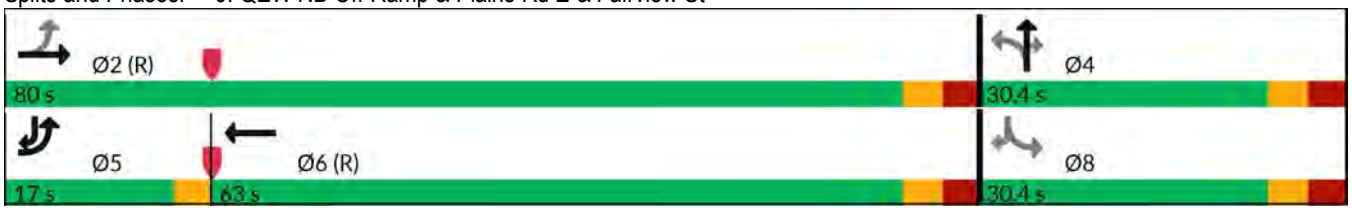
c Critical Lane Group

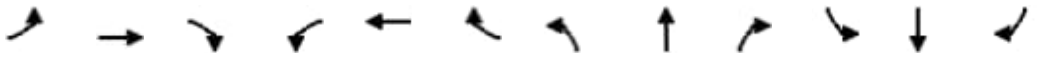
Lane Group	EBL	EBT	WBT	NBL	NBT	NBR	SBL	SBR
Lane Configurations								
Traffic Volume (vph)	134	863	649	89	165	331	1	359
Future Volume (vph)	134	863	649	89	165	331	1	359
Lane Group Flow (vph)	143	918	694	85	281	257	1	382
Turn Type	pm+pt	NA	NA	Perm	NA	Perm	Perm	pm+ov
Protected Phases	5	2	6		4			5
Permitted Phases	2			4		4	8	8
Detector Phase	5	2	6	4	4	4	8	5
Switch Phase								
Minimum Initial (s)	6.0	8.0	8.0	8.0	8.0	8.0	8.0	6.0
Minimum Split (s)	9.0	35.1	35.1	30.4	30.4	30.4	30.4	9.0
Total Split (s)	17.0	80.0	63.0	30.4	30.4	30.4	30.4	17.0
Total Split (%)	15.4%	72.5%	57.1%	27.5%	27.5%	27.5%	27.5%	15.4%
Yellow Time (s)	3.0	3.3	3.3	3.3	3.3	3.3	3.3	3.0
All-Red Time (s)	0.0	2.8	2.8	3.1	3.1	3.1	3.1	0.0
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	6.1	6.1	6.4	6.4	6.4	6.4	3.0
Lead/Lag	Lead		Lag					Lead
Lead-Lag Optimize?	Yes		Yes					Yes
Recall Mode	None	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.26	0.26	0.24	0.24	0.78	0.55	0.01	0.58
Control Delay (s/veh)	7.5	8.0	13.2	35.7	52.0	16.1	30.0	16.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	7.5	8.0	13.2	35.7	52.0	16.1	30.0	16.9
Queue Length 50th (m)	9.3	27.3	27.0	16.9	61.8	15.3	0.2	34.9
Queue Length 95th (m)	20.2	42.0	43.1	29.2	87.8	38.9	1.5	55.5
Internal Link Dist (m)		287.3	180.4		94.5			
Turn Bay Length (m)	35.0					50.0	80.0	
Base Capacity (vph)	604	3562	2910	401	399	496	131	725
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	0.24	0.26	0.24	0.21	0.70	0.52	0.01	0.53

Intersection Summary

Cycle Length: 110.4
Actuated Cycle Length: 110.4
Offset: 97 (88%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Description: event plan 2 for AM, 3 for PM

Splits and Phases: 9: QEW NB Off-Ramp & Plains Rd E & Fairview St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	134	863	0	0	649	4	89	165	331	1	0	359
Future Volume (vph)	134	863	0	0	649	4	89	165	331	1	0	359
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Total Lost time (s)	3.0	6.1			6.1		6.4	6.4	6.4	6.4		3.0
Lane Util. Factor	1.00	0.91			0.91		0.95	0.91	0.95	1.00		1.00
Frpb, ped/bikes	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
Frt	1.00	1.00			1.00		1.00	0.95	0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00	0.95		1.00
Satd. Flow (prot)	1789	5142			5039		1700	1624	1521	1825		1541
Flt Permitted	0.35	1.00			1.00		0.95	1.00	1.00	0.29		1.00
Satd. Flow (perm)	658	5142			5039		1700	1624	1521	557		1541
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)	143	918	0	0	690	4	95	176	352	1	0	382
RTOR Reduction (vph)	0	0	0	0	0	0	0	17	142	0	0	133
Lane Group Flow (vph)	143	918	0	0	694	0	85	264	115	1	0	249
Confl. Peds. (#/hr)	2					2						
Heavy Vehicles (%)	2%	2%	0%	0%	4%	0%	2%	2%	2%	0%	0%	6%
Turn Type	pm+pt	NA			NA		Perm	NA	Perm	Perm		pm+ov
Protected Phases	5	2			6			4				5
Permitted Phases	2						4		4	8		8
Actuated Green, G (s)	74.4	74.4			62.8		23.5	23.5	23.5	23.5		32.1
Effective Green, g (s)	74.4	74.4			62.8		23.5	23.5	23.5	23.5		32.1
Actuated g/C Ratio	0.67	0.67			0.57		0.21	0.21	0.21	0.21		0.29
Clearance Time (s)	3.0	6.1			6.1		6.4	6.4	6.4	6.4		3.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	531	3465			2866		361	345	323	118		448
v/s Ratio Prot	0.02	0.18			0.14							c0.04
v/s Ratio Perm	c0.16						0.05	0.16	0.08	0.00		0.12
v/c Ratio	0.27	0.26			0.24		0.24	0.77	0.36	0.01		0.56
Uniform Delay, d1	6.5	7.1			11.9		36.0	40.9	37.0	34.3		33.1
Progression Factor	1.00	1.00			1.00		1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2	0.3	0.2			0.2		0.3	9.8	0.7	0.0		1.5
Delay (s)	6.8	7.3			12.1		36.3	50.7	37.7	34.3		34.6
Level of Service	A	A			B		D	D	D	C		C
Approach Delay (s/veh)		7.3			12.1			43.4			34.6	
Approach LOS		A			B			D			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	20.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	110.4	Sum of lost time (s)	15.5
Intersection Capacity Utilization	70.3%	ICU Level of Service	C
Analysis Period (min)	15		
Description: event plan 2 for AM, 3 for PM			

c Critical Lane Group

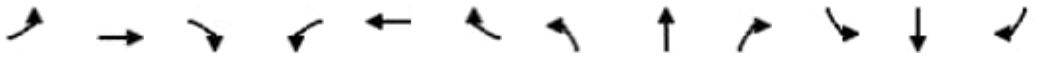
Lane Group	EBL	EBT	EBR	NBT	NBR	SBT
Lane Configurations						
Traffic Volume (vph)	125	0	174	824	345	1095
Future Volume (vph)	125	0	174	824	345	1095
Lane Group Flow (vph)	107	103	98	849	356	1129
Turn Type	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		2		6
Permitted Phases	4		4		2	
Detector Phase	4	4	4	2	2	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	37.0	37.0	37.0	28.0	28.0	28.0
Total Split (s)	43.0	43.0	43.0	67.0	67.0	67.0
Total Split (%)	39.1%	39.1%	39.1%	60.9%	60.9%	60.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	C-Max	C-Max	C-Max
v/c Ratio	0.58	0.44	0.44	0.23	0.31	0.30
Control Delay (s/veh)	57.6	22.3	21.7	4.1	1.2	9.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	57.6	22.3	21.7	4.1	1.2	9.4
Queue Length 50th (m)	24.5	7.0	5.6	16.5	0.0	63.5
Queue Length 95th (m)	41.7	24.3	21.7	26.0	7.7	88.9
Internal Link Dist (m)		230.7		394.1		264.9
Turn Bay Length (m)					80.0	
Base Capacity (vph)	518	519	497	3770	1156	3770
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.20	0.20	0.23	0.31	0.30

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 49 (45%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Description: from project 24223.
pattern 2 for AM, 3 for PM (sched 1)

Splits and Phases: 10: Brant Street & Hwy 403 EB Off-Ramp/QEW EB On-Ramp





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	125	0	174	0	0	0	0	824	345	0	1095	0
Future Volume (vph)	125	0	174	0	0	0	0	824	345	0	1095	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)	7.0	7.0	7.0					6.0	6.0		6.0	
Lane Util. Factor	0.95	0.91	0.95					0.91	1.00		0.91	
Frpb, ped/bikes	1.00	0.99	0.99					1.00	0.98		1.00	
Flpb, ped/bikes	1.00	1.00	1.00					1.00	1.00		1.00	
Frt	1.00	0.88	0.85					1.00	0.85		1.00	
Flt Protected	0.95	0.99	1.00					1.00	1.00		1.00	
Satd. Flow (prot)	1585	1439	1371					4932	1403		4932	
Flt Permitted	0.95	0.99	1.00					1.00	1.00		1.00	
Satd. Flow (perm)	1585	1439	1371					4932	1403		4932	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	129	0	179	0	0	0	0	849	356	0	1129	0
RTOR Reduction (vph)	0	64	64	0	0	0	0	0	84	0	0	0
Lane Group Flow (vph)	107	39	34	0	0	0	0	849	272	0	1129	0
Confl. Peds. (#/hr)									1	1		
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	1%	0%	3%	0%	0%	0%	0%	4%	5%	0%	4%	0%
Turn Type	Perm	NA	Perm					NA	Perm		NA	
Protected Phases		4						2			6	
Permitted Phases	4		4						2			
Actuated Green, G (s)	12.9	12.9	12.9					84.1	84.1		84.1	
Effective Green, g (s)	12.9	12.9	12.9					84.1	84.1		84.1	
Actuated g/C Ratio	0.12	0.12	0.12					0.76	0.76		0.76	
Clearance Time (s)	7.0	7.0	7.0					6.0	6.0		6.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0	3.0		3.0	
Lane Grp Cap (vph)	185	168	160					3770	1072		3770	
v/s Ratio Prot								0.17			c0.23	
v/s Ratio Perm	c0.07	0.03	0.03						0.19			
v/c Ratio	0.58	0.23	0.22					0.23	0.25		0.30	
Uniform Delay, d1	46.0	44.1	44.0					3.7	3.8		4.0	
Progression Factor	1.00	1.00	1.00					1.00	1.00		2.17	
Incremental Delay, d2	4.3	0.7	0.7					0.1	0.6		0.2	
Delay (s)	50.3	44.8	44.6					3.8	4.4		8.7	
Level of Service	D	D	D					A	A		A	
Approach Delay (s/veh)		46.7			0.0			4.0			8.7	
Approach LOS		D			A			A			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	39.2%	ICU Level of Service	A
Analysis Period (min)	15		
Description: from project 24223.			
pattern 2 for AM, 3 for PM (sched 1)			

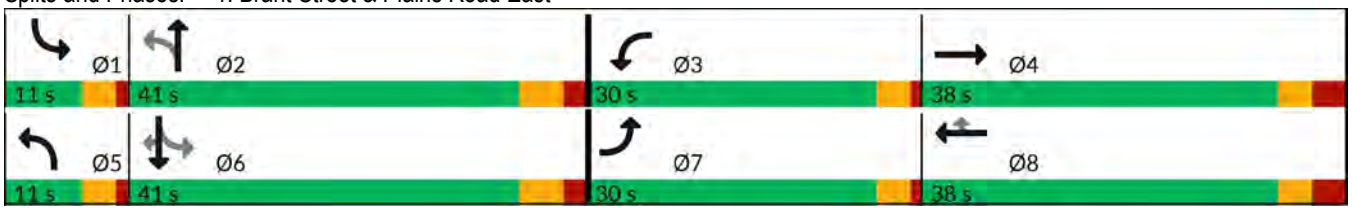
c Critical Lane Group

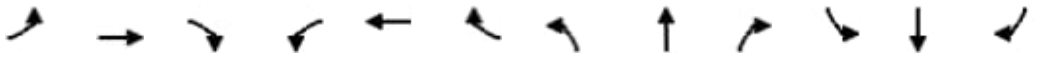
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	519	190	111	741	368	48	875	104	783	693
Future Volume (vph)	519	190	111	741	368	48	875	104	783	693
Lane Group Flow (vph)	535	263	114	764	379	49	982	107	807	714
Turn Type	Prot	NA	Prot	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8	2		6		6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	7.0	8.0	7.0	8.0	8.0	7.0	8.0	7.0	8.0	8.0
Minimum Split (s)	11.0	38.0	11.0	38.0	38.0	11.0	33.0	11.0	33.0	33.0
Total Split (s)	30.0	38.0	30.0	38.0	38.0	11.0	41.0	11.0	41.0	41.0
Total Split (%)	25.0%	31.7%	25.0%	31.7%	31.7%	9.2%	34.2%	9.2%	34.2%	34.2%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	3.0	1.0	3.0	3.0	1.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	6.0	4.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	Max	None	Max	Max
v/c Ratio	0.83	0.44	0.60	0.85	0.79	0.20	0.65	0.55	0.49	0.86
Control Delay (s/veh)	56.0	30.8	61.6	50.9	38.9	23.9	37.1	34.7	33.7	22.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	56.0	30.8	61.6	50.9	38.9	23.9	37.1	34.7	33.7	22.8
Queue Length 50th (m)	64.6	45.0	27.0	92.1	56.5	7.2	76.5	16.5	60.7	51.3
Queue Length 95th (m)	85.0	74.5	45.1	118.3	#104.6	15.8	94.1	29.8	76.0	#140.9
Internal Link Dist (m)		240.4		173.9			422.3		394.1	
Turn Bay Length (m)	65.0		60.0		75.0	60.0		55.0		40.0
Base Capacity (vph)	737	600	380	982	508	248	1514	193	1652	827
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.44	0.30	0.78	0.75	0.20	0.65	0.55	0.49	0.86

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 114.5
Natural Cycle: 105
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Brant Street & Plains Road East





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	519	190	65	111	741	368	48	875	78	104	783	693
Future Volume (vph)	519	190	65	111	741	368	48	875	78	104	783	693
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	0.97	1.00		1.00	0.95	1.00	1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3236	1734		1668	3500	1467	1650	4908		1620	5029	1450
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.26	1.00		0.17	1.00	1.00
Satd. Flow (perm)	3236	1734		1668	3500	1467	456	4908		283	5029	1450
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	535	196	67	114	764	379	49	902	80	107	807	714
RTOR Reduction (vph)	0	9	0	0	0	101	0	8	0	0	0	353
Lane Group Flow (vph)	535	254	0	114	764	278	49	974	0	107	807	361
Confl. Peds. (#/hr)	2		5	5		2	11		4	4		11
Confl. Bikes (#/hr)						3						4
Heavy Vehicles (%)	1%	4%	3%	1%	2%	1%	2%	3%	4%	4%	2%	1%
Turn Type	Prot	NA		Prot	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8	2			6		6
Actuated Green, G (s)	22.9	39.1		13.2	29.4	29.4	41.6	36.1		44.6	37.6	37.6
Effective Green, g (s)	22.9	39.1		13.2	29.4	29.4	41.6	36.1		44.6	37.6	37.6
Actuated g/C Ratio	0.20	0.34		0.11	0.25	0.25	0.36	0.31		0.39	0.33	0.33
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	642	587		190	891	373	221	1535		190	1638	472
v/s Ratio Prot	c0.17	0.15		0.07	c0.22		0.01	0.20		c0.03	0.16	
v/s Ratio Perm						0.19	0.07			0.18		c0.25
v/c Ratio	0.83	0.43		0.60	0.86	0.75	0.22	0.63		0.56	0.49	0.77
Uniform Delay, d1	44.4	29.6		48.6	41.0	39.6	24.6	34.0		24.6	31.2	34.9
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	9.1	0.5		5.2	8.2	7.9	0.5	2.0		3.8	1.1	11.3
Delay (s)	53.5	30.1		53.8	49.2	47.5	25.1	36.0		28.3	32.3	46.2
Level of Service	D	C		D	D	D	C	D		C	C	D
Approach Delay (s/veh)		45.8			49.1			35.5			38.1	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	41.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	115.4	Sum of lost time (s)	20.0
Intersection Capacity Utilization	84.1%	ICU Level of Service	E
Analysis Period (min)	15		

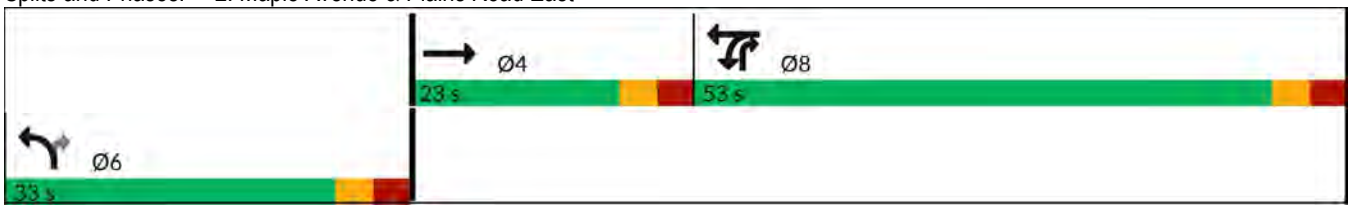
c Critical Lane Group

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	354	877	573	24	426
Future Volume (vph)	354	877	573	24	426
Lane Group Flow (vph)	408	964	630	26	468
Turn Type	NA	Split	NA	Prot	pm+ov
Protected Phases	4	8	8	6	8
Permitted Phases					6
Detector Phase	4	8	8	6	8
Switch Phase					
Minimum Initial (s)	8.0	8.0	8.0	7.0	8.0
Minimum Split (s)	14.0	33.0	33.0	33.0	33.0
Total Split (s)	23.0	53.0	53.0	33.0	53.0
Total Split (%)	21.1%	48.6%	48.6%	30.3%	48.6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	Max	None	None	None	None
v/c Ratio	0.45	0.60	0.69	0.14	0.57
Control Delay (s/veh)	27.3	14.6	18.7	36.9	10.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	27.3	14.6	18.7	36.9	10.9
Queue Length 50th (m)	20.4	36.0	48.9	2.8	31.2
Queue Length 95th (m)	52.0	77.7	119.2	12.5	50.1
Internal Link Dist (m)	259.0		484.0	228.5	
Turn Bay Length (m)		85.0			
Base Capacity (vph)	901	2352	1325	696	1147
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.45	0.41	0.48	0.04	0.41

Intersection Summary

Cycle Length: 109
Actuated Cycle Length: 69.4
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Description: STP from video

Splits and Phases: 2: Maple Avenue & Plains Road East



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	354	17	877	573	24	426
Future Volume (vph)	354	17	877	573	24	426
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.0	3.0	3.5	3.0	3.0
Total Lost time (s)	6.0		6.0	6.0	6.0	6.0
Lane Util. Factor	0.95		0.97	1.00	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3450		3268	1842	1685	1506
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3450		3268	1842	1685	1506
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	389	19	964	630	26	468
RTOR Reduction (vph)	3	0	0	0	0	19
Lane Group Flow (vph)	405	0	964	630	26	449
Confl. Peds. (#/hr)						5
Heavy Vehicles (%)	2%	18%	0%	2%	0%	0%
Turn Type	NA		Split	NA	Prot	pm+ov
Protected Phases	4		8	8	6	8
Permitted Phases						6
Actuated Green, G (s)	18.1		34.2	34.2	2.5	36.7
Effective Green, g (s)	18.1		34.2	34.2	2.5	36.7
Actuated g/C Ratio	0.25		0.47	0.47	0.03	0.50
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	857		1535	865	57	883
v/s Ratio Prot	c0.12		0.29	c0.34	0.02	c0.24
v/s Ratio Perm						0.06
v/c Ratio	0.47		0.63	0.73	0.46	0.51
Uniform Delay, d1	23.3		14.5	15.6	34.5	12.0
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	1.9		0.8	3.1	5.7	0.5
Delay (s)	25.2		15.3	18.6	40.2	12.5
Level of Service	C		B	B	D	B
Approach Delay (s/veh)	25.2			16.6	14.0	
Approach LOS	C			B	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	17.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	72.8	Sum of lost time (s)	18.0
Intersection Capacity Utilization	58.7%	ICU Level of Service	B
Analysis Period (min)	15		
Description: STP from video			

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	706	6	4	1509	11	7	0	3	3	0	16
Future Vol, veh/h	7	706	6	4	1509	11	7	0	3	3	0	16
Conflicting Peds, #/hr	14	0	4	4	0	14	2	0	1	1	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	15	-	-	15	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	2	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	7	735	6	4	1572	11	7	0	3	3	0	17

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1597	0	0	745	0	0	1552	2361	376	1983	2359	808
Stage 1	-	-	-	-	-	-	756	756	-	1600	1600	-
Stage 2	-	-	-	-	-	-	796	1605	-	383	759	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	416	-	-	872	-	-	79	36	627	37	36	328
Stage 1	-	-	-	-	-	-	371	419	-	113	167	-
Stage 2	-	-	-	-	-	-	351	166	-	617	418	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	411	-	-	869	-	-	73	35	625	36	35	324
Mov Cap-2 Maneuver	-	-	-	-	-	-	73	35	-	36	35	-
Stage 1	-	-	-	-	-	-	364	411	-	110	164	-
Stage 2	-	-	-	-	-	-	331	163	-	603	410	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.1	0	45.6	34.2
HCM LOS			E	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	99	411	-	-	869	-	-	143
HCM Lane V/C Ratio	0.105	0.018	-	-	0.005	-	-	0.138
HCM Ctrl Dly (s/v)	45.6	13.9	-	-	9.2	-	-	34.2
HCM Lane LOS	E	B	-	-	A	-	-	D
HCM 95th %tile Q (veh)	0.3	0.1	-	-	0	-	-	0.5

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	709	2	7	1522	1	1	0	10	1	0	1
Future Vol, veh/h	1	709	2	7	1522	1	1	0	10	1	0	1
Conflicting Peds, #/hr	13	0	2	2	0	13	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	15	-	-	15	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	2	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	1	746	2	7	1602	1	1	0	11	1	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1616	0	0	750	0	0	1567	2381	376	2005	2382	816
Stage 1	-	-	-	-	-	-	751	751	-	1630	1630	-
Stage 2	-	-	-	-	-	-	816	1630	-	375	752	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	409	-	-	868	-	-	77	35	627	36	35	324
Stage 1	-	-	-	-	-	-	373	421	-	108	162	-
Stage 2	-	-	-	-	-	-	341	162	-	624	421	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	405	-	-	867	-	-	76	34	626	35	34	320
Mov Cap-2 Maneuver	-	-	-	-	-	-	76	34	-	35	34	-
Stage 1	-	-	-	-	-	-	372	419	-	107	159	-
Stage 2	-	-	-	-	-	-	337	159	-	612	419	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	14.8	64.1
HCM LOS			B	F

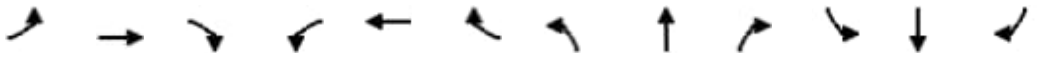
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	378	405	-	-	867	-	-	63
HCM Lane V/C Ratio	0.031	0.003	-	-	0.008	-	-	0.033
HCM Ctrl Dly (s/v)	14.8	13.9	-	-	9.2	-	-	64.1
HCM Lane LOS	B	B	-	-	A	-	-	F
HCM 95th %tile Q (veh)	0.1	0	-	-	0	-	-	0.1

Lane Group	WBL	WBT	WBR	NBL	NBT	NBR	SBT
Lane Configurations							
Traffic Volume (vph)	115	12	88	74	1376	313	1855
Future Volume (vph)	115	12	88	74	1376	313	1855
Lane Group Flow (vph)	64	65	90	76	1404	319	1896
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	NA
Protected Phases		8		5	2		6
Permitted Phases	8		8	2		2	
Detector Phase	8	8	8	5	2	2	6
Switch Phase							
Minimum Initial (s)	8.0	8.0	8.0	7.0	8.0	8.0	8.0
Minimum Split (s)	37.0	37.0	37.0	11.0	28.0	28.0	28.0
Total Split (s)	43.0	43.0	43.0	11.0	77.0	77.0	66.0
Total Split (%)	35.8%	35.8%	35.8%	9.2%	64.2%	64.2%	55.0%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	4.0	6.0	6.0	6.0
Lead/Lag				Lead			Lag
Lead-Lag Optimize?				Yes			Yes
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max
v/c Ratio	0.45	0.46	0.47	0.36	0.34	0.26	0.52
Control Delay (s/veh)	61.2	61.7	27.3	7.8	5.9	3.0	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	61.2	61.7	27.3	7.8	5.9	3.0	8.6
Queue Length 50th (m)	16.2	16.4	6.1	6.0	51.3	13.7	69.8
Queue Length 95th (m)	30.7	31.2	22.3	8.5	67.1	33.4	98.9
Internal Link Dist (m)		133.1			264.9		193.7
Turn Bay Length (m)				60.0		130.0	
Base Capacity (vph)	480	477	490	210	4116	1241	3681
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.14	0.18	0.36	0.34	0.26	0.52

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 100 (83%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Description: action plan 2 for am, 3 for pm

Splits and Phases: 5: Brant Street & Retail Access/QEW WB Off-Ramp / WB On-Ramp





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	115	12	88	74	1376	313	0	1855	3
Future Volume (vph)	0	0	0	115	12	88	74	1376	313	0	1855	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)				7.0	7.0	7.0	4.0	6.0	6.0		6.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.91	1.00		0.91	
Frpb, ped/bikes				1.00	1.00	0.99	1.00	1.00	0.97		1.00	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00	1.00		1.00	
Frt				1.00	1.00	0.85	1.00	1.00	0.85		1.00	
Flt Protected				0.95	0.96	1.00	0.95	1.00	1.00		1.00	
Satd. Flow (prot)				1600	1592	1486	1636	5129	1469		5077	
Flt Permitted				0.95	0.96	1.00	0.08	1.00	1.00		1.00	
Satd. Flow (perm)				1600	1592	1486	144	5129	1469		5077	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	117	12	90	76	1404	319	0	1893	3
RTOR Reduction (vph)	0	0	0	0	0	58	0	0	63	0	0	0
Lane Group Flow (vph)	0	0	0	64	65	32	76	1404	256	0	1896	0
Confl. Peds. (#/hr)	2					2	5		2	2		5
Heavy Vehicles (%)	0%	0%	0%	0%	42%	0%	3%	0%	0%	0%	1%	0%
Turn Type				Perm	NA	Perm	pm+pt	NA	Perm		NA	
Protected Phases					8		5	2			6	
Permitted Phases				8		8	2		2			
Actuated Green, G (s)				10.7	10.7	10.7	96.3	96.3	96.3		86.2	
Effective Green, g (s)				10.7	10.7	10.7	96.3	96.3	96.3		86.2	
Actuated g/C Ratio				0.09	0.09	0.09	0.80	0.80	0.80		0.72	
Clearance Time (s)				7.0	7.0	7.0	4.0	6.0	6.0		6.0	
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)				142	141	132	191	4116	1178		3646	
v/s Ratio Prot							0.02	c0.27			c0.37	
v/s Ratio Perm				0.04	0.04	0.02	0.30		0.17			
v/c Ratio				0.45	0.46	0.24	0.40	0.34	0.22		0.52	
Uniform Delay, d1				51.9	51.9	50.9	5.1	3.2	2.8		7.6	
Progression Factor				1.00	1.00	1.00	1.37	1.67	6.88		1.00	
Incremental Delay, d2				2.3	2.4	0.9	1.3	0.2	0.4		0.5	
Delay (s)				54.1	54.3	51.8	8.3	5.6	19.9		8.1	
Level of Service				D	D	D	A	A	B		A	
Approach Delay (s/veh)		0.0			53.2			8.3			8.1	
Approach LOS		A			D			A			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	10.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	63.8%	ICU Level of Service	B
Analysis Period (min)	15		
Description: action plan 2 for am, 3 for pm			

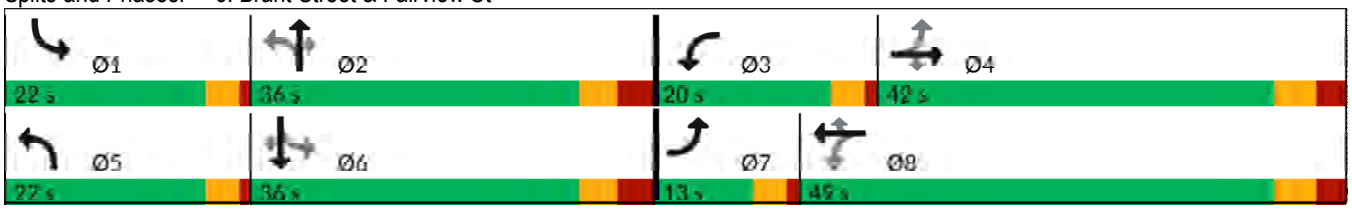
c Critical Lane Group

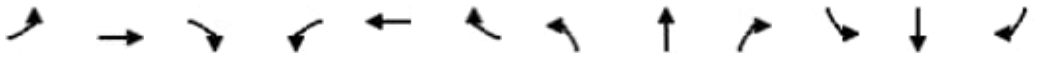
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	184	611	255	205	1094	287	226	529	147	201	516	145
Future Volume (vph)	184	611	255	205	1094	287	226	529	147	201	516	145
Lane Group Flow (vph)	194	643	268	216	1152	302	238	557	155	212	543	153
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	8.0	8.0	7.0	8.0	8.0	7.0	8.0	8.0	7.0	8.0	8.0
Minimum Split (s)	12.0	31.4	31.4	12.0	31.4	31.4	12.0	31.5	31.5	12.0	31.5	31.5
Total Split (s)	13.0	42.0	42.0	20.0	49.0	49.0	22.0	36.0	36.0	22.0	36.0	36.0
Total Split (%)	10.8%	35.0%	35.0%	16.7%	40.8%	40.8%	18.3%	30.0%	30.0%	18.3%	30.0%	30.0%
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.3	3.3	3.0	3.3	3.3
All-Red Time (s)	1.0	2.7	2.7	1.0	2.7	2.7	1.0	3.2	3.2	1.0	3.2	3.2
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)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.5	6.5	4.0	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
v/c Ratio	0.93	0.55	0.40	0.58	0.89	0.44	0.72	0.72	0.37	0.66	0.74	0.37
Control Delay (s/veh)	74.6	33.2	5.7	22.6	43.0	5.2	35.3	45.6	8.4	32.2	47.2	8.5
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 (s/veh)	74.6	33.2	5.7	22.6	43.0	5.2	35.3	45.6	8.4	32.2	47.2	8.5
Queue Length 50th (m)	27.7	63.5	0.0	27.1	128.8	0.0	37.4	63.3	0.0	32.6	63.0	0.0
Queue Length 95th (m)	#84.6	92.3	20.0	47.8	#185.8	19.6	57.5	85.0	17.0	51.1	82.8	17.0
Internal Link Dist (m)		607.3			241.7			325.5			422.3	
Turn Bay Length (m)	300.0		140.0	60.0		100.0	84.0		70.0	45.0		60.0
Base Capacity (vph)	208	1206	680	420	1414	721	362	989	496	370	979	507
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.93	0.53	0.39	0.51	0.81	0.42	0.66	0.56	0.31	0.57	0.55	0.30

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 107.9
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Description: pattern 2 for AM, 3 for PM (sched 1)
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Brant Street & Fairview St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	184	611	255	205	1094	287	226	529	147	201	516	145
Future Volume (vph)	184	611	255	205	1094	287	226	529	147	201	516	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.5	6.5	4.0	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.94	1.00	1.00	0.98
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	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1652	3535	1479	1684	3535	1353	1588	3570	1396	1597	3535	1433
Flt Permitted	0.11	1.00	1.00	0.26	1.00	1.00	0.25	1.00	1.00	0.27	1.00	1.00
Satd. Flow (perm)	195	3535	1479	467	3535	1353	412	3570	1396	450	3535	1433
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	194	643	268	216	1152	302	238	557	155	212	543	153
RTOR Reduction (vph)	0	0	179	0	0	191	0	0	121	0	0	121
Lane Group Flow (vph)	194	643	89	216	1152	111	238	557	34	212	543	32
Confl. Peds. (#/hr)	14		5	5		14	6		39	39		6
Confl. Bikes (#/hr)									1			1
Heavy Vehicles (%)	2%	1%	0%	0%	1%	8%	6%	0%	1%	5%	1%	3%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	44.8	35.7	35.7	52.2	39.4	39.4	39.2	23.4	23.4	37.2	22.4	22.4
Effective Green, g (s)	44.8	35.7	35.7	52.2	39.4	39.4	39.2	23.4	23.4	37.2	22.4	22.4
Actuated g/C Ratio	0.42	0.33	0.33	0.49	0.37	0.37	0.36	0.22	0.22	0.35	0.21	0.21
Clearance Time (s)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.5	6.5	4.0	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)	204	1172	490	371	1294	495	322	776	303	313	735	298
v/s Ratio Prot	c0.08	0.18		c0.07	c0.33		c0.11	0.16		0.09	0.15	
v/s Ratio Perm	0.32		0.06	0.21		0.08	c0.16		0.02	0.14		0.02
v/c Ratio	0.95	0.55	0.18	0.58	0.89	0.22	0.74	0.72	0.11	0.68	0.74	0.11
Uniform Delay, d1	24.8	29.4	25.6	17.7	32.1	23.5	26.3	39.0	33.8	27.1	39.9	34.5
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	48.9	0.5	0.2	2.3	8.0	0.2	8.6	3.2	0.2	5.7	3.9	0.2
Delay (s)	73.8	29.9	25.7	20.0	40.1	23.8	34.9	42.2	33.9	32.8	43.8	34.7
Level of Service	E	C	C	B	D	C	C	D	C	C	D	C
Approach Delay (s/veh)		36.6			34.5			39.0			39.7	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	37.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	107.6	Sum of lost time (s)	20.9
Intersection Capacity Utilization	87.5%	ICU Level of Service	E
Analysis Period (min)	15		
Description: pattern 2 for AM, 3 for PM (sched 1)			
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	52	728	1405	50	12	45
Future Vol, veh/h	52	728	1405	50	12	45
Conflicting Peds, #/hr	1	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	40	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	24	0	0
Mvmt Flow	53	743	1434	51	12	46

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1486	0	-	0	1939	744
Stage 1	-	-	-	-	1461	-
Stage 2	-	-	-	-	478	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	458	-	-	-	59	362
Stage 1	-	-	-	-	183	-
Stage 2	-	-	-	-	595	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	458	-	-	-	52	362
Mov Cap-2 Maneuver	-	-	-	-	131	-
Stage 1	-	-	-	-	162	-
Stage 2	-	-	-	-	594	-

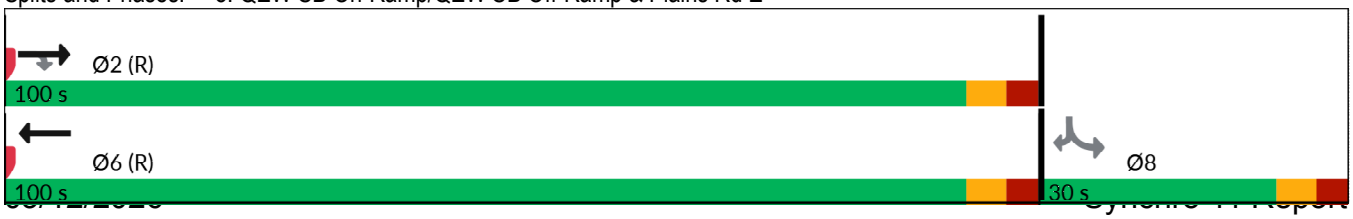
Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.9	0	20.4
HCM LOS			C

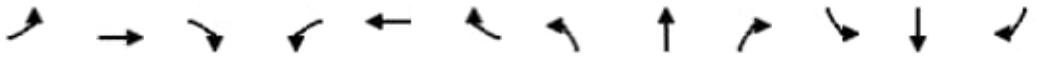
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	458	-	-	-	131	362
HCM Lane V/C Ratio	0.116	-	-	-	0.093	0.127
HCM Ctrl Dly (s/v)	13.9	-	-	-	35.3	16.4
HCM Lane LOS	B	-	-	-	E	C
HCM 95th %tile Q (veh)	0.4	-	-	-	0.3	0.4

Lane Group	EBT	EBR	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	873	328	1387	371	236
Future Volume (vph)	873	328	1387	371	236
Lane Group Flow (vph)	909	342	1445	386	246
Turn Type	NA	Perm	NA	Perm	Perm
Protected Phases	2		6		
Permitted Phases		2		8	8
Detector Phase	2	2	6	8	8
Switch Phase					
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	41.0	41.0	41.0	30.0	30.0
Total Split (s)	100.0	100.0	100.0	30.0	30.0
Total Split (%)	76.9%	76.9%	76.9%	23.1%	23.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	C-Max	None	None
v/c Ratio	0.24	0.29	0.38	0.76	0.84
Control Delay (s/veh)	5.9	1.2	9.7	62.7	61.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	5.9	1.2	9.7	62.7	61.4
Queue Length 50th (m)	26.8	0.0	87.2	51.3	46.0
Queue Length 95th (m)	33.4	8.2	92.8	68.4	#85.4
Internal Link Dist (m)	279.6		287.3		
Turn Bay Length (m)		70.0			
Base Capacity (vph)	3774	1166	3774	572	321
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.24	0.29	0.38	0.67	0.77

Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 31 (24%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Description: Pattern 2 for AM, 3 for PM
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: QEW SB On-Ramp/QEW SB Off-Ramp & Plains Rd E





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	873	328	0	1387	0	0	0	0	371	0	236
Future Volume (vph)	0	873	328	0	1387	0	0	0	0	371	0	236
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)		7.0	7.0		7.0					7.0		7.0
Lane Util. Factor		0.91	1.00		0.91					0.97		1.00
Frpb, ped/bikes		1.00	0.97		1.00					1.00		0.98
Flpb, ped/bikes		1.00	1.00		1.00					1.00		1.00
Frt		1.00	0.85		1.00					1.00		0.85
Flt Protected		1.00	1.00		1.00					0.95		1.00
Satd. Flow (prot)		5129	1463		5129					3236		1479
Flt Permitted		1.00	1.00		1.00					0.95		1.00
Satd. Flow (perm)		5129	1463		5129					3236		1479
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	909	342	0	1445	0	0	0	0	386	0	246
RTOR Reduction (vph)	0	0	90	0	0	0	0	0	0	0	0	62
Lane Group Flow (vph)	0	909	252	0	1445	0	0	0	0	386	0	184
Confl. Peds. (#/hr)	2		5	5		2	4					4
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%
Turn Type		NA	Perm		NA					Perm		Perm
Protected Phases		2			6							
Permitted Phases			2							8		8
Actuated Green, G (s)		95.7	95.7		95.7					20.3		20.3
Effective Green, g (s)		95.7	95.7		95.7					20.3		20.3
Actuated g/C Ratio		0.74	0.74		0.74					0.16		0.16
Clearance Time (s)		7.0	7.0		7.0					7.0		7.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0		3.0
Lane Grp Cap (vph)		3775	1076		3775					505		230
v/s Ratio Prot		0.18			c0.28							
v/s Ratio Perm			0.17							0.12		c0.12
v/c Ratio		0.24	0.23		0.38					0.76		0.80
Uniform Delay, d1		5.5	5.5		6.3					52.6		52.9
Progression Factor		1.00	1.00		1.45					1.00		1.00
Incremental Delay, d2		0.2	0.5		0.2					6.8		17.9
Delay (s)		5.7	6.0		9.3					59.3		70.8
Level of Service		A	A		A					E		E
Approach Delay (s/veh)		5.7			9.3			0.0			63.8	
Approach LOS		A			A			A			E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	18.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	55.6%	ICU Level of Service	B
Analysis Period (min)	15		
Description: Pattern 2 for AM, 3 for PM			

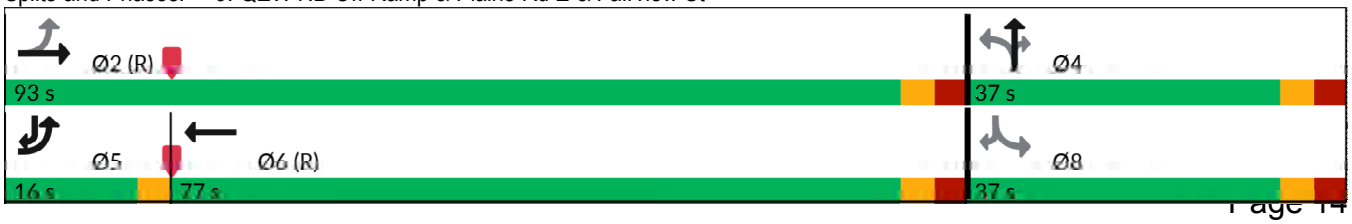
c Critical Lane Group

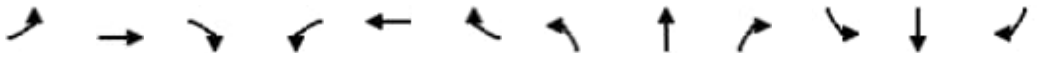
Lane Group	EBL	EBT	WBT	NBL	NBT	NBR	SBL	SBR
Lane Configurations								
Traffic Volume (vph)	152	1090	1905	195	192	290	6	591
Future Volume (vph)	152	1090	1905	195	192	290	6	591
Lane Group Flow (vph)	154	1101	1950	177	270	237	6	597
Turn Type	pm+pt	NA	NA	Perm	NA	Perm	Perm	pm+ov
Protected Phases	5	2	6		4			5
Permitted Phases	2			4		4	8	8
Detector Phase	5	2	6	4	4	4	8	8
Switch Phase								
Minimum Initial (s)	6.0	8.0	8.0	8.0	8.0	8.0	8.0	6.0
Minimum Split (s)	9.0	35.1	35.1	36.4	36.4	36.4	36.4	9.0
Total Split (s)	16.0	93.0	77.0	37.0	37.0	37.0	37.0	16.0
Total Split (%)	12.3%	71.5%	59.2%	28.5%	28.5%	28.5%	28.5%	12.3%
Yellow Time (s)	3.0	3.3	3.3	3.3	3.3	3.3	3.3	3.0
All-Red Time (s)	0.0	2.8	2.8	3.1	3.1	3.1	3.1	0.0
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	6.1	6.1	6.4	6.4	6.4	6.4	3.0
Lead/Lag	Lead		Lag					Lead
Lead-Lag Optimize?	Yes		Yes					Yes
Recall Mode	None	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.72	0.35	0.77	0.33	0.52	0.43	0.02	0.83
Control Delay (s/veh)	49.1	15.5	29.7	38.5	41.6	20.9	36.2	42.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	49.1	15.5	29.7	38.5	41.6	20.9	36.2	42.2
Queue Length 50th (m)	26.7	54.7	157.4	38.6	63.6	24.8	1.1	131.0
Queue Length 95th (m)	m45.7	38.2	156.6	66.5	104.1	56.0	5.1	#221.6
Internal Link Dist (m)		287.3	180.4		94.5			
Turn Bay Length (m)	35.0					50.0	80.0	
Base Capacity (vph)	237	3506	2838	532	519	555	243	723
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	0.65	0.31	0.69	0.33	0.52	0.43	0.02	0.83

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 119 (92%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated
Description: event plan 2 for AM, 3 for PM
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: QEW NB Off-Ramp & Plains Rd E & Fairview St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	152	1090	0	0	1905	26	195	192	290	6	0	591
Future Volume (vph)	152	1090	0	0	1905	26	195	192	290	6	0	591
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Total Lost time (s)	3.0	6.1			6.1		6.4	6.4	6.4	6.4		3.0
Lane Util. Factor	1.00	0.91			0.91		0.95	0.91	0.95	1.00		1.00
Frpb, ped/bikes	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
Frt	1.00	1.00			1.00		1.00	0.97	0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00	0.95		1.00
Satd. Flow (prot)	1789	5245			5202		1734	1672	1536	1825		1601
Flt Permitted	0.06	1.00			1.00		0.95	1.00	1.00	0.41		1.00
Satd. Flow (perm)	114	5245			5202		1734	1672	1536	795		1601
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	154	1101	0	0	1924	26	197	194	293	6	0	597
RTOR Reduction (vph)	0	0	0	0	1	0	0	6	84	0	0	16
Lane Group Flow (vph)	154	1101	0	0	1949	0	177	264	153	6	0	581
Confl. Peds. (#/hr)			7	7								
Heavy Vehicles (%)	2%	0%	0%	0%	0%	46%	0%	1%	1%	0%	0%	2%
Turn Type	pm+pt	NA			NA		Perm	NA	Perm	Perm		pm+ov
Protected Phases	5	2			6			4				5
Permitted Phases	2						4		4	8		8
Actuated Green, G (s)	77.6	77.6			63.3		39.9	39.9	39.9	39.9		51.2
Effective Green, g (s)	77.6	77.6			63.3		39.9	39.9	39.9	39.9		51.2
Actuated g/C Ratio	0.60	0.60			0.49		0.31	0.31	0.31	0.31		0.39
Clearance Time (s)	3.0	6.1			6.1		6.4	6.4	6.4	6.4		3.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	213	3130			2532		532	513	471	244		630
v/s Ratio Prot	0.06	0.21			c0.37							c0.08
v/s Ratio Perm	0.37						0.10	0.16	0.10	0.01		0.28
v/c Ratio	0.72	0.35			0.77		0.33	0.51	0.33	0.02		0.92
Uniform Delay, d1	31.4	13.4			27.4		34.8	37.1	34.7	31.5		37.5
Progression Factor	1.22	1.15			1.00		1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2	10.9	0.3			2.3		0.4	0.9	0.4	0.0		19.2
Delay (s)	49.4	15.7			29.7		35.1	37.9	35.1	31.5		56.7
Level of Service	D	B			C		D	D	D	C		E
Approach Delay (s/veh)		19.8			29.7			36.2			56.4	
Approach LOS		B			C			D			E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	31.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	101.1%	ICU Level of Service	G
Analysis Period (min)	15		
Description: event plan 2 for AM, 3 for PM			

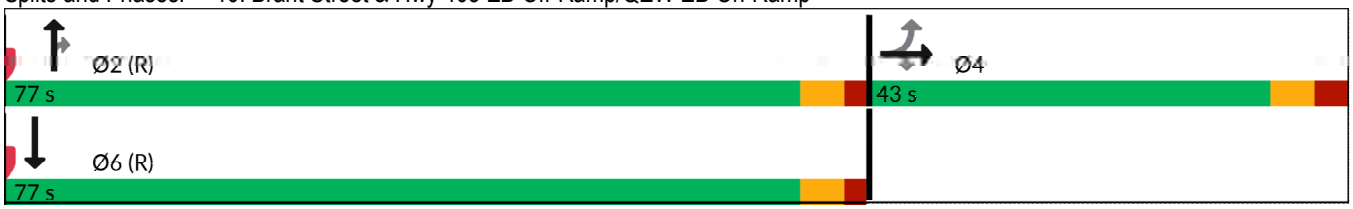
c Critical Lane Group

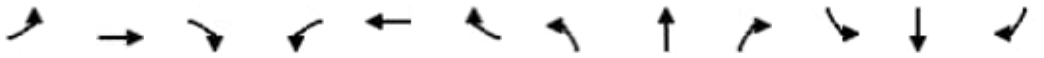
Lane Group	EBL	EBT	EBR	NBT	NBR	SBT
Lane Configurations						
Traffic Volume (vph)	203	0	187	1397	458	1293
Future Volume (vph)	203	0	187	1397	458	1293
Lane Group Flow (vph)	141	136	129	1455	477	1347
Turn Type	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		2		6
Permitted Phases	4		4		2	
Detector Phase	4	4	4	2	2	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	37.0	37.0	37.0	28.0	28.0	28.0
Total Split (s)	43.0	43.0	43.0	77.0	77.0	77.0
Total Split (%)	35.8%	35.8%	35.8%	64.2%	64.2%	64.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	C-Max	C-Max	C-Max
v/c Ratio	0.67	0.57	0.55	0.38	0.40	0.36
Control Delay (s/veh)	64.4	42.4	37.2	5.8	1.5	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	64.4	42.4	37.2	5.8	1.5	6.4
Queue Length 50th (m)	35.4	24.5	19.1	39.2	0.0	32.4
Queue Length 95th (m)	55.6	45.3	38.7	58.3	9.6	69.2
Internal Link Dist (m)		230.7		394.1		264.9
Turn Bay Length (m)					80.0	
Base Capacity (vph)	457	474	454	3793	1200	3793
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.29	0.28	0.38	0.40	0.36

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 49 (41%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Description: from project 24223.
pattern 2 for AM, 3 for PM (sched 1)

Splits and Phases: 10: Brant Street & Hwy 403 EB Off-Ramp/QEW EB On-Ramp





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	203	0	187	0	0	0	0	1397	458	0	1293	0
Future Volume (vph)	203	0	187	0	0	0	0	1397	458	0	1293	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)	7.0	7.0	7.0					6.0	6.0		6.0	
Lane Util. Factor	0.95	0.91	0.95					0.91	1.00		0.91	
Frpb, ped/bikes	1.00	0.99	0.99					1.00	0.97		1.00	
Flpb, ped/bikes	1.00	1.00	1.00					1.00	1.00		1.00	
Frt	1.00	0.93	0.85					1.00	0.85		1.00	
Flt Protected	0.95	0.97	1.00					1.00	1.00		1.00	
Satd. Flow (prot)	1524	1489	1397					5029	1436		5029	
Flt Permitted	0.95	0.97	1.00					1.00	1.00		1.00	
Satd. Flow (perm)	1524	1489	1397					5029	1436		5029	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	211	0	195	0	0	0	0	1455	477	0	1347	0
RTOR Reduction (vph)	0	35	43	0	0	0	0	0	117	0	0	0
Lane Group Flow (vph)	141	102	86	0	0	0	0	1455	360	0	1347	0
Confl. Peds. (#/hr)			2	2			7		3	3		7
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	5%	0%	1%	0%	0%	0%	0%	2%	2%	0%	2%	0%
Turn Type	Perm	NA	Perm					NA	Perm		NA	
Protected Phases		4						2			6	
Permitted Phases	4		4						2			
Actuated Green, G (s)	16.5	16.5	16.5					90.5	90.5		90.5	
Effective Green, g (s)	16.5	16.5	16.5					90.5	90.5		90.5	
Actuated g/C Ratio	0.14	0.14	0.14					0.75	0.75		0.75	
Clearance Time (s)	7.0	7.0	7.0					6.0	6.0		6.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0	3.0		3.0	
Lane Grp Cap (vph)	209	204	192					3792	1082		3792	
v/s Ratio Prot								c0.29			0.27	
v/s Ratio Perm	c0.09	0.07	0.06						0.25			
v/c Ratio	0.67	0.50	0.45					0.38	0.33		0.36	
Uniform Delay, d1	49.2	47.9	47.6					5.1	4.8		5.0	
Progression Factor	1.00	1.00	1.00					1.00	1.00		1.14	
Incremental Delay, d2	8.3	1.9	1.7					0.3	0.8		0.2	
Delay (s)	57.5	49.8	49.2					5.4	5.7		5.9	
Level of Service	E	D	D					A	A		A	
Approach Delay (s/veh)		52.3			0.0			5.5			5.9	
Approach LOS		D			A			A			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	10.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	48.2%	ICU Level of Service	A
Analysis Period (min)	15		
Description: from project 24223.			
pattern 2 for AM, 3 for PM (sched 1)			

c Critical Lane Group

APPENDIX F

Future Background Intersection Capacity Analysis

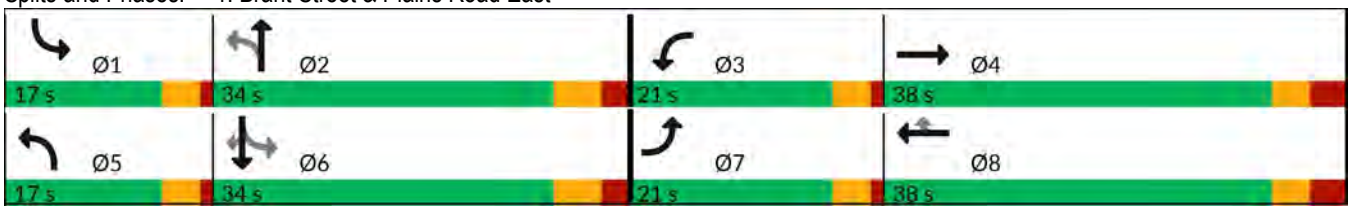
Future Background (2031) Horizon

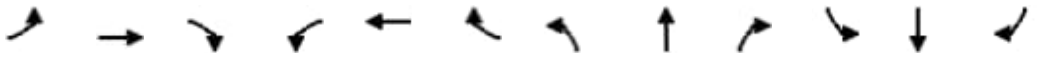
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	397	306	62	179	73	31	666	155	863	451
Future Volume (vph)	397	306	62	179	73	31	666	155	863	451
Lane Group Flow (vph)	409	354	64	185	75	32	822	160	890	465
Turn Type	Prot	NA	Prot	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8	2		6		6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	7.0	8.0	7.0	8.0	8.0	7.0	8.0	7.0	8.0	8.0
Minimum Split (s)	11.0	38.0	11.0	38.0	38.0	11.0	33.0	11.0	33.0	33.0
Total Split (s)	21.0	38.0	21.0	38.0	38.0	17.0	34.0	17.0	34.0	34.0
Total Split (%)	19.1%	34.5%	19.1%	34.5%	34.5%	15.5%	30.9%	15.5%	30.9%	30.9%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	3.0	1.0	3.0	3.0	1.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	6.0	4.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	Max	None	Max	Max
v/c Ratio	0.75	0.71	0.38	0.31	0.23	0.10	0.55	0.48	0.44	0.58
Control Delay (s/veh)	47.0	39.4	47.4	33.7	4.2	15.8	28.1	19.9	23.3	9.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	47.0	39.4	47.4	33.7	4.2	15.8	28.1	19.9	23.3	9.4
Queue Length 50th (m)	36.4	59.3	11.2	15.9	0.0	2.9	43.6	15.8	46.7	11.2
Queue Length 95th (m)	#68.1	98.2	26.6	26.1	5.4	9.5	70.5	35.3	73.5	50.9
Internal Link Dist (m)		240.4		173.9			422.3		394.1	
Turn Bay Length (m)	65.0		60.0		75.0	60.0		55.0		40.0
Base Capacity (vph)	597	645	313	1204	553	423	1487	374	2004	795
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.55	0.20	0.15	0.14	0.08	0.55	0.43	0.44	0.58

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 90.8
Natural Cycle: 95
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Brant Street & Plains Road East





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	397	306	38	62	179	73	31	666	131	155	863	451
Future Volume (vph)	397	306	38	62	179	73	31	666	131	155	863	451
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	0.97	1.00		1.00	0.95	1.00	1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3143	1794		1652	3368	1352	1684	4676		1635	4980	1422
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.31	1.00		0.23	1.00	1.00
Satd. Flow (perm)	3143	1794		1652	3368	1352	541	4676		391	4980	1422
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	409	315	39	64	185	75	32	687	135	160	890	465
RTOR Reduction (vph)	0	4	0	0	0	61	0	24	0	0	0	229
Lane Group Flow (vph)	409	350	0	64	185	14	32	798	0	160	890	236
Confl. Peds. (#/hr)	2					2	4		5	5		4
Confl. Bikes (#/hr)									1			5
Heavy Vehicles (%)	4%	3%	3%	2%	6%	10%	0%	7%	5%	3%	3%	4%
Turn Type	Prot	NA		Prot	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8	2			6		6
Actuated Green, G (s)	15.7	25.0		7.6	16.9	16.9	34.3	30.2		44.6	36.5	36.5
Effective Green, g (s)	15.7	25.0		7.6	16.9	16.9	34.3	30.2		44.6	36.5	36.5
Actuated g/C Ratio	0.17	0.27		0.08	0.18	0.18	0.37	0.32		0.48	0.39	0.39
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	529	481		134	610	245	249	1515		325	1950	556
v/s Ratio Prot	c0.13	c0.19		0.04	0.05		0.01	0.17		c0.05	0.18	
v/s Ratio Perm						0.01	0.04			c0.18		0.17
v/c Ratio	0.77	0.73		0.48	0.30	0.06	0.13	0.53		0.49	0.46	0.42
Uniform Delay, d1	37.0	31.0		40.9	33.0	31.5	19.0	25.7		14.9	21.0	20.7
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	6.9	5.4		2.7	0.3	0.1	0.2	1.3		1.2	0.8	2.4
Delay (s)	44.0	36.4		43.6	33.3	31.6	19.2	27.0		16.1	21.8	23.1
Level of Service	D	D		D	C	C	B	C		B	C	C
Approach Delay (s/veh)		40.5			35.0			26.7			21.6	
Approach LOS		D			C			C			C	

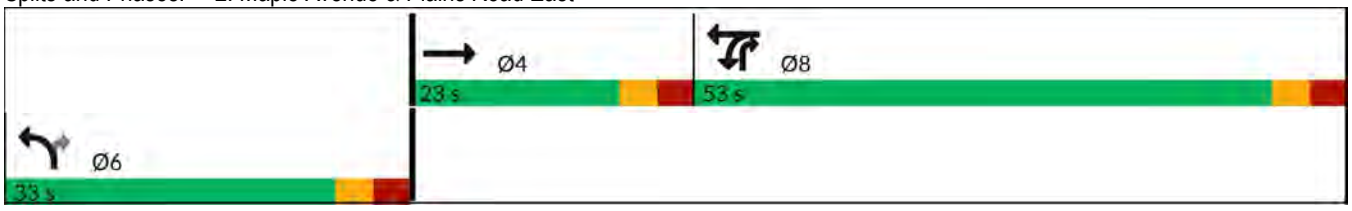
Intersection Summary			
HCM 2000 Control Delay (s/veh)	28.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	93.2	Sum of lost time (s)	20.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	370	247	416	16	329
Future Volume (vph)	370	247	416	16	329
Lane Group Flow (vph)	431	257	433	17	343
Turn Type	NA	Split	NA	Prot	pm+ov
Protected Phases	4	8	8	6	8
Permitted Phases					6
Detector Phase	4	8	8	6	8
Switch Phase					
Minimum Initial (s)	8.0	8.0	8.0	7.0	8.0
Minimum Split (s)	14.0	33.0	33.0	33.0	33.0
Total Split (s)	23.0	53.0	53.0	33.0	53.0
Total Split (%)	21.1%	48.6%	48.6%	30.3%	48.6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	Max	None	None	None	None
v/c Ratio	0.37	0.23	0.65	0.07	0.57
Control Delay (s/veh)	15.8	11.8	18.9	24.8	13.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	15.8	11.8	18.9	24.8	13.4
Queue Length 50th (m)	13.1	7.4	29.1	1.3	19.8
Queue Length 95th (m)	42.8	19.1	73.8	8.0	35.3
Internal Link Dist (m)	259.0		484.0	228.5	
Turn Bay Length (m)		85.0			
Base Capacity (vph)	1171	2806	1676	940	1322
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.37	0.09	0.26	0.02	0.26

Intersection Summary
Cycle Length: 109
Actuated Cycle Length: 50.6
Natural Cycle: 80
Control Type: Semi Act-Uncoord
Description: STP from video

Splits and Phases: 2: Maple Avenue & Plains Road East



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	370	44	247	416	16	329
Future Volume (vph)	370	44	247	416	16	329
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.0	3.0	3.5	3.0	3.0
Total Lost time (s)	6.0		6.0	6.0	6.0	6.0
Lane Util. Factor	0.95		0.97	1.00	1.00	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3315		3054	1824	1685	1436
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3315		3054	1824	1685	1436
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	385	46	257	433	17	343
RTOR Reduction (vph)	7	0	0	0	0	25
Lane Group Flow (vph)	424	0	257	433	17	318
Heavy Vehicles (%)	5%	14%	7%	3%	0%	5%
Turn Type	NA		Split	NA	Prot	pm+ov
Protected Phases	4		8	8	6	8
Permitted Phases						6
Actuated Green, G (s)	17.8		18.4	18.4	1.1	19.5
Effective Green, g (s)	17.8		18.4	18.4	1.1	19.5
Actuated g/C Ratio	0.32		0.33	0.33	0.02	0.35
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1067		1016	606	33	662
v/s Ratio Prot	c0.13		0.08	c0.24	0.01	c0.16
v/s Ratio Perm						0.06
v/c Ratio	0.40		0.25	0.71	0.52	0.48
Uniform Delay, d1	14.6		13.4	16.2	26.8	13.9
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	1.1		0.1	4.0	12.9	0.6
Delay (s)	15.7		13.6	20.1	39.7	14.5
Level of Service	B		B	C	D	B
Approach Delay (s/veh)	15.7			17.7	15.7	
Approach LOS	B			B	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	16.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	55.3	Sum of lost time (s)	18.0
Intersection Capacity Utilization	42.0%	ICU Level of Service	A
Analysis Period (min)	15		

Description: STP from video

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	681	5	9	616	6	1	0	2	4	0	11
Future Vol, veh/h	10	681	5	9	616	6	1	0	2	4	0	11
Conflicting Peds, #/hr	18	0	4	4	0	18	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	15	-	-	15	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	5	0	0	4	0	0	0	0	0	0	0
Mvmt Flow	11	717	5	9	648	6	1	0	2	4	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	672	0	0	726	0	0	1088	1436	365	1068	1435	345
Stage 1	-	-	-	-	-	-	746	746	-	687	687	-
Stage 2	-	-	-	-	-	-	342	690	-	381	748	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	928	-	-	886	-	-	173	135	638	179	135	657
Stage 1	-	-	-	-	-	-	376	424	-	408	450	-
Stage 2	-	-	-	-	-	-	652	449	-	619	423	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	915	-	-	883	-	-	167	130	636	173	130	648
Mov Cap-2 Maneuver	-	-	-	-	-	-	167	130	-	173	130	-
Stage 1	-	-	-	-	-	-	370	418	-	397	439	-
Stage 2	-	-	-	-	-	-	634	438	-	610	417	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.1	0.1	16.1	15.1
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	328	915	-	-	883	-	-	374
HCM Lane V/C Ratio	0.01	0.012	-	-	0.011	-	-	0.042
HCM Ctrl Dly (s/v)	16.1	9	-	-	9.1	-	-	15.1
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q (veh)	0	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	694	1	6	631	0	0	0	2	0	0	0
Future Vol, veh/h	0	694	1	6	631	0	0	0	2	0	0	0
Conflicting Peds, #/hr	9	0	3	3	0	9	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	15	-	-	15	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	5	0	0	4	0	0	0	0	0	0	0
Mvmt Flow	0	738	1	6	671	0	0	0	2	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	680	0	0	742	0	0	1090	1434	373	1061	1434	345
Stage 1	-	-	-	-	-	-	742	742	-	692	692	-
Stage 2	-	-	-	-	-	-	348	692	-	369	742	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	922	-	-	874	-	-	172	135	630	181	135	657
Stage 1	-	-	-	-	-	-	378	425	-	405	448	-
Stage 2	-	-	-	-	-	-	647	448	-	629	425	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	916	-	-	872	-	-	171	133	629	178	133	652
Mov Cap-2 Maneuver	-	-	-	-	-	-	171	133	-	178	133	-
Stage 1	-	-	-	-	-	-	377	424	-	402	442	-
Stage 2	-	-	-	-	-	-	643	442	-	627	424	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0.1	10.7	0
HCM LOS			B	A

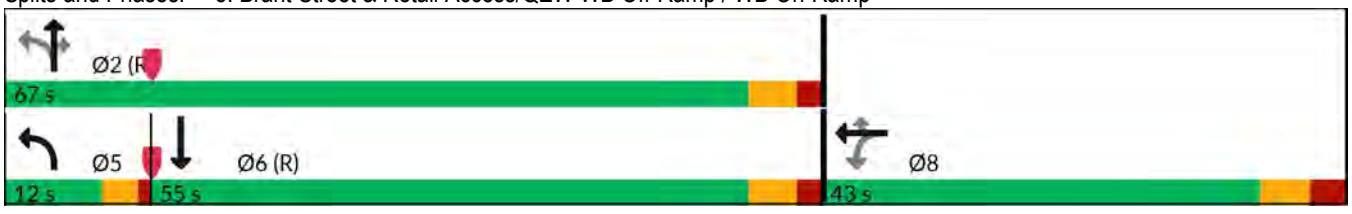
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	629	916	-	-	872	-	-	-
HCM Lane V/C Ratio	0.003	-	-	-	0.007	-	-	-
HCM Ctrl Dly (s/v)	10.7	0	-	-	9.2	-	-	0
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q (veh)	0	0	-	-	0	-	-	-

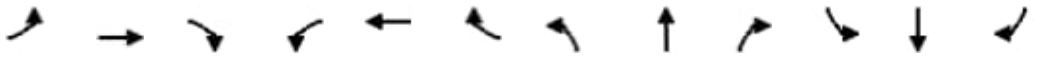
Lane Group	WBL	WBT	WBR	NBL	NBT	NBR	SBT
Lane Configurations							
Traffic Volume (vph)	332	14	347	28	815	178	1474
Future Volume (vph)	332	14	347	28	815	178	1474
Lane Group Flow (vph)	196	197	394	32	926	202	1676
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	NA
Protected Phases		8		5	2		6
Permitted Phases	8		8	2		2	
Detector Phase	8	8	8	5	2	2	6
Switch Phase							
Minimum Initial (s)	8.0	8.0	8.0	7.0	8.0	8.0	8.0
Minimum Split (s)	37.0	37.0	37.0	11.5	28.0	28.0	28.0
Total Split (s)	43.0	43.0	43.0	12.0	67.0	67.0	55.0
Total Split (%)	39.1%	39.1%	39.1%	10.9%	60.9%	60.9%	50.0%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	4.0	6.0	6.0	6.0
Lead/Lag				Lead			Lag
Lead-Lag Optimize?				Yes			Yes
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max
v/c Ratio	0.53	0.50	0.87	0.17	0.29	0.21	0.59
Control Delay (s/veh)	39.5	38.5	46.0	16.0	15.4	7.6	18.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	39.5	38.5	46.0	16.0	15.4	7.6	18.6
Queue Length 50th (m)	39.7	39.7	60.9	3.5	44.3	0.0	95.4
Queue Length 95th (m)	56.9	56.3	88.1	9.5	59.9	22.3	127.0
Internal Link Dist (m)		133.1			264.9		193.7
Turn Bay Length (m)				60.0		130.0	
Base Capacity (vph)	494	523	563	203	3191	981	2854
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.38	0.70	0.16	0.29	0.21	0.59

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 100 (91%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Description: action plan 2 for am, 3 for pm

Splits and Phases: 5: Brant Street & Retail Access/QEW WB Off-Ramp / WB On-Ramp





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	332	14	347	28	815	178	0	1474	1
Future Volume (vph)	0	0	0	332	14	347	28	815	178	0	1474	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)				7.0	7.0	7.0	4.0	6.0	6.0		6.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.91	1.00		0.91	
Frpb, ped/bikes				1.00	1.00	1.00	1.00	1.00	0.98		1.00	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00	1.00		1.00	
Frt				1.00	1.00	0.85	1.00	1.00	0.85		1.00	
Flt Protected				0.95	0.96	1.00	0.95	1.00	1.00		1.00	
Satd. Flow (prot)				1510	1600	1478	1620	5029	1431		4980	
Flt Permitted				0.95	0.96	1.00	0.09	1.00	1.00		1.00	
Satd. Flow (perm)				1510	1600	1478	148	5029	1431		4980	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	0	0	0	377	16	394	32	926	202	0	1675	1
RTOR Reduction (vph)	0	0	0	0	0	90	0	0	74	0	0	0
Lane Group Flow (vph)	0	0	0	196	197	304	32	926	128	0	1676	0
Confl. Peds. (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	6%	14%	2%	4%	2%	3%	0%	3%	0%
Turn Type				Perm	NA	Perm	pm+pt	NA	Perm		NA	
Protected Phases					8		5	2			6	
Permitted Phases				8		8	2		2			
Actuated Green, G (s)				27.2	27.2	27.2	69.8	69.8	69.8		61.5	
Effective Green, g (s)				27.2	27.2	27.2	69.8	69.8	69.8		61.5	
Actuated g/C Ratio				0.25	0.25	0.25	0.63	0.63	0.63		0.56	
Clearance Time (s)				7.0	7.0	7.0	4.0	6.0	6.0		6.0	
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)				373	395	365	151	3191	908		2784	
v/s Ratio Prot							0.01	c0.18			c0.34	
v/s Ratio Perm				0.13	0.12	c0.21	0.13		0.09			
v/c Ratio				0.53	0.50	0.83	0.21	0.29	0.14		0.60	
Uniform Delay, d1				35.8	35.5	39.3	10.3	9.0	8.1		16.1	
Progression Factor				1.00	1.00	1.00	1.58	1.52	4.32		1.00	
Incremental Delay, d2				1.3	1.0	15.0	0.7	0.2	0.3		1.0	
Delay (s)				37.2	36.5	54.3	17.0	13.9	35.2		17.1	
Level of Service				D	D	D	B	B	D		B	
Approach Delay (s/veh)		0.0			45.6			17.7			17.1	
Approach LOS		A			D			B			B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	23.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	50.7%	ICU Level of Service	A
Analysis Period (min)	15		
Description: action plan 2 for am, 3 for pm			

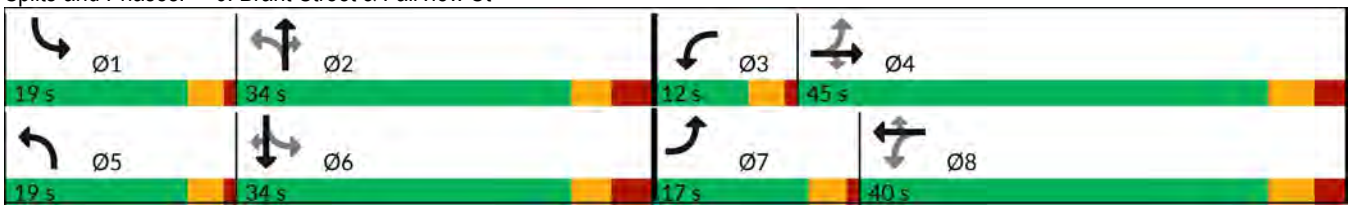
c Critical Lane Group

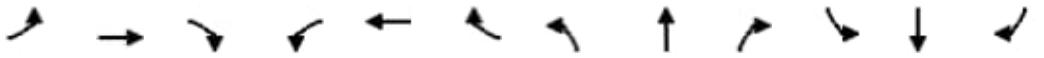
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	692	177	137	315	148	162	594	174	162	593	41
Future Volume (vph)	250	692	177	137	315	148	162	594	174	162	593	41
Lane Group Flow (vph)	253	699	179	138	318	149	164	600	176	164	599	41
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	8.0	8.0	7.0	8.0	8.0	7.0	8.0	8.0	7.0	8.0	8.0
Minimum Split (s)	12.0	31.4	31.4	12.0	31.4	31.4	12.0	31.5	31.5	12.0	31.5	31.5
Total Split (s)	17.0	45.0	45.0	12.0	40.0	40.0	19.0	34.0	34.0	19.0	34.0	34.0
Total Split (%)	15.5%	40.9%	40.9%	10.9%	36.4%	36.4%	17.3%	30.9%	30.9%	17.3%	30.9%	30.9%
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.3	3.3	3.0	3.3	3.3
All-Red Time (s)	1.0	2.7	2.7	1.0	2.7	2.7	1.0	3.2	3.2	1.0	3.2	3.2
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)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.5	6.5	4.0	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
v/c Ratio	0.53	0.72	0.34	0.50	0.42	0.35	0.48	0.71	0.38	0.49	0.71	0.10
Control Delay (s/veh)	20.7	32.6	6.0	23.2	30.4	7.2	20.1	35.4	7.3	20.6	35.6	0.4
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 (s/veh)	20.7	32.6	6.0	23.2	30.4	7.2	20.1	35.4	7.3	20.6	35.6	0.4
Queue Length 50th (m)	26.5	55.6	0.0	13.4	24.4	0.0	16.2	48.4	0.0	16.2	48.5	0.0
Queue Length 95th (m)	53.5	87.3	15.3	29.9	41.8	14.4	33.9	79.4	16.6	34.0	79.1	0.0
Internal Link Dist (m)		607.3			241.7			325.5			422.3	
Turn Bay Length (m)	300.0		140.0	60.0		100.0	84.0		70.0	45.0		60.0
Base Capacity (vph)	492	1639	774	279	1360	650	418	1191	589	413	1203	547
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.43	0.23	0.49	0.23	0.23	0.39	0.50	0.30	0.40	0.50	0.07

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 84.1
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Description: pattern 2 for AM, 3 for PM (sched 1)

Splits and Phases: 6: Brant Street & Fairview St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	692	177	137	315	148	162	594	174	162	593	41
Future Volume (vph)	250	692	177	137	315	148	162	594	174	162	593	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.5	6.5	4.0	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.98
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	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1634	3466	1440	1574	3305	1362	1635	3535	1413	1601	3570	1326
Flt Permitted	0.46	1.00	1.00	0.29	1.00	1.00	0.27	1.00	1.00	0.28	1.00	1.00
Satd. Flow (perm)	789	3466	1440	483	3305	1362	467	3535	1413	476	3570	1326
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	253	699	179	138	318	149	164	600	176	164	599	41
RTOR Reduction (vph)	0	0	128	0	0	115	0	0	133	0	0	31
Lane Group Flow (vph)	253	699	51	138	318	34	164	600	43	164	599	10
Confl. Peds. (#/hr)	3		4	4		3	3		22	22		3
Heavy Vehicles (%)	3%	3%	3%	7%	8%	9%	3%	1%	3%	5%	0%	12%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	35.6	23.6	23.6	27.3	19.3	19.3	31.4	20.2	20.2	30.8	19.9	19.9
Effective Green, g (s)	35.6	23.6	23.6	27.3	19.3	19.3	31.4	20.2	20.2	30.8	19.9	19.9
Actuated g/C Ratio	0.43	0.28	0.28	0.33	0.23	0.23	0.38	0.24	0.24	0.37	0.24	0.24
Clearance Time (s)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.5	6.5	4.0	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)	460	978	406	262	762	314	331	854	341	322	849	315
v/s Ratio Prot	c0.08	c0.20		0.05	0.10		0.07	c0.17		c0.07	0.17	
v/s Ratio Perm	0.15		0.04	0.12		0.03	0.12		0.03	0.12		0.01
v/c Ratio	0.55	0.71	0.12	0.53	0.42	0.11	0.50	0.70	0.12	0.51	0.71	0.03
Uniform Delay, d1	16.4	27.0	22.3	20.9	27.4	25.4	18.5	29.0	24.8	18.9	29.2	24.4
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	1.4	2.5	0.1	1.9	0.4	0.2	1.2	2.6	0.2	1.3	2.7	0.0
Delay (s)	17.9	29.5	22.5	22.9	27.7	25.5	19.7	31.6	25.0	20.2	31.9	24.5
Level of Service	B	C	C	C	C	C	B	C	C	C	C	C
Approach Delay (s/veh)		25.8			26.1			28.3			29.1	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	27.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	83.6	Sum of lost time (s)	20.9
Intersection Capacity Utilization	71.5%	ICU Level of Service	C
Analysis Period (min)	15		
Description: pattern 2 for AM, 3 for PM (sched 1)			

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	24	646	582	29	20	44
Future Vol, veh/h	24	646	582	29	20	44
Conflicting Peds, #/hr	1	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	40	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	3	4	4	0	3
Mvmt Flow	28	760	685	34	24	52

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	720	0	-	0	1139	361
Stage 1	-	-	-	-	703	-
Stage 2	-	-	-	-	436	-
Critical Hdwy	4.1	-	-	-	6.8	6.96
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.33
Pot Cap-1 Maneuver	891	-	-	-	198	633
Stage 1	-	-	-	-	457	-
Stage 2	-	-	-	-	625	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	890	-	-	-	191	633
Mov Cap-2 Maneuver	-	-	-	-	319	-
Stage 1	-	-	-	-	442	-
Stage 2	-	-	-	-	624	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.3	0	13.1
HCM LOS			B

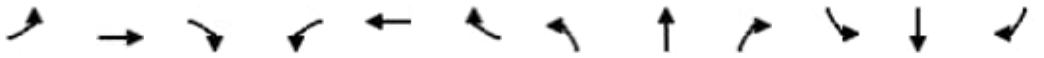
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	890	-	-	-	319	633
HCM Lane V/C Ratio	0.032	-	-	-	0.074	0.082
HCM Ctrl Dly (s/v)	9.2	-	-	-	17.2	11.2
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q (veh)	0.1	-	-	-	0.2	0.3

Lane Group	EBT	EBR	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	962	196	686	191	79
Future Volume (vph)	962	196	686	191	79
Lane Group Flow (vph)	1069	218	762	212	88
Turn Type	NA	Perm	NA	Perm	Perm
Protected Phases	2		6		
Permitted Phases		2		8	8
Detector Phase	2	2	6	8	8
Switch Phase					
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	41.0	41.0	41.0	25.0	25.0
Total Split (s)	75.0	75.0	75.0	25.0	25.0
Total Split (%)	75.0%	75.0%	75.0%	25.0%	25.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	C-Max	None	None
v/c Ratio	0.29	0.19	0.21	0.56	0.35
Control Delay (s/veh)	4.7	1.0	4.4	47.0	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	4.7	1.0	4.4	47.0	12.5
Queue Length 50th (m)	22.1	0.0	14.6	21.3	0.0
Queue Length 95th (m)	31.9	6.2	21.9	32.0	13.8
Internal Link Dist (m)	279.6		287.3		
Turn Bay Length (m)		70.0			
Base Capacity (vph)	3720	1138	3648	565	335
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.29	0.19	0.21	0.38	0.26

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 31 (31%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Description: Pattern 2 for AM, 3 for PM

Splits and Phases: 8: QEW SB On-Ramp/QEW SB Off-Ramp & Plains Rd E





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑					↰↰		↱
Traffic Volume (vph)	0	962	196	0	686	0	0	0	0	191	0	79
Future Volume (vph)	0	962	196	0	686	0	0	0	0	191	0	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)		7.0	7.0		7.0					7.0		7.0
Lane Util. Factor		0.91	1.00		0.91					0.97		1.00
Frpb, ped/bikes		1.00	1.00		1.00					1.00		1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00		1.00
Frt		1.00	0.85		1.00					1.00		0.85
Flt Protected		1.00	1.00		1.00					0.95		1.00
Satd. Flow (prot)		5029	1463		4932					3143		1463
Flt Permitted		1.00	1.00		1.00					0.95		1.00
Satd. Flow (perm)		5029	1463		4932					3143		1463
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)	0	1069	218	0	762	0	0	0	0	212	0	88
RTOR Reduction (vph)	0	0	57	0	0	0	0	0	0	0	0	77
Lane Group Flow (vph)	0	1069	161	0	762	0	0	0	0	212	0	11
Confl. Peds. (#/hr)	3					3						
Heavy Vehicles (%)	0%	2%	3%	0%	4%	0%	0%	0%	0%	4%	0%	3%
Turn Type		NA	Perm		NA					Perm		Perm
Protected Phases		2			6							
Permitted Phases			2							8		8
Actuated Green, G (s)		74.0	74.0		74.0					12.0		12.0
Effective Green, g (s)		74.0	74.0		74.0					12.0		12.0
Actuated g/C Ratio		0.74	0.74		0.74					0.12		0.12
Clearance Time (s)		7.0	7.0		7.0					7.0		7.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0		3.0
Lane Grp Cap (vph)		3721	1082		3649					377		175
v/s Ratio Prot		c0.21			0.15							
v/s Ratio Perm			0.11							c0.07		0.01
v/c Ratio		0.29	0.15		0.21					0.56		0.06
Uniform Delay, d1		4.3	3.8		4.0					41.5		39.0
Progression Factor		1.00	1.00		1.00					1.00		1.00
Incremental Delay, d2		0.2	0.3		0.1					1.9		0.1
Delay (s)		4.5	4.1		4.1					43.4		39.1
Level of Service		A	A		A					D		D
Approach Delay (s/veh)		4.4			4.1			0.0			42.2	
Approach LOS		A			A			A			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	9.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		
Description: Pattern 2 for AM, 3 for PM			

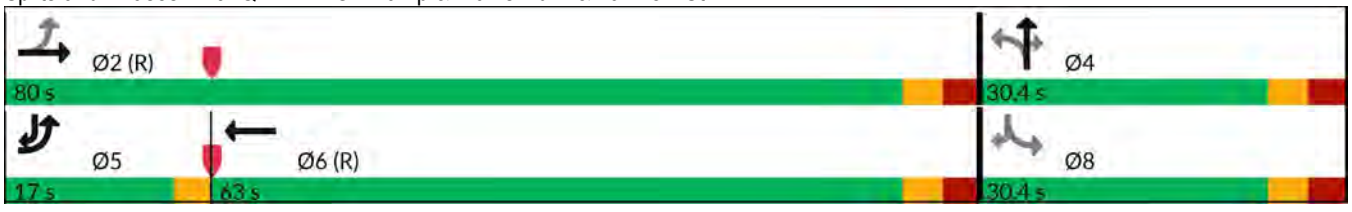
c Critical Lane Group

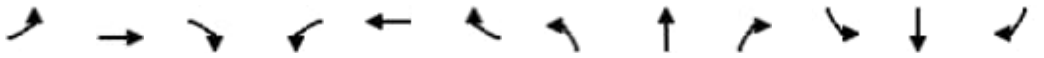
Lane Group	EBL	EBT	WBT	NBL	NBT	NBR	SBL	SBR
Lane Configurations								
Traffic Volume (vph)	183	863	649	89	202	331	49	519
Future Volume (vph)	183	863	649	89	202	331	49	519
Lane Group Flow (vph)	195	918	708	85	306	271	52	552
Turn Type	pm+pt	NA	NA	Perm	NA	Perm	Perm	pm+ov
Protected Phases	5	2	6		4			5
Permitted Phases	2			4		4	8	8
Detector Phase	5	2	6	4	4	4	8	5
Switch Phase								
Minimum Initial (s)	6.0	8.0	8.0	8.0	8.0	8.0	8.0	6.0
Minimum Split (s)	9.0	35.1	35.1	30.4	30.4	30.4	30.4	9.0
Total Split (s)	17.0	80.0	63.0	30.4	30.4	30.4	30.4	17.0
Total Split (%)	15.4%	72.5%	57.1%	27.5%	27.5%	27.5%	27.5%	15.4%
Yellow Time (s)	3.0	3.3	3.3	3.3	3.3	3.3	3.3	3.0
All-Red Time (s)	0.0	2.8	2.8	3.1	3.1	3.1	3.1	0.0
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	6.1	6.1	6.4	6.4	6.4	6.4	3.0
Lead/Lag	Lead		Lag					Lead
Lead-Lag Optimize?	Yes		Yes					Yes
Recall Mode	None	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.36	0.27	0.27	0.21	0.77	0.55	0.42	0.78
Control Delay (s/veh)	9.2	9.0	15.7	33.6	50.7	16.2	44.9	26.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	9.2	9.0	15.7	33.6	50.7	16.2	44.9	26.3
Queue Length 50th (m)	14.2	29.4	30.0	16.4	68.3	17.7	10.1	75.1
Queue Length 95th (m)	28.6	44.4	48.6	28.4	95.1	41.7	21.5	98.3
Internal Link Dist (m)		287.3	180.4		94.5			
Turn Bay Length (m)	35.0					50.0	80.0	
Base Capacity (vph)	580	3514	2800	420	417	512	131	755
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	0.34	0.26	0.25	0.20	0.73	0.53	0.40	0.73

Intersection Summary

Cycle Length: 110.4
Actuated Cycle Length: 110.4
Offset: 97 (88%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Description: event plan 2 for AM, 3 for PM

Splits and Phases: 9: QEW NB Off-Ramp & Plains Rd E & Fairview St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	183	863	0	0	649	17	89	202	331	49	0	519
Future Volume (vph)	183	863	0	0	649	17	89	202	331	49	0	519
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Total Lost time (s)	3.0	6.1			6.1		6.4	6.4	6.4	6.4		3.0
Lane Util. Factor	1.00	0.91			0.91		0.95	0.91	0.95	1.00		1.00
Frpb, ped/bikes	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
Frt	1.00	1.00			1.00		1.00	0.96	0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00	0.95		1.00
Satd. Flow (prot)	1789	5142			5026		1700	1643	1521	1825		1541
Flt Permitted	0.34	1.00			1.00		0.95	1.00	1.00	0.28		1.00
Satd. Flow (perm)	635	5142			5026		1700	1643	1521	531		1541
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)	195	918	0	0	690	18	95	215	352	52	0	552
RTOR Reduction (vph)	0	0	0	0	2	0	0	11	138	0	0	126
Lane Group Flow (vph)	195	918	0	0	706	0	85	295	133	52	0	426
Confl. Peds. (#/hr)	2					2						
Heavy Vehicles (%)	2%	2%	0%	0%	4%	0%	2%	2%	2%	0%	0%	6%
Turn Type	pm+pt	NA			NA		Perm	NA	Perm	Perm		pm+ov
Protected Phases	5	2			6			4				5
Permitted Phases	2						4		4	8		8
Actuated Green, G (s)	72.1	72.1			58.6		25.8	25.8	25.8	25.8		36.3
Effective Green, g (s)	72.1	72.1			58.6		25.8	25.8	25.8	25.8		36.3
Actuated g/C Ratio	0.65	0.65			0.53		0.23	0.23	0.23	0.23		0.33
Clearance Time (s)	3.0	6.1			6.1		6.4	6.4	6.4	6.4		3.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	524	3358			2667		397	383	355	124		506
v/s Ratio Prot	0.04	0.18			0.14							c0.08
v/s Ratio Perm	c0.21						0.05	0.18	0.09	0.10		0.20
v/c Ratio	0.37	0.27			0.26		0.21	0.77	0.37	0.42		0.84
Uniform Delay, d1	7.7	8.1			14.1		34.1	39.5	35.5	35.9		34.4
Progression Factor	1.00	1.00			1.00		1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2	0.4	0.2			0.2		0.3	9.0	0.7	2.3		12.1
Delay (s)	8.1	8.3			14.4		34.4	48.5	36.2	38.2		46.5
Level of Service	A	A			B		C	D	D	D		D
Approach Delay (s/veh)		8.3			14.4			41.7			45.8	
Approach LOS		A			B			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	24.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	110.4	Sum of lost time (s)	15.5
Intersection Capacity Utilization	81.3%	ICU Level of Service	D
Analysis Period (min)	15		
Description: event plan 2 for AM, 3 for PM			

c Critical Lane Group

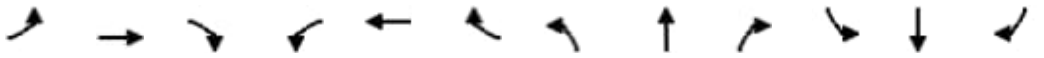
Lane Group	EBL	EBT	EBR	NBT	NBR	SBT
Lane Configurations						
Traffic Volume (vph)	125	0	174	892	345	1180
Future Volume (vph)	125	0	174	892	345	1180
Lane Group Flow (vph)	107	103	98	920	356	1216
Turn Type	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		2		6
Permitted Phases	4		4		2	
Detector Phase	4	4	4	2	2	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	37.0	37.0	37.0	28.0	28.0	28.0
Total Split (s)	43.0	43.0	43.0	67.0	67.0	67.0
Total Split (%)	39.1%	39.1%	39.1%	60.9%	60.9%	60.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	C-Max	C-Max	C-Max
v/c Ratio	0.58	0.47	0.46	0.24	0.31	0.32
Control Delay (s/veh)	57.6	28.3	27.5	4.2	1.2	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	57.6	28.3	27.5	4.2	1.2	9.3
Queue Length 50th (m)	24.5	10.3	8.8	18.2	0.0	70.4
Queue Length 95th (m)	41.7	28.0	25.2	28.3	7.7	94.6
Internal Link Dist (m)		230.7		394.1		264.9
Turn Bay Length (m)					80.0	
Base Capacity (vph)	518	510	488	3770	1156	3770
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.20	0.20	0.24	0.31	0.32

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 49 (45%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Description: from project 24223.
pattern 2 for AM, 3 for PM (sched 1)

Splits and Phases: 10: Brant Street & Hwy 403 EB Off-Ramp/QEW EB On-Ramp





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	125	0	174	0	0	0	0	892	345	0	1180	0
Future Volume (vph)	125	0	174	0	0	0	0	892	345	0	1180	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)	7.0	7.0	7.0					6.0	6.0		6.0	
Lane Util. Factor	0.95	0.91	0.95					0.91	1.00		0.91	
Frpb, ped/bikes	1.00	0.99	0.99					1.00	0.98		1.00	
Flpb, ped/bikes	1.00	1.00	1.00					1.00	1.00		1.00	
Frt	1.00	0.88	0.85					1.00	0.85		1.00	
Flt Protected	0.95	0.99	1.00					1.00	1.00		1.00	
Satd. Flow (prot)	1585	1439	1371					4932	1403		4932	
Flt Permitted	0.95	0.99	1.00					1.00	1.00		1.00	
Satd. Flow (perm)	1585	1439	1371					4932	1403		4932	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	129	0	179	0	0	0	0	920	356	0	1216	0
RTOR Reduction (vph)	0	51	51	0	0	0	0	0	84	0	0	0
Lane Group Flow (vph)	107	52	47	0	0	0	0	920	272	0	1216	0
Confl. Peds. (#/hr)									1	1		
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	1%	0%	3%	0%	0%	0%	0%	4%	5%	0%	4%	0%
Turn Type	Perm	NA	Perm					NA	Perm		NA	
Protected Phases		4						2			6	
Permitted Phases	4		4						2			
Actuated Green, G (s)	12.9	12.9	12.9					84.1	84.1		84.1	
Effective Green, g (s)	12.9	12.9	12.9					84.1	84.1		84.1	
Actuated g/C Ratio	0.12	0.12	0.12					0.76	0.76		0.76	
Clearance Time (s)	7.0	7.0	7.0					6.0	6.0		6.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0	3.0		3.0	
Lane Grp Cap (vph)	185	168	160					3770	1072		3770	
v/s Ratio Prot								0.19			c0.25	
v/s Ratio Perm	c0.07	0.04	0.03						0.19			
v/c Ratio	0.58	0.31	0.29					0.24	0.25		0.32	
Uniform Delay, d1	46.0	44.5	44.4					3.7	3.8		4.0	
Progression Factor	1.00	1.00	1.00					1.00	1.00		2.10	
Incremental Delay, d2	4.3	1.0	1.0					0.2	0.6		0.2	
Delay (s)	50.3	45.5	45.4					3.9	4.4		8.7	
Level of Service	D	D	D					A	A		A	
Approach Delay (s/veh)		47.1			0.0			4.0			8.7	
Approach LOS		D			A			A			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	10.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	40.8%	ICU Level of Service	A
Analysis Period (min)	15		
Description: from project 24223.			
pattern 2 for AM, 3 for PM (sched 1)			

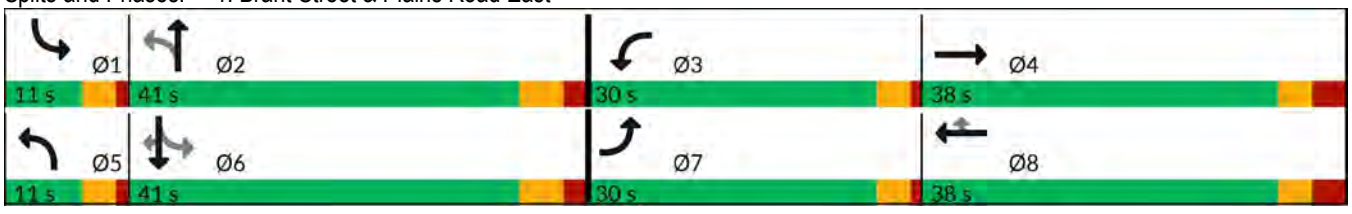
c Critical Lane Group

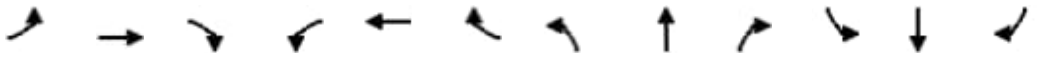
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	531	237	111	835	368	48	970	104	866	721
Future Volume (vph)	531	237	111	835	368	48	970	104	866	721
Lane Group Flow (vph)	547	311	114	861	379	49	1080	107	893	743
Turn Type	Prot	NA	Prot	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8	2		6		6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	7.0	8.0	7.0	8.0	8.0	7.0	8.0	7.0	8.0	8.0
Minimum Split (s)	11.0	38.0	11.0	38.0	38.0	11.0	33.0	11.0	33.0	33.0
Total Split (s)	30.0	38.0	30.0	38.0	38.0	11.0	41.0	11.0	41.0	41.0
Total Split (%)	25.0%	31.7%	25.0%	31.7%	31.7%	9.2%	34.2%	9.2%	34.2%	34.2%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	3.0	1.0	3.0	3.0	1.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	6.0	4.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	Max	None	Max	Max
v/c Ratio	0.84	0.50	0.60	0.92	0.78	0.22	0.73	0.64	0.55	0.91
Control Delay (s/veh)	57.6	32.5	62.5	58.1	38.1	24.8	40.0	42.0	35.6	29.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	57.6	32.5	62.5	58.1	38.1	24.8	40.0	42.0	35.6	29.4
Queue Length 50th (m)	66.3	56.2	27.1	108.5	58.0	7.3	87.1	16.6	69.0	67.4
Queue Length 95th (m)	87.1	90.2	45.1	#148.3	#106.2	15.8	105.4	#33.2	85.0	#159.6
Internal Link Dist (m)		240.4		173.9			422.3		394.1	
Turn Bay Length (m)	65.0		60.0		75.0	60.0		55.0		40.0
Base Capacity (vph)	722	624	372	961	498	219	1484	168	1613	814
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.50	0.31	0.90	0.76	0.22	0.73	0.64	0.55	0.91

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 116.7
Natural Cycle: 105
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Brant Street & Plains Road East





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	531	237	65	111	835	368	48	970	78	104	866	721
Future Volume (vph)	531	237	65	111	835	368	48	970	78	104	866	721
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	0.97	1.00		1.00	0.95	1.00	1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3236	1745		1668	3500	1468	1651	4915		1620	5029	1449
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.22	1.00		0.13	1.00	1.00
Satd. Flow (perm)	3236	1745		1668	3500	1468	380	4915		218	5029	1449
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	547	244	67	114	861	379	49	1000	80	107	893	743
RTOR Reduction (vph)	0	7	0	0	0	96	0	8	0	0	0	351
Lane Group Flow (vph)	547	304	0	114	861	283	49	1072	0	107	893	392
Confl. Peds. (#/hr)	2		5	5		2	11		4	4		11
Confl. Bikes (#/hr)						3						4
Heavy Vehicles (%)	1%	4%	3%	1%	2%	1%	2%	3%	4%	4%	2%	1%
Turn Type	Prot	NA		Prot	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8	2			6		6
Actuated Green, G (s)	23.5	41.3		13.3	31.1	31.1	41.4	35.9		44.4	37.4	37.4
Effective Green, g (s)	23.5	41.3		13.3	31.1	31.1	41.4	35.9		44.4	37.4	37.4
Actuated g/C Ratio	0.20	0.35		0.11	0.26	0.26	0.35	0.31		0.38	0.32	0.32
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	647	613		188	926	388	193	1501		165	1600	461
v/s Ratio Prot	c0.17	0.17		0.07	c0.25		0.01	0.22		c0.04	0.18	
v/s Ratio Perm						0.19	0.08			0.21		c0.27
v/c Ratio	0.85	0.50		0.61	0.93	0.73	0.25	0.71		0.65	0.56	0.85
Uniform Delay, d1	45.3	29.9		49.6	42.1	39.4	25.9	36.2		26.3	33.2	37.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	9.9	0.6		5.4	15.2	6.7	0.7	2.9		8.5	1.4	17.6
Delay (s)	55.2	30.6		55.0	57.3	46.1	26.6	39.2		34.8	34.6	55.0
Level of Service	E	C		E	E	D	C	D		C	C	E
Approach Delay (s/veh)		46.2			54.0			38.6			43.3	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	45.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	117.5	Sum of lost time (s)	20.0
Intersection Capacity Utilization	88.3%	ICU Level of Service	E
Analysis Period (min)	15		

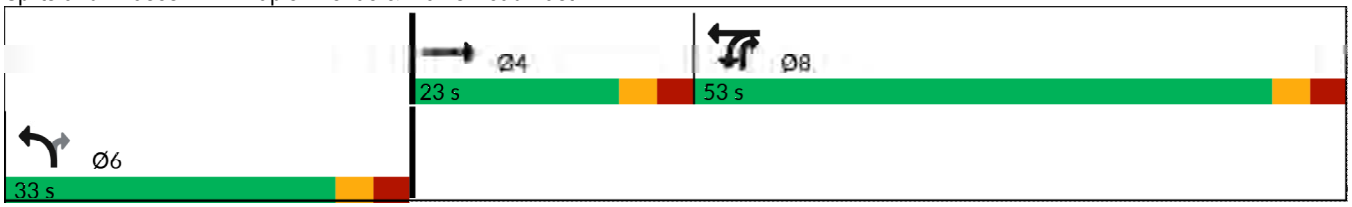
c Critical Lane Group

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	418	877	692	65	426
Future Volume (vph)	418	877	692	65	426
Lane Group Flow (vph)	515	964	760	71	468
Turn Type	NA	Split	NA	Prot	pm+ov
Protected Phases	4	8	8	6	8
Permitted Phases					6
Detector Phase	4	8	8	6	8
Switch Phase					
Minimum Initial (s)	8.0	8.0	8.0	7.0	8.0
Minimum Split (s)	14.0	33.0	33.0	33.0	33.0
Total Split (s)	23.0	53.0	53.0	33.0	53.0
Total Split (%)	21.1%	48.6%	48.6%	30.3%	48.6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	Max	None	None	None	None
v/c Ratio	0.74	0.57	0.80	0.38	0.51
Control Delay (s/veh)	41.3	16.8	26.6	44.5	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	41.3	16.8	26.6	44.5	9.1
Queue Length 50th (m)	47.4	59.7	110.0	12.5	32.9
Queue Length 95th (m)	#76.4	84.9	#193.2	25.8	51.5
Internal Link Dist (m)	259.0		484.0	228.5	
Turn Bay Length (m)		85.0			
Base Capacity (vph)	697	1839	1036	544	984
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.74	0.52	0.73	0.13	0.48

Intersection Summary

Cycle Length: 109
Actuated Cycle Length: 85.8
Natural Cycle: 100
Control Type: Semi Act-Uncoord
Description: STP from video
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Maple Avenue & Plains Road East



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	418	51	877	692	65	426
Future Volume (vph)	418	51	877	692	65	426
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.0	3.0	3.5	3.0	3.0
Total Lost time (s)	6.0		6.0	6.0	6.0	6.0
Lane Util. Factor	0.95		0.97	1.00	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3385		3268	1842	1685	1504
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3385		3268	1842	1685	1504
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	459	56	964	760	71	468
RTOR Reduction (vph)	8	0	0	0	0	8
Lane Group Flow (vph)	507	0	964	760	71	460
Confl. Peds. (#/hr)						5
Heavy Vehicles (%)	2%	18%	0%	2%	0%	0%
Turn Type	NA		Split	NA	Prot	pm+ov
Protected Phases	4		8	8	6	8
Permitted Phases						6
Actuated Green, G (s)	17.5		44.1	44.1	7.5	51.6
Effective Green, g (s)	17.5		44.1	44.1	7.5	51.6
Actuated g/C Ratio	0.20		0.51	0.51	0.09	0.59
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	680		1654	932	145	994
v/s Ratio Prot	c0.15		0.29	c0.41	0.04	c0.23
v/s Ratio Perm						0.07
v/c Ratio	0.75		0.58	0.82	0.49	0.46
Uniform Delay, d1	32.7		15.1	18.1	38.0	10.0
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	7.3		0.5	5.6	2.6	0.3
Delay (s)	40.0		15.6	23.6	40.6	10.3
Level of Service	D		B	C	D	B
Approach Delay (s/veh)	40.0			19.1	14.3	
Approach LOS	D			B	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	22.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	87.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
Description: STP from video			

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	762	6	4	1629	11	7	0	3	3	0	16
Future Vol, veh/h	7	762	6	4	1629	11	7	0	3	3	0	16
Conflicting Peds, #/hr	14	0	4	4	0	14	2	0	1	1	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	15	-	-	15	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	2	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	7	794	6	4	1697	11	7	0	3	3	0	17

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1722	0	0	804	0	0	1674	2545	405	2137	2543	870
Stage 1	-	-	-	-	-	-	815	815	-	1725	1725	-
Stage 2	-	-	-	-	-	-	859	1730	-	412	818	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	372	-	-	829	-	-	64	27	601	28	27	299
Stage 1	-	-	-	-	-	-	342	394	-	94	145	-
Stage 2	-	-	-	-	-	-	322	144	-	593	393	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	368	-	-	826	-	-	59	26	599	27	26	295
Mov Cap-2 Maneuver	-	-	-	-	-	-	59	26	-	27	26	-
Stage 1	-	-	-	-	-	-	334	385	-	91	143	-
Stage 2	-	-	-	-	-	-	302	142	-	578	384	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.1	0	55.9	42.7
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	81	368	-	-	826	-	-	115
HCM Lane V/C Ratio	0.129	0.02	-	-	0.005	-	-	0.172
HCM Ctrl Dly (s/v)	55.9	15	-	-	9.4	-	-	42.7
HCM Lane LOS	F	B	-	-	A	-	-	E
HCM 95th %tile Q (veh)	0.4	0.1	-	-	0	-	-	0.6

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	765	2	7	1642	1	1	0	10	1	0	1
Future Vol, veh/h	1	765	2	7	1642	1	1	0	10	1	0	1
Conflicting Peds, #/hr	13	0	2	2	0	13	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	15	-	-	15	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	2	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	1	805	2	7	1728	1	1	0	11	1	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1742	0	0	809	0	0	1689	2566	406	2161	2567	879
Stage 1	-	-	-	-	-	-	810	810	-	1756	1756	-
Stage 2	-	-	-	-	-	-	879	1756	-	405	811	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	366	-	-	825	-	-	62	26	600	27	26	295
Stage 1	-	-	-	-	-	-	344	396	-	90	140	-
Stage 2	-	-	-	-	-	-	313	140	-	599	396	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	362	-	-	824	-	-	61	25	599	26	25	292
Mov Cap-2 Maneuver	-	-	-	-	-	-	61	25	-	26	25	-
Stage 1	-	-	-	-	-	-	343	394	-	89	137	-
Stage 2	-	-	-	-	-	-	309	137	-	587	394	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	16.2	83.4
HCM LOS			C	F

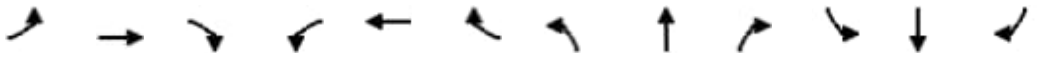
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	332	362	-	-	824	-	-	48
HCM Lane V/C Ratio	0.035	0.003	-	-	0.009	-	-	0.044
HCM Ctrl Dly (s/v)	16.2	15	-	-	9.4	-	-	83.4
HCM Lane LOS	C	B	-	-	A	-	-	F
HCM 95th %tile Q (veh)	0.1	0	-	-	0	-	-	0.1

Lane Group	WBL	WBT	WBR	NBL	NBT	NBR	SBT
Lane Configurations							
Traffic Volume (vph)	155	12	88	74	1421	359	1896
Future Volume (vph)	155	12	88	74	1421	359	1896
Lane Group Flow (vph)	85	85	90	76	1450	366	1938
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	NA
Protected Phases		8		5	2		6
Permitted Phases	8		8	2		2	
Detector Phase	8	8	8	5	2	2	6
Switch Phase							
Minimum Initial (s)	8.0	8.0	8.0	7.0	8.0	8.0	8.0
Minimum Split (s)	37.0	37.0	37.0	11.0	28.0	28.0	28.0
Total Split (s)	43.0	43.0	43.0	11.0	77.0	77.0	66.0
Total Split (%)	35.8%	35.8%	35.8%	9.2%	64.2%	64.2%	55.0%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	4.0	6.0	6.0	6.0
Lead/Lag				Lead			Lag
Lead-Lag Optimize?				Yes			Yes
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max
v/c Ratio	0.53	0.53	0.44	0.38	0.36	0.30	0.53
Control Delay (s/veh)	62.9	62.6	25.2	8.7	6.6	3.5	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	62.9	62.6	25.2	8.7	6.6	3.5	9.5
Queue Length 50th (m)	21.4	21.4	6.0	6.2	56.0	17.9	75.7
Queue Length 95th (m)	38.0	38.0	21.8	9.7	73.9	40.3	108.9
Internal Link Dist (m)		133.1			264.9		193.7
Turn Bay Length (m)				60.0		130.0	
Base Capacity (vph)	480	484	490	202	4062	1239	3626
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.18	0.18	0.38	0.36	0.30	0.53

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 100 (83%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Description: action plan 2 for am, 3 for pm

Splits and Phases: 5: Brant Street & Retail Access/QEW WB Off-Ramp / WB On-Ramp





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	155	12	88	74	1421	359	0	1896	3
Future Volume (vph)	0	0	0	155	12	88	74	1421	359	0	1896	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)				7.0	7.0	7.0	4.0	6.0	6.0		6.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.91	1.00		0.91	
Frpb, ped/bikes				1.00	1.00	0.99	1.00	1.00	0.97		1.00	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00	1.00		1.00	
Frt				1.00	1.00	0.85	1.00	1.00	0.85		1.00	
Flt Protected				0.95	0.96	1.00	0.95	1.00	1.00		1.00	
Satd. Flow (prot)				1600	1616	1486	1636	5129	1469		5077	
Flt Permitted				0.95	0.96	1.00	0.08	1.00	1.00		1.00	
Satd. Flow (perm)				1600	1616	1486	133	5129	1469		5077	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	158	12	90	76	1450	366	0	1935	3
RTOR Reduction (vph)	0	0	0	0	0	58	0	0	76	0	0	0
Lane Group Flow (vph)	0	0	0	85	85	32	76	1450	290	0	1938	0
Confl. Peds. (#/hr)	2					2	5		2	2		5
Heavy Vehicles (%)	0%	0%	0%	0%	42%	0%	3%	0%	0%	0%	1%	0%
Turn Type				Perm	NA	Perm	pm+pt	NA	Perm		NA	
Protected Phases					8		5	2			6	
Permitted Phases				8		8	2		2			
Actuated Green, G (s)				12.0	12.0	12.0	95.0	95.0	95.0		84.8	
Effective Green, g (s)				12.0	12.0	12.0	95.0	95.0	95.0		84.8	
Actuated g/C Ratio				0.10	0.10	0.10	0.79	0.79	0.79		0.71	
Clearance Time (s)				7.0	7.0	7.0	4.0	6.0	6.0		6.0	
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)				160	161	148	182	4060	1162		3587	
v/s Ratio Prot							0.02	c0.28			c0.38	
v/s Ratio Perm				c0.05	0.05	0.02	0.31		0.20			
v/c Ratio				0.53	0.53	0.22	0.42	0.36	0.25		0.54	
Uniform Delay, d1				51.3	51.3	49.7	6.0	3.6	3.2		8.4	
Progression Factor				1.00	1.00	1.00	1.14	1.66	7.34		1.00	
Incremental Delay, d2				3.4	3.1	0.7	1.5	0.2	0.5		0.6	
Delay (s)				54.7	54.4	50.4	8.3	6.2	24.3		8.9	
Level of Service				D	D	D	A	A	C		A	
Approach Delay (s/veh)		0.0			53.1			9.8			8.9	
Approach LOS		A			D			A			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	12.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	64.5%	ICU Level of Service	C
Analysis Period (min)	15		
Description: action plan 2 for am, 3 for pm			

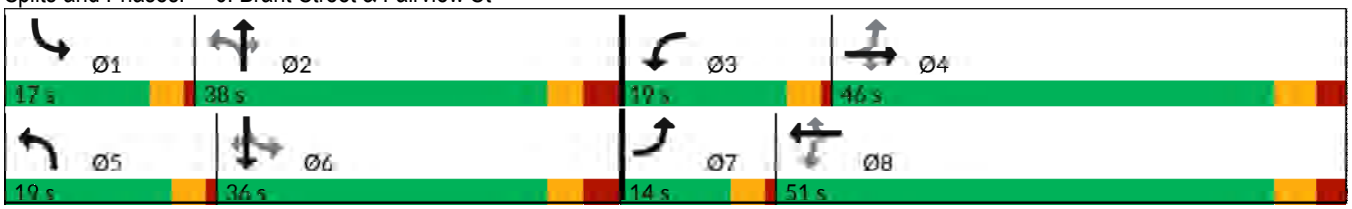
c Critical Lane Group

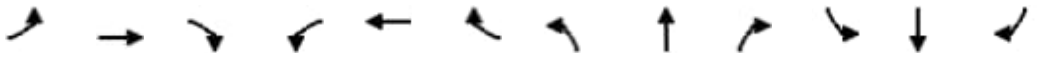
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	184	648	281	205	1145	287	252	620	147	201	597	145
Future Volume (vph)	184	648	281	205	1145	287	252	620	147	201	597	145
Lane Group Flow (vph)	194	682	296	216	1205	302	265	653	155	212	628	153
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	8.0	8.0	7.0	8.0	8.0	7.0	8.0	8.0	7.0	8.0	8.0
Minimum Split (s)	12.0	31.4	31.4	12.0	31.4	31.4	12.0	31.5	31.5	12.0	31.5	31.5
Total Split (s)	14.0	46.0	46.0	19.0	51.0	51.0	19.0	38.0	38.0	17.0	36.0	36.0
Total Split (%)	11.7%	38.3%	38.3%	15.8%	42.5%	42.5%	15.8%	31.7%	31.7%	14.2%	30.0%	30.0%
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.3	3.3	3.0	3.3	3.3
All-Red Time (s)	1.0	2.7	2.7	1.0	2.7	2.7	1.0	3.2	3.2	1.0	3.2	3.2
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)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.5	6.5	4.0	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
v/c Ratio	0.92	0.55	0.42	0.59	0.92	0.44	0.92	0.75	0.34	0.79	0.80	0.35
Control Delay (s/veh)	72.3	32.7	5.2	22.8	46.2	5.0	63.0	46.2	7.6	46.3	50.7	8.1
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 (s/veh)	72.3	32.7	5.2	22.8	46.2	5.0	63.0	46.2	7.6	46.3	50.7	8.1
Queue Length 50th (m)	30.2	69.2	0.0	27.5	142.0	0.0	44.6	77.1	0.0	34.2	75.4	0.0
Queue Length 95th (m)	#81.0	93.6	19.7	45.2	#192.4	18.9	#97.2	98.6	16.6	#62.7	97.1	17.0
Internal Link Dist (m)		607.3			241.7			325.5			422.3	
Turn Bay Length (m)	300.0		140.0	60.0		100.0	84.0		70.0	45.0		60.0
Base Capacity (vph)	211	1259	717	399	1397	716	289	996	499	274	924	487
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.54	0.41	0.54	0.86	0.42	0.92	0.66	0.31	0.77	0.68	0.31

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 113.4
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Description: pattern 2 for AM, 3 for PM (sched 1)
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Brant Street & Fairview St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	184	648	281	205	1145	287	252	620	147	201	597	145
Future Volume (vph)	184	648	281	205	1145	287	252	620	147	201	597	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.5	6.5	4.0	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.93	1.00	1.00	0.98
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	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1652	3535	1479	1684	3535	1352	1589	3570	1392	1599	3535	1432
Flt Permitted	0.10	1.00	1.00	0.26	1.00	1.00	0.18	1.00	1.00	0.22	1.00	1.00
Satd. Flow (perm)	176	3535	1479	455	3535	1352	294	3570	1392	375	3535	1432
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	194	682	296	216	1205	302	265	653	155	212	628	153
RTOR Reduction (vph)	0	0	193	0	0	190	0	0	117	0	0	119
Lane Group Flow (vph)	194	682	103	216	1205	112	265	653	38	212	628	34
Confl. Peds. (#/hr)	14		5	5		14	6		39	39		6
Confl. Bikes (#/hr)									1			1
Heavy Vehicles (%)	2%	1%	0%	0%	1%	8%	6%	0%	1%	5%	1%	3%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	49.7	39.6	39.6	54.9	42.2	42.2	42.7	27.6	27.6	37.7	25.1	25.1
Effective Green, g (s)	49.7	39.6	39.6	54.9	42.2	42.2	42.7	27.6	27.6	37.7	25.1	25.1
Actuated g/C Ratio	0.44	0.35	0.35	0.48	0.37	0.37	0.38	0.24	0.24	0.33	0.22	0.22
Clearance Time (s)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.5	6.5	4.0	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)	208	1234	516	357	1315	503	283	868	338	260	782	316
v/s Ratio Prot	c0.08	0.19		c0.07	c0.34		c0.12	0.18		0.09	0.18	
v/s Ratio Perm	0.33		0.07	0.22		0.08	c0.23		0.03	0.18		0.02
v/c Ratio	0.93	0.55	0.20	0.61	0.92	0.22	0.94	0.75	0.11	0.82	0.80	0.11
Uniform Delay, d1	28.0	29.8	25.8	18.7	33.9	24.4	28.2	39.7	33.4	29.9	41.8	35.2
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	43.6	0.5	0.2	2.9	10.1	0.2	36.5	3.7	0.1	17.6	6.0	0.2
Delay (s)	71.7	30.3	26.0	21.6	44.0	24.6	64.8	43.5	33.5	47.5	47.8	35.4
Level of Service	E	C	C	C	D	C	E	D	C	D	D	D
Approach Delay (s/veh)		36.1			37.8			47.3			45.8	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	41.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	113.4	Sum of lost time (s)	20.9
Intersection Capacity Utilization	90.4%	ICU Level of Service	E
Analysis Period (min)	15		
Description: pattern 2 for AM, 3 for PM (sched 1)			
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	61	746	1457	58	13	52
Future Vol, veh/h	61	746	1457	58	13	52
Conflicting Peds, #/hr	1	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	40	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	24	0	0
Mvmt Flow	62	761	1487	59	13	53

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1547	0	-	0	2023	774
Stage 1	-	-	-	-	1518	-
Stage 2	-	-	-	-	505	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	434	-	-	-	52	346
Stage 1	-	-	-	-	171	-
Stage 2	-	-	-	-	577	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	434	-	-	-	44	346
Mov Cap-2 Maneuver	-	-	-	-	118	-
Stage 1	-	-	-	-	146	-
Stage 2	-	-	-	-	576	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	1.1	0	21.7
HCM LOS			C

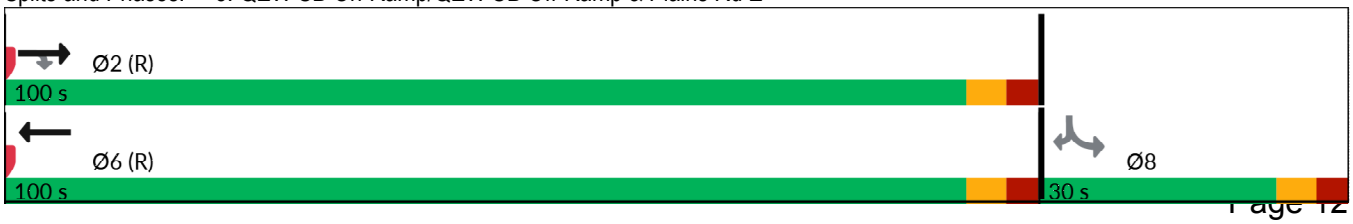
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	434	-	-	-	118	346
HCM Lane V/C Ratio	0.143	-	-	-	0.112	0.153
HCM Ctrl Dly (s/v)	14.7	-	-	-	39.3	17.3
HCM Lane LOS	B	-	-	-	E	C
HCM 95th %tile Q (veh)	0.5	-	-	-	0.4	0.5

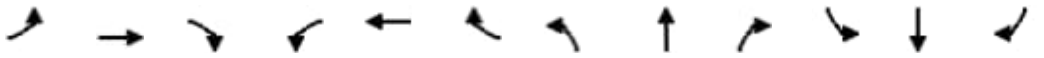
Lane Group	EBT	EBR	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	905	328	1473	440	236
Future Volume (vph)	905	328	1473	440	236
Lane Group Flow (vph)	943	342	1534	458	246
Turn Type	NA	Perm	NA	Perm	Perm
Protected Phases	2		6		
Permitted Phases		2		8	8
Detector Phase	2	2	6	8	8
Switch Phase					
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	41.0	41.0	41.0	30.0	30.0
Total Split (s)	100.0	100.0	100.0	30.0	30.0
Total Split (%)	76.9%	76.9%	76.9%	23.1%	23.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	C-Max	None	None
v/c Ratio	0.25	0.30	0.41	0.85	0.83
Control Delay (s/veh)	6.3	1.3	9.9	67.8	61.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	6.3	1.3	9.9	67.8	61.3
Queue Length 50th (m)	29.1	0.0	85.6	61.7	48.6
Queue Length 95th (m)	34.8	8.2	m100.7	#82.7	#90.7
Internal Link Dist (m)	279.6		287.3		
Turn Bay Length (m)		70.0			
Base Capacity (vph)	3720	1154	3720	572	312
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.25	0.30	0.41	0.80	0.79

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 31 (24%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Description: Pattern 2 for AM, 3 for PM
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: QEW SB On-Ramp/QEW SB Off-Ramp & Plains Rd E





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	905	328	0	1473	0	0	0	0	440	0	236
Future Volume (vph)	0	905	328	0	1473	0	0	0	0	440	0	236
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)		7.0	7.0		7.0					7.0		7.0
Lane Util. Factor		0.91	1.00		0.91					0.97		1.00
Frpb, ped/bikes		1.00	0.97		1.00					1.00		0.98
Flpb, ped/bikes		1.00	1.00		1.00					1.00		1.00
Frt		1.00	0.85		1.00					1.00		0.85
Flt Protected		1.00	1.00		1.00					0.95		1.00
Satd. Flow (prot)		5129	1463		5129					3236		1479
Flt Permitted		1.00	1.00		1.00					0.95		1.00
Satd. Flow (perm)		5129	1463		5129					3236		1479
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	943	342	0	1534	0	0	0	0	458	0	246
RTOR Reduction (vph)	0	0	94	0	0	0	0	0	0	0	0	52
Lane Group Flow (vph)	0	943	248	0	1534	0	0	0	0	458	0	194
Confl. Peds. (#/hr)	2		5	5		2	4					4
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%
Turn Type		NA	Perm		NA					Perm		Perm
Protected Phases		2			6							
Permitted Phases			2							8		8
Actuated Green, G (s)		94.3	94.3		94.3					21.7		21.7
Effective Green, g (s)		94.3	94.3		94.3					21.7		21.7
Actuated g/C Ratio		0.73	0.73		0.73					0.17		0.17
Clearance Time (s)		7.0	7.0		7.0					7.0		7.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0		3.0
Lane Grp Cap (vph)		3720	1061		3720					540		246
v/s Ratio Prot		0.18			c0.30							
v/s Ratio Perm			0.17							c0.14		0.13
v/c Ratio		0.25	0.23		0.41					0.85		0.79
Uniform Delay, d1		6.0	5.9		7.0					52.6		52.0
Progression Factor		1.00	1.00		1.36					1.00		1.00
Incremental Delay, d2		0.2	0.5		0.1					11.8		15.7
Delay (s)		6.2	6.4		9.6					64.4		67.7
Level of Service		A	A		A					E		E
Approach Delay (s/veh)		6.2			9.6			0.0			65.5	
Approach LOS		A			A			A			E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	19.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		
Description: Pattern 2 for AM, 3 for PM			

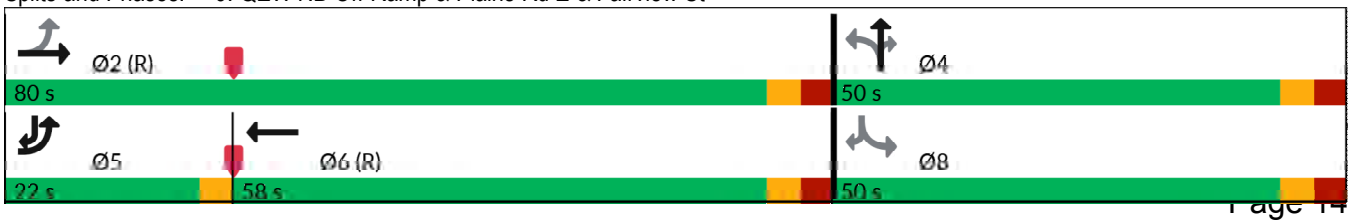
c Critical Lane Group

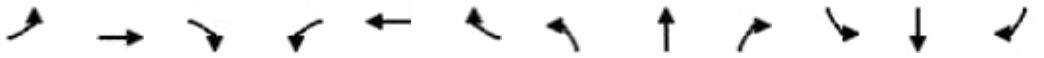
Lane Group	EBL	EBT	WBT	NBL	NBT	NBR	SBL	SBR
Lane Configurations								
Traffic Volume (vph)	262	1090	1905	195	243	290	44	746
Future Volume (vph)	262	1090	1905	195	243	290	44	746
Lane Group Flow (vph)	265	1101	1999	177	297	261	44	754
Turn Type	pm+pt	NA	NA	Perm	NA	Perm	Perm	pm+ov
Protected Phases	5	2	6		4			5
Permitted Phases	2			4		4	8	8
Detector Phase	5	2	6	4	4	4	8	8
Switch Phase								
Minimum Initial (s)	6.0	8.0	8.0	8.0	8.0	8.0	8.0	6.0
Minimum Split (s)	9.0	35.1	35.1	36.4	36.4	36.4	36.4	9.0
Total Split (s)	22.0	80.0	58.0	50.0	50.0	50.0	50.0	22.0
Total Split (%)	16.9%	61.5%	44.6%	38.5%	38.5%	38.5%	38.5%	16.9%
Yellow Time (s)	3.0	3.3	3.3	3.3	3.3	3.3	3.3	3.0
All-Red Time (s)	0.0	2.8	2.8	3.1	3.1	3.1	3.1	0.0
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	6.1	6.1	6.4	6.4	6.4	6.4	3.0
Lead/Lag	Lead		Lag					Lead
Lead-Lag Optimize?	Yes		Yes					Yes
Recall Mode	None	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.88	0.37	0.95	0.30	0.52	0.46	0.17	0.89
Control Delay (s/veh)	65.6	18.2	47.9	33.7	38.0	26.0	32.8	41.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	65.6	18.2	47.9	33.7	38.0	26.0	32.8	41.6
Queue Length 50th (m)	54.9	55.6	191.9	37.0	69.3	39.6	8.4	167.6
Queue Length 95th (m)	m#92.5	67.8	#230.3	58.3	101.7	67.6	18.5	#255.6
Internal Link Dist (m)		287.3	180.4		94.5			
Turn Bay Length (m)	35.0					50.0	80.0	
Base Capacity (vph)	321	2981	2109	583	575	570	258	843
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	0.83	0.37	0.95	0.30	0.52	0.46	0.17	0.89

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 119 (92%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated
Description: event plan 2 for AM, 3 for PM
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: QEW NB Off-Ramp & Plains Rd E & Fairview St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	262	1090	0	0	1905	74	195	243	290	44	0	746
Future Volume (vph)	262	1090	0	0	1905	74	195	243	290	44	0	746
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Total Lost time (s)	3.0	6.1			6.1		6.4	6.4	6.4	6.4		3.0
Lane Util. Factor	1.00	0.91			0.91		0.95	0.91	0.95	1.00		1.00
Frpb, ped/bikes	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
Frt	1.00	1.00			0.99		1.00	0.98	0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00	0.95		1.00
Satd. Flow (prot)	1789	5245			5127		1734	1698	1536	1825		1601
Flt Permitted	0.07	1.00			1.00		0.95	1.00	1.00	0.40		1.00
Satd. Flow (perm)	133	5245			5127		1734	1698	1536	767		1601
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	265	1101	0	0	1924	75	197	245	293	44	0	754
RTOR Reduction (vph)	0	0	0	0	3	0	0	3	53	0	0	14
Lane Group Flow (vph)	265	1101	0	0	1996	0	177	294	208	44	0	740
Confl. Peds. (#/hr)			7	7								
Heavy Vehicles (%)	2%	0%	0%	0%	0%	46%	0%	1%	1%	0%	0%	2%
Turn Type	pm+pt	NA			NA		Perm	NA	Perm	Perm		pm+ov
Protected Phases	5	2			6			4				5
Permitted Phases	2						4		4	8		8
Actuated Green, G (s)	73.8	73.8			53.5		43.7	43.7	43.7	43.7		61.0
Effective Green, g (s)	73.8	73.8			53.5		43.7	43.7	43.7	43.7		61.0
Actuated g/C Ratio	0.57	0.57			0.41		0.34	0.34	0.34	0.34		0.47
Clearance Time (s)	3.0	6.1			6.1		6.4	6.4	6.4	6.4		3.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	295	2977			2109		582	570	516	257		751
v/s Ratio Prot	0.12	0.21			c0.39							c0.13
v/s Ratio Perm	0.39						0.10	0.17	0.14	0.06		0.33
v/c Ratio	0.90	0.37			0.95		0.30	0.52	0.40	0.17		0.99
Uniform Delay, d1	40.5	15.4			36.9		31.9	34.6	33.1	30.4		34.1
Progression Factor	1.12	1.16			1.00		1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2	26.0	0.3			10.5		0.3	0.8	0.5	0.3		29.0
Delay (s)	71.5	18.1			47.4		32.2	35.4	33.6	30.7		63.1
Level of Service	E	B			D		C	D	C	C		E
Approach Delay (s/veh)		28.5			47.4			34.0			61.3	
Approach LOS		C			D			C			E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	42.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	113.1%	ICU Level of Service	H
Analysis Period (min)	15		
Description: event plan 2 for AM, 3 for PM			

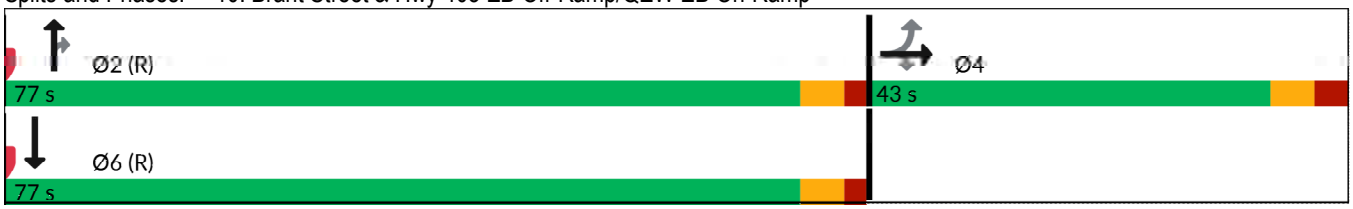
c Critical Lane Group

Lane Group	EBL	EBT	EBR	NBT	NBR	SBT
Lane Configurations						
Traffic Volume (vph)	203	0	187	1491	458	1387
Future Volume (vph)	203	0	187	1491	458	1387
Lane Group Flow (vph)	141	136	129	1553	477	1445
Turn Type	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		2		6
Permitted Phases	4		4		2	
Detector Phase	4	4	4	2	2	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	37.0	37.0	37.0	28.0	28.0	28.0
Total Split (s)	43.0	43.0	43.0	77.0	77.0	77.0
Total Split (%)	35.8%	35.8%	35.8%	64.2%	64.2%	64.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	C-Max	C-Max	C-Max
v/c Ratio	0.67	0.57	0.57	0.41	0.40	0.38
Control Delay (s/veh)	64.4	42.9	42.6	6.0	1.5	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	64.4	42.9	42.6	6.0	1.5	7.0
Queue Length 50th (m)	35.4	24.8	22.0	42.9	0.0	34.8
Queue Length 95th (m)	55.6	45.6	41.6	63.6	9.6	83.9
Internal Link Dist (m)		230.7		394.1		264.9
Turn Bay Length (m)					80.0	
Base Capacity (vph)	457	474	446	3793	1200	3793
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.29	0.29	0.41	0.40	0.38

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 49 (41%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Description: from project 24223.
pattern 2 for AM, 3 for PM (sched 1)

Splits and Phases: 10: Brant Street & Hwy 403 EB Off-Ramp/QEW EB On-Ramp



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	203	0	187	0	0	0	0	1491	458	0	1387	0
Future Volume (vph)	203	0	187	0	0	0	0	1491	458	0	1387	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)	7.0	7.0	7.0					6.0	6.0		6.0	
Lane Util. Factor	0.95	0.91	0.95					0.91	1.00		0.91	
Frpb, ped/bikes	1.00	0.99	0.99					1.00	0.97		1.00	
Flpb, ped/bikes	1.00	1.00	1.00					1.00	1.00		1.00	
Frt	1.00	0.93	0.85					1.00	0.85		1.00	
Flt Protected	0.95	0.97	1.00					1.00	1.00		1.00	
Satd. Flow (prot)	1524	1489	1397					5029	1436		5029	
Flt Permitted	0.95	0.97	1.00					1.00	1.00		1.00	
Satd. Flow (perm)	1524	1489	1397					5029	1436		5029	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	211	0	195	0	0	0	0	1553	477	0	1445	0
RTOR Reduction (vph)	0	34	34	0	0	0	0	0	117	0	0	0
Lane Group Flow (vph)	141	102	95	0	0	0	0	1553	360	0	1445	0
Confl. Peds. (#/hr)			2	2			7		3	3		7
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	5%	0%	1%	0%	0%	0%	0%	2%	2%	0%	2%	0%
Turn Type	Perm	NA	Perm					NA	Perm		NA	
Protected Phases		4						2			6	
Permitted Phases	4		4						2			
Actuated Green, G (s)	16.5	16.5	16.5					90.5	90.5		90.5	
Effective Green, g (s)	16.5	16.5	16.5					90.5	90.5		90.5	
Actuated g/C Ratio	0.14	0.14	0.14					0.75	0.75		0.75	
Clearance Time (s)	7.0	7.0	7.0					6.0	6.0		6.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0	3.0		3.0	
Lane Grp Cap (vph)	209	204	192					3792	1082		3792	
v/s Ratio Prot								c0.31			0.29	
v/s Ratio Perm	c0.09	0.07	0.07						0.25			
v/c Ratio	0.67	0.50	0.50					0.41	0.33		0.38	
Uniform Delay, d1	49.2	47.9	47.9					5.2	4.8		5.1	
Progression Factor	1.00	1.00	1.00					1.00	1.00		1.22	
Incremental Delay, d2	8.3	1.9	2.0					0.3	0.8		0.3	
Delay (s)	57.5	49.9	49.9					5.6	5.7		6.5	
Level of Service	E	D	D					A	A		A	
Approach Delay (s/veh)		52.5			0.0			5.6			6.5	
Approach LOS		D			A			A			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	10.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	48.3%	ICU Level of Service	A
Analysis Period (min)	15		
Description: from project 24223.			
pattern 2 for AM, 3 for PM (sched 1)			

c Critical Lane Group

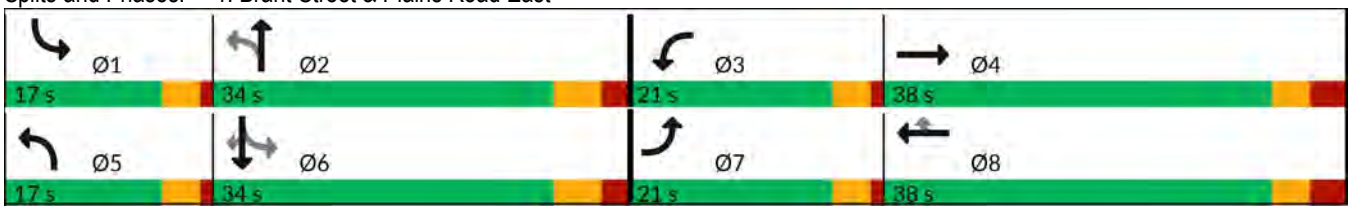
Future Background (2036) Horizon

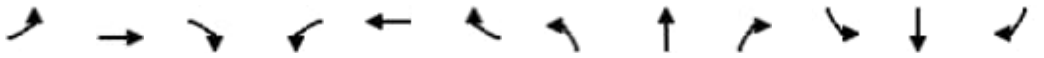
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	397	309	62	183	73	31	672	155	871	451
Future Volume (vph)	397	309	62	183	73	31	672	155	871	451
Lane Group Flow (vph)	409	358	64	189	75	32	828	160	898	465
Turn Type	Prot	NA	Prot	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8	2		6		6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	7.0	8.0	7.0	8.0	8.0	7.0	8.0	7.0	8.0	8.0
Minimum Split (s)	11.0	38.0	11.0	38.0	38.0	11.0	33.0	11.0	33.0	33.0
Total Split (s)	21.0	38.0	21.0	38.0	38.0	17.0	34.0	17.0	34.0	34.0
Total Split (%)	19.1%	34.5%	19.1%	34.5%	34.5%	15.5%	30.9%	15.5%	30.9%	30.9%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	3.0	1.0	3.0	3.0	1.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	6.0	4.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	Max	None	Max	Max
v/c Ratio	0.75	0.72	0.38	0.32	0.23	0.10	0.56	0.48	0.45	0.59
Control Delay (s/veh)	47.1	39.5	47.5	33.7	4.1	15.8	28.3	20.0	23.4	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	47.1	39.5	47.5	33.7	4.1	15.8	28.3	20.0	23.4	9.6
Queue Length 50th (m)	36.5	60.2	11.2	16.3	0.0	2.9	44.3	15.8	47.3	11.8
Queue Length 95th (m)	#68.1	99.2	26.6	26.6	5.4	9.5	71.2	35.3	74.3	52.1
Internal Link Dist (m)		240.4		173.9			422.3		394.1	
Turn Bay Length (m)	65.0		60.0		75.0	60.0		55.0		40.0
Base Capacity (vph)	596	645	313	1203	552	420	1486	371	2001	792
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.56	0.20	0.16	0.14	0.08	0.56	0.43	0.45	0.59

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 90.9
Natural Cycle: 95
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Brant Street & Plains Road East





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	397	309	38	62	183	73	31	672	131	155	871	451
Future Volume (vph)	397	309	38	62	183	73	31	672	131	155	871	451
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	0.97	1.00		1.00	0.95	1.00	1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3143	1794		1652	3368	1352	1684	4677		1635	4980	1422
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.30	1.00		0.22	1.00	1.00
Satd. Flow (perm)	3143	1794		1652	3368	1352	533	4677		386	4980	1422
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	409	319	39	64	189	75	32	693	135	160	898	465
RTOR Reduction (vph)	0	4	0	0	0	61	0	24	0	0	0	227
Lane Group Flow (vph)	409	354	0	64	189	14	32	804	0	160	898	238
Confl. Peds. (#/hr)	2					2	4		5	5		4
Confl. Bikes (#/hr)									1			5
Heavy Vehicles (%)	4%	3%	3%	2%	6%	10%	0%	7%	5%	3%	3%	4%
Turn Type	Prot	NA		Prot	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8	2			6		6
Actuated Green, G (s)	15.7	25.2		7.6	17.1	17.1	34.3	30.2		44.6	36.5	36.5
Effective Green, g (s)	15.7	25.2		7.6	17.1	17.1	34.3	30.2		44.6	36.5	36.5
Actuated g/C Ratio	0.17	0.27		0.08	0.18	0.18	0.37	0.32		0.48	0.39	0.39
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	528	484		134	616	247	246	1512		323	1946	555
v/s Ratio Prot	c0.13	c0.20		0.04	0.06		0.01	0.17		c0.06	0.18	
v/s Ratio Perm						0.01	0.04			c0.18		0.17
v/c Ratio	0.77	0.73		0.48	0.31	0.06	0.13	0.53		0.50	0.46	0.43
Uniform Delay, d1	37.2	31.0		41.0	33.0	31.5	19.1	25.8		15.0	21.1	20.8
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	7.0	5.6		2.7	0.3	0.1	0.2	1.3		1.2	0.8	2.4
Delay (s)	44.2	36.6		43.7	33.3	31.6	19.3	27.2		16.2	21.9	23.2
Level of Service	D	D		D	C	C	B	C		B	C	C
Approach Delay (s/veh)		40.6			34.9			26.9			21.7	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	28.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	93.4	Sum of lost time (s)	20.0
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		

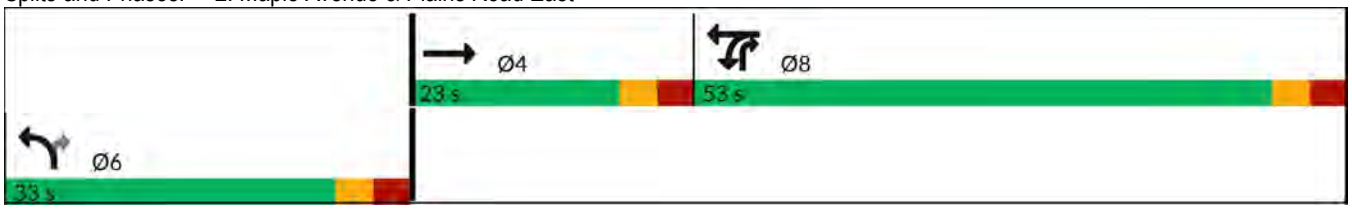
c Critical Lane Group

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	373	247	420	16	329
Future Volume (vph)	373	247	420	16	329
Lane Group Flow (vph)	435	257	438	17	343
Turn Type	NA	Split	NA	Prot	pm+ov
Protected Phases	4	8	8	6	8
Permitted Phases					6
Detector Phase	4	8	8	6	8
Switch Phase					
Minimum Initial (s)	8.0	8.0	8.0	7.0	8.0
Minimum Split (s)	14.0	33.0	33.0	33.0	33.0
Total Split (s)	23.0	53.0	53.0	33.0	53.0
Total Split (%)	21.1%	48.6%	48.6%	30.3%	48.6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	Max	None	None	None	None
v/c Ratio	0.37	0.23	0.66	0.07	0.57
Control Delay (s/veh)	16.0	11.8	18.9	25.0	13.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	16.0	11.8	18.9	25.0	13.3
Queue Length 50th (m)	13.3	7.4	29.5	1.3	19.9
Queue Length 95th (m)	43.5	19.1	74.8	8.1	35.5
Internal Link Dist (m)	259.0		484.0	228.5	
Turn Bay Length (m)		85.0			
Base Capacity (vph)	1168	2801	1673	937	1320
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.37	0.09	0.26	0.02	0.26

Intersection Summary

Cycle Length: 109
Actuated Cycle Length: 50.7
Natural Cycle: 80
Control Type: Semi Act-Uncoord
Description: STP from video

Splits and Phases: 2: Maple Avenue & Plains Road East





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	373	44	247	420	16	329
Future Volume (vph)	373	44	247	420	16	329
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.0	3.0	3.5	3.0	3.0
Total Lost time (s)	6.0		6.0	6.0	6.0	6.0
Lane Util. Factor	0.95		0.97	1.00	1.00	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3316		3054	1824	1685	1436
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3316		3054	1824	1685	1436
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	389	46	257	438	17	343
RTOR Reduction (vph)	7	0	0	0	0	25
Lane Group Flow (vph)	428	0	257	438	17	318
Heavy Vehicles (%)	5%	14%	7%	3%	0%	5%
Turn Type	NA		Split	NA	Prot	pm+ov
Protected Phases	4		8	8	6	8
Permitted Phases						6
Actuated Green, G (s)	17.8		18.5	18.5	1.1	19.6
Effective Green, g (s)	17.8		18.5	18.5	1.1	19.6
Actuated g/C Ratio	0.32		0.33	0.33	0.02	0.35
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1065		1019	609	33	663
v/s Ratio Prot	c0.13		0.08	c0.24	0.01	c0.16
v/s Ratio Perm						0.06
v/c Ratio	0.40		0.25	0.72	0.52	0.48
Uniform Delay, d1	14.7		13.4	16.2	26.9	13.9
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	1.1		0.1	4.1	12.9	0.6
Delay (s)	15.8		13.6	20.2	39.8	14.5
Level of Service	B		B	C	D	B
Approach Delay (s/veh)	15.8			17.8	15.7	
Approach LOS	B			B	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	16.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	55.4	Sum of lost time (s)	18.0
Intersection Capacity Utilization	42.1%	ICU Level of Service	A
Analysis Period (min)	15		
Description: STP from video			
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	684	5	9	620	6	1	0	2	4	0	11
Future Vol, veh/h	10	684	5	9	620	6	1	0	2	4	0	11
Conflicting Peds, #/hr	18	0	4	4	0	18	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	15	-	-	15	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	5	0	0	4	0	0	0	0	0	0	0
Mvmt Flow	11	720	5	9	653	6	1	0	2	4	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	677	0	0	729	0	0	1094	1444	367	1074	1443	348
Stage 1	-	-	-	-	-	-	749	749	-	692	692	-
Stage 2	-	-	-	-	-	-	345	695	-	382	751	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	924	-	-	884	-	-	171	133	636	177	133	654
Stage 1	-	-	-	-	-	-	375	422	-	405	448	-
Stage 2	-	-	-	-	-	-	649	447	-	618	421	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	911	-	-	881	-	-	165	128	634	171	128	645
Mov Cap-2 Maneuver	-	-	-	-	-	-	165	128	-	171	128	-
Stage 1	-	-	-	-	-	-	369	416	-	394	437	-
Stage 2	-	-	-	-	-	-	631	436	-	609	415	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.1	0.1	16.2	15.1
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	326	911	-	-	881	-	-	371
HCM Lane V/C Ratio	0.01	0.012	-	-	0.011	-	-	0.043
HCM Ctrl Dly (s/v)	16.2	9	-	-	9.1	-	-	15.1
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q (veh)	0	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	697	1	6	635	0	0	0	2	0	0	0
Future Vol, veh/h	0	697	1	6	635	0	0	0	2	0	0	0
Conflicting Peds, #/hr	9	0	3	3	0	9	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	15	-	-	15	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	5	0	0	4	0	0	0	0	0	0	0
Mvmt Flow	0	741	1	6	676	0	0	0	2	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	685	0	0	745	0	0	1095	1442	374	1068	1442	347
Stage 1	-	-	-	-	-	-	745	745	-	697	697	-
Stage 2	-	-	-	-	-	-	350	697	-	371	745	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	918	-	-	872	-	-	171	134	629	179	134	655
Stage 1	-	-	-	-	-	-	377	424	-	402	446	-
Stage 2	-	-	-	-	-	-	645	446	-	627	424	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	912	-	-	870	-	-	170	132	628	176	132	650
Mov Cap-2 Maneuver	-	-	-	-	-	-	170	132	-	176	132	-
Stage 1	-	-	-	-	-	-	376	423	-	399	440	-
Stage 2	-	-	-	-	-	-	641	440	-	625	423	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0.1	10.8	0
HCM LOS			B	A

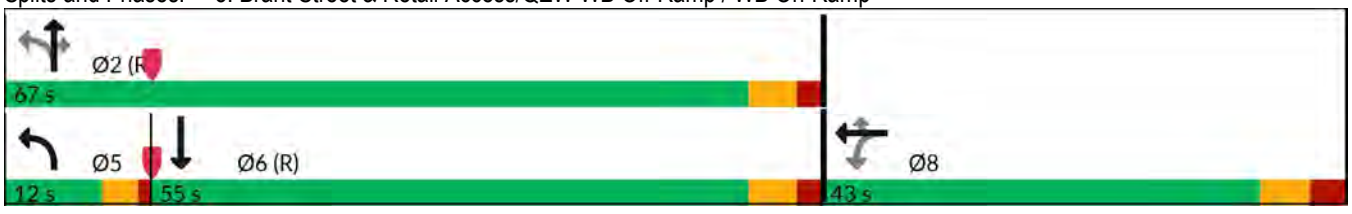
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	628	912	-	-	870	-	-	-
HCM Lane V/C Ratio	0.003	-	-	-	0.007	-	-	-
HCM Ctrl Dly (s/v)	10.8	0	-	-	9.2	-	-	0
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q (veh)	0	0	-	-	0	-	-	-

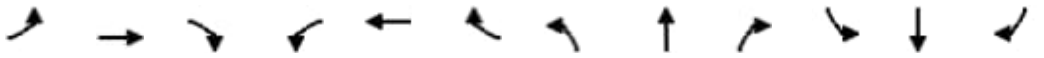
Lane Group	WBL	WBT	WBR	NBL	NBT	NBR	SBT
Lane Configurations							
Traffic Volume (vph)	336	14	347	28	818	181	1478
Future Volume (vph)	336	14	347	28	818	181	1478
Lane Group Flow (vph)	199	199	394	32	930	206	1681
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	NA
Protected Phases		8		5	2		6
Permitted Phases	8		8	2		2	
Detector Phase	8	8	8	5	2	2	6
Switch Phase							
Minimum Initial (s)	8.0	8.0	8.0	7.0	8.0	8.0	8.0
Minimum Split (s)	37.0	37.0	37.0	11.5	28.0	28.0	28.0
Total Split (s)	43.0	43.0	43.0	12.0	67.0	67.0	55.0
Total Split (%)	39.1%	39.1%	39.1%	10.9%	60.9%	60.9%	50.0%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	4.0	6.0	6.0	6.0
Lead/Lag				Lead			Lag
Lead-Lag Optimize?				Yes			Yes
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max
v/c Ratio	0.53	0.50	0.87	0.17	0.29	0.21	0.59
Control Delay (s/veh)	39.7	38.5	46.0	16.0	15.5	7.6	18.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	39.7	38.5	46.0	16.0	15.5	7.6	18.6
Queue Length 50th (m)	40.5	40.1	61.0	3.5	44.6	0.0	96.1
Queue Length 95th (m)	57.5	56.8	88.4	9.5	60.3	22.8	127.7
Internal Link Dist (m)		133.1			264.9		193.7
Turn Bay Length (m)				60.0		130.0	
Base Capacity (vph)	494	523	563	203	3188	982	2852
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.38	0.70	0.16	0.29	0.21	0.59

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 100 (91%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Description: action plan 2 for am, 3 for pm

Splits and Phases: 5: Brant Street & Retail Access/QEW WB Off-Ramp / WB On-Ramp





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	336	14	347	28	818	181	0	1478	1
Future Volume (vph)	0	0	0	336	14	347	28	818	181	0	1478	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)				7.0	7.0	7.0	4.0	6.0	6.0		6.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.91	1.00		0.91	
Frpb, ped/bikes				1.00	1.00	1.00	1.00	1.00	0.98		1.00	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00	1.00		1.00	
Frt				1.00	1.00	0.85	1.00	1.00	0.85		1.00	
Flt Protected				0.95	0.96	1.00	0.95	1.00	1.00		1.00	
Satd. Flow (prot)				1510	1600	1478	1620	5029	1431		4980	
Flt Permitted				0.95	0.96	1.00	0.09	1.00	1.00		1.00	
Satd. Flow (perm)				1510	1600	1478	147	5029	1431		4980	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	0	0	0	382	16	394	32	930	206	0	1680	1
RTOR Reduction (vph)	0	0	0	0	0	89	0	0	75	0	0	0
Lane Group Flow (vph)	0	0	0	199	199	305	32	930	131	0	1681	0
Confl. Peds. (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	6%	14%	2%	4%	2%	3%	0%	3%	0%
Turn Type				Perm	NA	Perm	pm+pt	NA	Perm		NA	
Protected Phases					8		5	2			6	
Permitted Phases				8		8	2		2			
Actuated Green, G (s)				27.3	27.3	27.3	69.7	69.7	69.7		61.4	
Effective Green, g (s)				27.3	27.3	27.3	69.7	69.7	69.7		61.4	
Actuated g/C Ratio				0.25	0.25	0.25	0.63	0.63	0.63		0.56	
Clearance Time (s)				7.0	7.0	7.0	4.0	6.0	6.0		6.0	
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)				374	397	366	150	3186	906		2779	
v/s Ratio Prot							0.01	c0.18			c0.34	
v/s Ratio Perm				0.13	0.12	c0.21	0.13		0.09			
v/c Ratio				0.53	0.50	0.83	0.21	0.29	0.14		0.60	
Uniform Delay, d1				35.8	35.5	39.2	10.4	9.1	8.1		16.2	
Progression Factor				1.00	1.00	1.00	1.57	1.52	4.35		1.00	
Incremental Delay, d2				1.5	1.0	15.0	0.7	0.2	0.3		1.0	
Delay (s)				37.3	36.5	54.2	17.1	14.0	35.7		17.2	
Level of Service				D	D	D	B	B	D		B	
Approach Delay (s/veh)		0.0			45.5			17.9			17.2	
Approach LOS		A			D			B			B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	23.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	50.7%	ICU Level of Service	A
Analysis Period (min)	15		
Description: action plan 2 for am, 3 for pm			

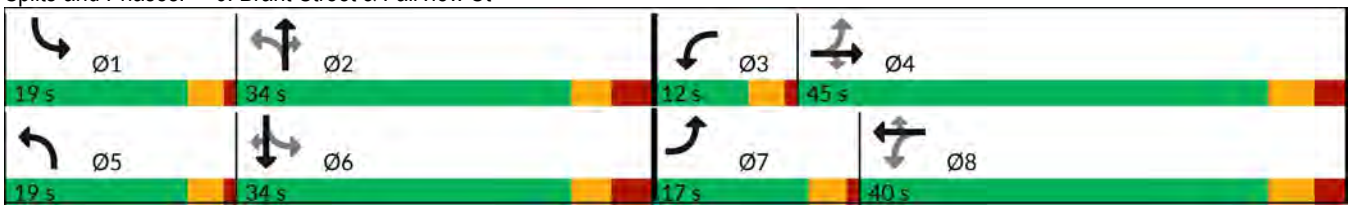
c Critical Lane Group

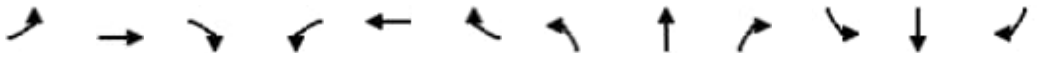
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	692	177	137	315	148	162	600	174	162	601	41
Future Volume (vph)	250	692	177	137	315	148	162	600	174	162	601	41
Lane Group Flow (vph)	253	699	179	138	318	149	164	606	176	164	607	41
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	8.0	8.0	7.0	8.0	8.0	7.0	8.0	8.0	7.0	8.0	8.0
Minimum Split (s)	12.0	31.4	31.4	12.0	31.4	31.4	12.0	31.5	31.5	12.0	31.5	31.5
Total Split (s)	17.0	45.0	45.0	12.0	40.0	40.0	19.0	34.0	34.0	19.0	34.0	34.0
Total Split (%)	15.5%	40.9%	40.9%	10.9%	36.4%	36.4%	17.3%	30.9%	30.9%	17.3%	30.9%	30.9%
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.3	3.3	3.0	3.3	3.3
All-Red Time (s)	1.0	2.7	2.7	1.0	2.7	2.7	1.0	3.2	3.2	1.0	3.2	3.2
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)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.5	6.5	4.0	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
v/c Ratio	0.53	0.72	0.34	0.51	0.42	0.35	0.48	0.71	0.37	0.49	0.72	0.10
Control Delay (s/veh)	20.7	32.7	6.0	23.3	30.5	7.2	20.2	35.5	7.3	20.6	35.7	0.4
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 (s/veh)	20.7	32.7	6.0	23.3	30.5	7.2	20.2	35.5	7.3	20.6	35.7	0.4
Queue Length 50th (m)	26.7	55.7	0.0	13.5	24.4	0.0	16.2	49.1	0.0	16.2	49.4	0.0
Queue Length 95th (m)	53.5	87.3	15.3	29.9	41.8	14.4	33.9	80.4	16.6	34.0	80.3	0.0
Internal Link Dist (m)		607.3			241.7			325.5			422.3	
Turn Bay Length (m)	300.0		140.0	60.0		100.0	84.0		70.0	45.0		60.0
Base Capacity (vph)	491	1635	772	278	1357	649	416	1188	588	411	1199	546
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.43	0.23	0.50	0.23	0.23	0.39	0.51	0.30	0.40	0.51	0.08

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 84.3
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Description: pattern 2 for AM, 3 for PM (sched 1)

Splits and Phases: 6: Brant Street & Fairview St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	692	177	137	315	148	162	600	174	162	601	41
Future Volume (vph)	250	692	177	137	315	148	162	600	174	162	601	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.5	6.5	4.0	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.98
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	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1634	3466	1440	1574	3305	1362	1635	3535	1413	1601	3570	1326
Flt Permitted	0.46	1.00	1.00	0.29	1.00	1.00	0.27	1.00	1.00	0.28	1.00	1.00
Satd. Flow (perm)	788	3466	1440	482	3305	1362	457	3535	1413	468	3570	1326
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	253	699	179	138	318	149	164	606	176	164	607	41
RTOR Reduction (vph)	0	0	129	0	0	115	0	0	133	0	0	31
Lane Group Flow (vph)	253	699	50	138	318	34	164	606	43	164	607	10
Confl. Peds. (#/hr)	3		4	4		3	3		22	22		3
Heavy Vehicles (%)	3%	3%	3%	7%	8%	9%	3%	1%	3%	5%	0%	12%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	35.6	23.6	23.6	27.3	19.3	19.3	31.5	20.3	20.3	30.9	20.0	20.0
Effective Green, g (s)	35.6	23.6	23.6	27.3	19.3	19.3	31.5	20.3	20.3	30.9	20.0	20.0
Actuated g/C Ratio	0.43	0.28	0.28	0.33	0.23	0.23	0.38	0.24	0.24	0.37	0.24	0.24
Clearance Time (s)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.5	6.5	4.0	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)	459	977	406	261	762	314	329	857	342	320	853	316
v/s Ratio Prot	c0.08	c0.20		0.05	0.10		0.07	c0.17		c0.07	0.17	
v/s Ratio Perm	0.15		0.04	0.12		0.03	0.12		0.03	0.12		0.01
v/c Ratio	0.55	0.72	0.12	0.53	0.42	0.11	0.50	0.71	0.12	0.51	0.71	0.03
Uniform Delay, d1	16.5	27.0	22.4	21.0	27.4	25.4	18.5	29.0	24.8	18.9	29.2	24.4
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	1.4	2.5	0.1	1.9	0.4	0.2	1.2	2.7	0.2	1.4	2.8	0.0
Delay (s)	17.9	29.5	22.5	22.9	27.8	25.6	19.7	31.7	24.9	20.3	32.0	24.5
Level of Service	B	C	C	C	C	C	B	C	C	C	C	C
Approach Delay (s/veh)		25.8			26.1			28.3			29.3	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	27.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	83.7	Sum of lost time (s)	20.9
Intersection Capacity Utilization	71.6%	ICU Level of Service	C
Analysis Period (min)	15		
Description: pattern 2 for AM, 3 for PM (sched 1)			

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	24	646	582	29	20	44
Future Vol, veh/h	24	646	582	29	20	44
Conflicting Peds, #/hr	1	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	40	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	3	4	4	0	3
Mvmt Flow	28	760	685	34	24	52

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	720	0	-	0	1139	361
Stage 1	-	-	-	-	703	-
Stage 2	-	-	-	-	436	-
Critical Hdwy	4.1	-	-	-	6.8	6.96
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.33
Pot Cap-1 Maneuver	891	-	-	-	198	633
Stage 1	-	-	-	-	457	-
Stage 2	-	-	-	-	625	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	890	-	-	-	191	633
Mov Cap-2 Maneuver	-	-	-	-	319	-
Stage 1	-	-	-	-	442	-
Stage 2	-	-	-	-	624	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.3	0	13.1
HCM LOS			B

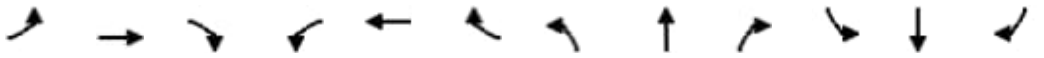
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	890	-	-	-	319	633
HCM Lane V/C Ratio	0.032	-	-	-	0.074	0.082
HCM Ctrl Dly (s/v)	9.2	-	-	-	17.2	11.2
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q (veh)	0.1	-	-	-	0.2	0.3

Lane Group	EBT	EBR	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	963	196	690	193	79
Future Volume (vph)	963	196	690	193	79
Lane Group Flow (vph)	1070	218	767	214	88
Turn Type	NA	Perm	NA	Perm	Perm
Protected Phases	2		6		
Permitted Phases		2		8	8
Detector Phase	2	2	6	8	8
Switch Phase					
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	41.0	41.0	41.0	25.0	25.0
Total Split (s)	75.0	75.0	75.0	25.0	25.0
Total Split (%)	75.0%	75.0%	75.0%	25.0%	25.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	C-Max	None	None
v/c Ratio	0.29	0.19	0.21	0.56	0.35
Control Delay (s/veh)	4.8	1.0	4.4	47.0	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	4.8	1.0	4.4	47.0	12.5
Queue Length 50th (m)	22.2	0.0	14.9	21.5	0.0
Queue Length 95th (m)	32.1	6.3	22.2	32.2	13.8
Internal Link Dist (m)	279.6		287.3		
Turn Bay Length (m)		70.0			
Base Capacity (vph)	3716	1138	3644	565	335
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.29	0.19	0.21	0.38	0.26

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 31 (31%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Description: Pattern 2 for AM, 3 for PM

Splits and Phases: 8: QEW SB On-Ramp/QEW SB Off-Ramp & Plains Rd E





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	963	196	0	690	0	0	0	0	193	0	79
Future Volume (vph)	0	963	196	0	690	0	0	0	0	193	0	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)		7.0	7.0		7.0					7.0		7.0
Lane Util. Factor		0.91	1.00		0.91					0.97		1.00
Frpb, ped/bikes		1.00	1.00		1.00					1.00		1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00		1.00
Frt		1.00	0.85		1.00					1.00		0.85
Flt Protected		1.00	1.00		1.00					0.95		1.00
Satd. Flow (prot)		5029	1463		4932					3143		1463
Flt Permitted		1.00	1.00		1.00					0.95		1.00
Satd. Flow (perm)		5029	1463		4932					3143		1463
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)	0	1070	218	0	767	0	0	0	0	214	0	88
RTOR Reduction (vph)	0	0	57	0	0	0	0	0	0	0	0	77
Lane Group Flow (vph)	0	1070	161	0	767	0	0	0	0	214	0	11
Confl. Peds. (#/hr)	3					3						
Heavy Vehicles (%)	0%	2%	3%	0%	4%	0%	0%	0%	0%	4%	0%	3%
Turn Type		NA	Perm		NA					Perm		Perm
Protected Phases		2			6							
Permitted Phases			2							8		8
Actuated Green, G (s)		73.9	73.9		73.9					12.1		12.1
Effective Green, g (s)		73.9	73.9		73.9					12.1		12.1
Actuated g/C Ratio		0.74	0.74		0.74					0.12		0.12
Clearance Time (s)		7.0	7.0		7.0					7.0		7.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0		3.0
Lane Grp Cap (vph)		3716	1081		3644					380		177
v/s Ratio Prot		c0.21			0.16							
v/s Ratio Perm			0.11							c0.07		0.01
v/c Ratio		0.29	0.15		0.21					0.56		0.06
Uniform Delay, d1		4.3	3.8		4.0					41.5		38.9
Progression Factor		1.00	1.00		1.00					1.00		1.00
Incremental Delay, d2		0.2	0.3		0.1					1.9		0.1
Delay (s)		4.5	4.1		4.2					43.4		39.1
Level of Service		A	A		A					D		D
Approach Delay (s/veh)		4.5			4.2			0.0			42.1	
Approach LOS		A			A			A			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	9.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		
Description: Pattern 2 for AM, 3 for PM			

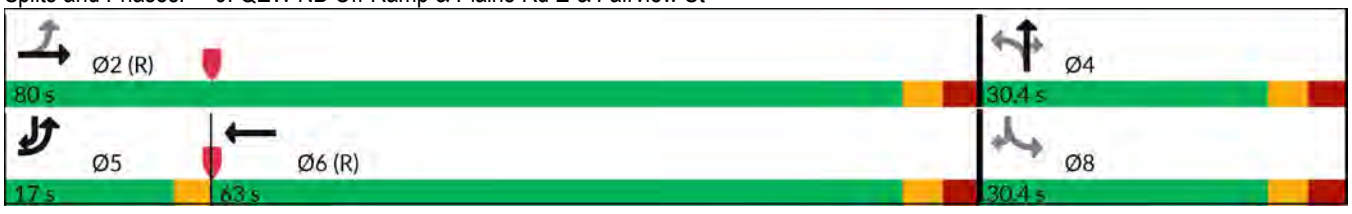
c Critical Lane Group

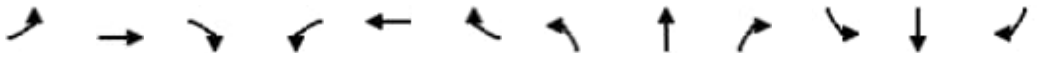
Lane Group	EBL	EBT	WBT	NBL	NBT	NBR	SBL	SBR
Lane Configurations								
Traffic Volume (vph)	186	863	649	89	202	331	49	523
Future Volume (vph)	186	863	649	89	202	331	49	523
Lane Group Flow (vph)	198	918	708	85	306	271	52	556
Turn Type	pm+pt	NA	NA	Perm	NA	Perm	Perm	pm+ov
Protected Phases	5	2	6		4			5
Permitted Phases	2			4		4	8	8
Detector Phase	5	2	6	4	4	4	8	5
Switch Phase								
Minimum Initial (s)	6.0	8.0	8.0	8.0	8.0	8.0	8.0	6.0
Minimum Split (s)	9.0	35.1	35.1	30.4	30.4	30.4	30.4	9.0
Total Split (s)	17.0	80.0	63.0	30.4	30.4	30.4	30.4	17.0
Total Split (%)	15.4%	72.5%	57.1%	27.5%	27.5%	27.5%	27.5%	15.4%
Yellow Time (s)	3.0	3.3	3.3	3.3	3.3	3.3	3.3	3.0
All-Red Time (s)	0.0	2.8	2.8	3.1	3.1	3.1	3.1	0.0
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	6.1	6.1	6.4	6.4	6.4	6.4	3.0
Lead/Lag	Lead		Lag					Lead
Lead-Lag Optimize?	Yes		Yes					Yes
Recall Mode	None	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.37	0.27	0.27	0.21	0.77	0.55	0.42	0.78
Control Delay (s/veh)	9.2	9.0	15.8	33.6	50.7	16.2	44.9	26.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	9.2	9.0	15.8	33.6	50.7	16.2	44.9	26.5
Queue Length 50th (m)	14.5	29.4	30.0	16.4	68.3	17.7	10.1	76.3
Queue Length 95th (m)	29.0	44.4	48.7	28.4	95.1	41.7	21.5	98.9
Internal Link Dist (m)		287.3	180.4		94.5			
Turn Bay Length (m)	35.0					50.0	80.0	
Base Capacity (vph)	580	3514	2798	420	417	512	131	756
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	0.34	0.26	0.25	0.20	0.73	0.53	0.40	0.74

Intersection Summary

Cycle Length: 110.4
Actuated Cycle Length: 110.4
Offset: 97 (88%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Description: event plan 2 for AM, 3 for PM

Splits and Phases: 9: QEW NB Off-Ramp & Plains Rd E & Fairview St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	186	863	0	0	649	17	89	202	331	49	0	523
Future Volume (vph)	186	863	0	0	649	17	89	202	331	49	0	523
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Total Lost time (s)	3.0	6.1			6.1		6.4	6.4	6.4	6.4		3.0
Lane Util. Factor	1.00	0.91			0.91		0.95	0.91	0.95	1.00		1.00
Frpb, ped/bikes	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
Frt	1.00	1.00			1.00		1.00	0.96	0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00	0.95		1.00
Satd. Flow (prot)	1789	5142			5026		1700	1643	1521	1825		1541
Flt Permitted	0.34	1.00			1.00		0.95	1.00	1.00	0.28		1.00
Satd. Flow (perm)	634	5142			5026		1700	1643	1521	531		1541
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)	198	918	0	0	690	18	95	215	352	52	0	556
RTOR Reduction (vph)	0	0	0	0	2	0	0	11	138	0	0	125
Lane Group Flow (vph)	198	918	0	0	706	0	85	295	133	52	0	431
Confl. Peds. (#/hr)	2					2						
Heavy Vehicles (%)	2%	2%	0%	0%	4%	0%	2%	2%	2%	0%	0%	6%
Turn Type	pm+pt	NA			NA		Perm	NA	Perm	Perm		pm+ov
Protected Phases	5	2			6			4				5
Permitted Phases	2						4		4	8		8
Actuated Green, G (s)	72.1	72.1			58.5		25.8	25.8	25.8	25.8		36.4
Effective Green, g (s)	72.1	72.1			58.5		25.8	25.8	25.8	25.8		36.4
Actuated g/C Ratio	0.65	0.65			0.53		0.23	0.23	0.23	0.23		0.33
Clearance Time (s)	3.0	6.1			6.1		6.4	6.4	6.4	6.4		3.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	524	3358			2663		397	383	355	124		508
v/s Ratio Prot	0.04	0.18			0.14							c0.08
v/s Ratio Perm	c0.21						0.05	0.18	0.09	0.10		0.20
v/c Ratio	0.38	0.27			0.26		0.21	0.77	0.37	0.42		0.85
Uniform Delay, d1	7.7	8.1			14.2		34.1	39.5	35.5	35.9		34.4
Progression Factor	1.00	1.00			1.00		1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2	0.5	0.2			0.2		0.3	9.0	0.7	2.3		12.4
Delay (s)	8.1	8.3			14.4		34.4	48.5	36.2	38.2		46.8
Level of Service	A	A			B		C	D	D	D		D
Approach Delay (s/veh)		8.3			14.4			41.7			46.1	
Approach LOS		A			B			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	24.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	110.4	Sum of lost time (s)	15.5
Intersection Capacity Utilization	81.5%	ICU Level of Service	D
Analysis Period (min)	15		
Description: event plan 2 for AM, 3 for PM			

c Critical Lane Group

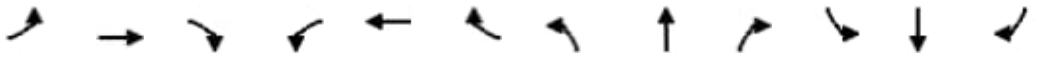
Lane Group	EBL	EBT	EBR	NBT	NBR	SBT
Lane Configurations						
Traffic Volume (vph)	125	0	174	898	345	1188
Future Volume (vph)	125	0	174	898	345	1188
Lane Group Flow (vph)	107	103	98	926	356	1225
Turn Type	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		2		6
Permitted Phases	4		4		2	
Detector Phase	4	4	4	2	2	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	37.0	37.0	37.0	28.0	28.0	28.0
Total Split (s)	43.0	43.0	43.0	67.0	67.0	67.0
Total Split (%)	39.1%	39.1%	39.1%	60.9%	60.9%	60.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	C-Max	C-Max	C-Max
v/c Ratio	0.58	0.47	0.46	0.25	0.31	0.32
Control Delay (s/veh)	57.6	28.7	28.0	4.2	1.2	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	57.6	28.7	28.0	4.2	1.2	9.3
Queue Length 50th (m)	24.5	10.5	9.0	18.3	0.0	71.2
Queue Length 95th (m)	41.7	28.2	25.4	28.6	7.7	95.1
Internal Link Dist (m)		230.7		394.1		264.9
Turn Bay Length (m)					80.0	
Base Capacity (vph)	518	509	487	3770	1156	3770
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.20	0.20	0.25	0.31	0.32

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 49 (45%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Description: from project 24223.
pattern 2 for AM, 3 for PM (sched 1)

Splits and Phases: 10: Brant Street & Hwy 403 EB Off-Ramp/QEW EB On-Ramp





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	125	0	174	0	0	0	0	898	345	0	1188	0
Future Volume (vph)	125	0	174	0	0	0	0	898	345	0	1188	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)	7.0	7.0	7.0					6.0	6.0		6.0	
Lane Util. Factor	0.95	0.91	0.95					0.91	1.00		0.91	
Frpb, ped/bikes	1.00	0.99	0.99					1.00	0.98		1.00	
Flpb, ped/bikes	1.00	1.00	1.00					1.00	1.00		1.00	
Frt	1.00	0.88	0.85					1.00	0.85		1.00	
Flt Protected	0.95	0.99	1.00					1.00	1.00		1.00	
Satd. Flow (prot)	1585	1439	1371					4932	1403		4932	
Flt Permitted	0.95	0.99	1.00					1.00	1.00		1.00	
Satd. Flow (perm)	1585	1439	1371					4932	1403		4932	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	129	0	179	0	0	0	0	926	356	0	1225	0
RTOR Reduction (vph)	0	50	50	0	0	0	0	0	84	0	0	0
Lane Group Flow (vph)	107	53	48	0	0	0	0	926	272	0	1225	0
Confl. Peds. (#/hr)									1	1		
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	1%	0%	3%	0%	0%	0%	0%	4%	5%	0%	4%	0%
Turn Type	Perm	NA	Perm					NA	Perm		NA	
Protected Phases		4						2			6	
Permitted Phases	4		4						2			
Actuated Green, G (s)	12.9	12.9	12.9					84.1	84.1		84.1	
Effective Green, g (s)	12.9	12.9	12.9					84.1	84.1		84.1	
Actuated g/C Ratio	0.12	0.12	0.12					0.76	0.76		0.76	
Clearance Time (s)	7.0	7.0	7.0					6.0	6.0		6.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0	3.0		3.0	
Lane Grp Cap (vph)	185	168	160					3770	1072		3770	
v/s Ratio Prot								0.19			c0.25	
v/s Ratio Perm	c0.07	0.04	0.03						0.19			
v/c Ratio	0.58	0.31	0.30					0.25	0.25		0.32	
Uniform Delay, d1	46.0	44.5	44.4					3.8	3.8		4.1	
Progression Factor	1.00	1.00	1.00					1.00	1.00		2.09	
Incremental Delay, d2	4.3	1.1	1.0					0.2	0.6		0.2	
Delay (s)	50.3	45.6	45.5					3.9	4.4		8.7	
Level of Service	D	D	D					A	A		A	
Approach Delay (s/veh)		47.2			0.0			4.0			8.7	
Approach LOS		D			A			A			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	10.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	41.0%	ICU Level of Service	A
Analysis Period (min)	15		
Description: from project 24223.			
pattern 2 for AM, 3 for PM (sched 1)			

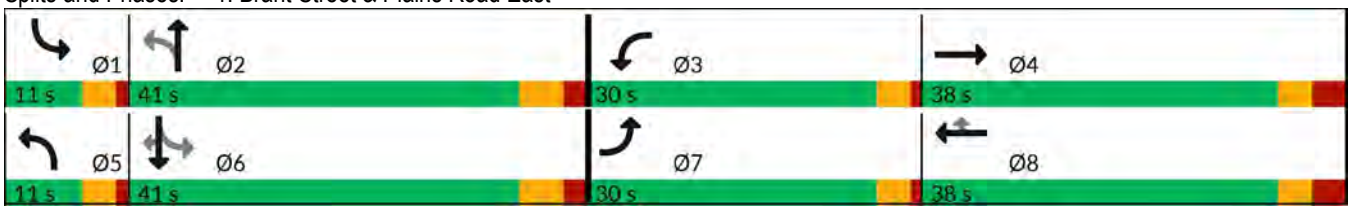
c Critical Lane Group

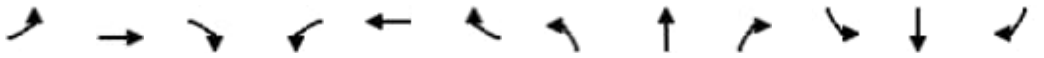
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	531	241	111	841	368	48	980	104	875	721
Future Volume (vph)	531	241	111	841	368	48	980	104	875	721
Lane Group Flow (vph)	547	315	114	867	379	49	1090	107	902	743
Turn Type	Prot	NA	Prot	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8	2		6		6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	7.0	8.0	7.0	8.0	8.0	7.0	8.0	7.0	8.0	8.0
Minimum Split (s)	11.0	38.0	11.0	38.0	38.0	11.0	33.0	11.0	33.0	33.0
Total Split (s)	30.0	38.0	30.0	38.0	38.0	11.0	41.0	11.0	41.0	41.0
Total Split (%)	25.0%	31.7%	25.0%	31.7%	31.7%	9.2%	34.2%	9.2%	34.2%	34.2%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	3.0	1.0	3.0	3.0	1.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	6.0	4.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	Max	None	Max	Max
v/c Ratio	0.84	0.50	0.60	0.93	0.78	0.23	0.73	0.65	0.56	0.91
Control Delay (s/veh)	57.6	32.6	62.5	58.7	38.0	24.8	40.3	42.9	35.7	29.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	57.6	32.6	62.5	58.7	38.0	24.8	40.3	42.9	35.7	29.6
Queue Length 50th (m)	66.3	57.1	27.1	109.4	58.0	7.3	88.2	16.6	70.0	67.9
Queue Length 95th (m)	87.1	91.7	45.1	#149.9	#106.2	15.8	106.5	#34.3	85.9	#160.0
Internal Link Dist (m)		240.4		173.9			422.3		394.1	
Turn Bay Length (m)	65.0		60.0		75.0	60.0		55.0		40.0
Base Capacity (vph)	721	625	371	960	497	217	1483	165	1612	813
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.50	0.31	0.90	0.76	0.23	0.73	0.65	0.56	0.91

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 116.8
Natural Cycle: 105
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Brant Street & Plains Road East





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	531	241	65	111	841	368	48	980	78	104	875	721
Future Volume (vph)	531	241	65	111	841	368	48	980	78	104	875	721
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	0.97	1.00		1.00	0.95	1.00	1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3236	1746		1668	3500	1468	1651	4915		1620	5029	1449
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.21	1.00		0.12	1.00	1.00
Satd. Flow (perm)	3236	1746		1668	3500	1468	373	4915		212	5029	1449
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	547	248	67	114	867	379	49	1010	80	107	902	743
RTOR Reduction (vph)	0	7	0	0	0	96	0	8	0	0	0	351
Lane Group Flow (vph)	547	308	0	114	867	283	49	1082	0	107	902	392
Confl. Peds. (#/hr)	2		5	5		2	11		4	4		11
Confl. Bikes (#/hr)						3						4
Heavy Vehicles (%)	1%	4%	3%	1%	2%	1%	2%	3%	4%	4%	2%	1%
Turn Type	Prot	NA		Prot	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8	2			6		6
Actuated Green, G (s)	23.5	41.4		13.3	31.2	31.2	41.4	35.9		44.4	37.4	37.4
Effective Green, g (s)	23.5	41.4		13.3	31.2	31.2	41.4	35.9		44.4	37.4	37.4
Actuated g/C Ratio	0.20	0.35		0.11	0.27	0.27	0.35	0.31		0.38	0.32	0.32
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	646	614		188	928	389	191	1500		163	1599	460
v/s Ratio Prot	c0.17	0.18		0.07	c0.25		0.01	0.22		c0.04	0.18	
v/s Ratio Perm						0.19	0.08			0.21		c0.27
v/c Ratio	0.85	0.50		0.61	0.93	0.73	0.26	0.72		0.66	0.56	0.85
Uniform Delay, d1	45.3	30.0		49.7	42.2	39.3	26.0	36.4		26.4	33.3	37.5
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	10.0	0.6		5.4	15.9	6.6	0.7	3.0		9.2	1.4	17.9
Delay (s)	55.3	30.6		55.1	58.1	46.0	26.7	39.4		35.6	34.8	55.4
Level of Service	E	C		E	E	D	C	D		D	C	E
Approach Delay (s/veh)		46.3			54.5			38.9			43.6	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	45.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	117.6	Sum of lost time (s)	20.0
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		

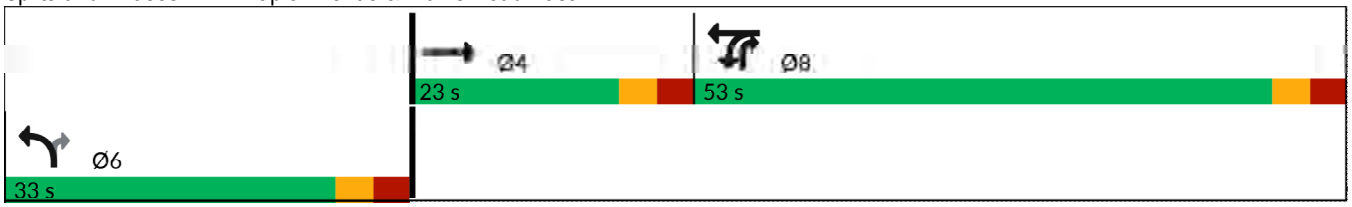
c Critical Lane Group

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	422	877	698	65	426
Future Volume (vph)	422	877	698	65	426
Lane Group Flow (vph)	520	964	767	71	468
Turn Type	NA	Split	NA	Prot	pm+ov
Protected Phases	4	8	8	6	8
Permitted Phases					6
Detector Phase	4	8	8	6	8
Switch Phase					
Minimum Initial (s)	8.0	8.0	8.0	7.0	8.0
Minimum Split (s)	14.0	33.0	33.0	33.0	33.0
Total Split (s)	23.0	53.0	53.0	33.0	53.0
Total Split (%)	21.1%	48.6%	48.6%	30.3%	48.6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	Max	None	None	None	None
v/c Ratio	0.75	0.57	0.81	0.39	0.51
Control Delay (s/veh)	41.9	16.7	26.9	44.6	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	41.9	16.7	26.9	44.6	9.1
Queue Length 50th (m)	47.9	59.7	111.7	12.5	33.0
Queue Length 95th (m)	#77.4	84.9	#196.0	25.8	51.6
Internal Link Dist (m)	259.0		484.0	228.5	
Turn Bay Length (m)		85.0			
Base Capacity (vph)	693	1829	1031	541	979
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.75	0.53	0.74	0.13	0.48

Intersection Summary

Cycle Length: 109
Actuated Cycle Length: 86.1
Natural Cycle: 100
Control Type: Semi Act-Uncoord
Description: STP from video
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Maple Avenue & Plains Road East



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	422	51	877	698	65	426
Future Volume (vph)	422	51	877	698	65	426
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.0	3.0	3.5	3.0	3.0
Total Lost time (s)	6.0		6.0	6.0	6.0	6.0
Lane Util. Factor	0.95		0.97	1.00	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3386		3268	1842	1685	1504
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3386		3268	1842	1685	1504
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	464	56	964	767	71	468
RTOR Reduction (vph)	8	0	0	0	0	8
Lane Group Flow (vph)	512	0	964	767	71	460
Confl. Peds. (#/hr)						5
Heavy Vehicles (%)	2%	18%	0%	2%	0%	0%
Turn Type	NA		Split	NA	Prot	pm+ov
Protected Phases	4		8	8	6	8
Permitted Phases						6
Actuated Green, G (s)	17.4		44.3	44.3	7.5	51.8
Effective Green, g (s)	17.4		44.3	44.3	7.5	51.8
Actuated g/C Ratio	0.20		0.51	0.51	0.09	0.59
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	675		1660	935	144	996
v/s Ratio Prot	c0.15		0.29	c0.42	0.04	c0.23
v/s Ratio Perm						0.07
v/c Ratio	0.76		0.58	0.82	0.49	0.46
Uniform Delay, d1	32.9		15.0	18.1	38.0	9.9
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	7.8		0.5	5.8	2.6	0.3
Delay (s)	40.7		15.5	23.9	40.7	10.2
Level of Service	D		B	C	D	B
Approach Delay (s/veh)	40.7			19.2	14.3	
Approach LOS	D			B	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	22.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	87.2	Sum of lost time (s)	18.0
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		
Description: STP from video			

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	766	6	4	1635	11	7	0	3	3	0	16
Future Vol, veh/h	7	766	6	4	1635	11	7	0	3	3	0	16
Conflicting Peds, #/hr	14	0	4	4	0	14	2	0	1	1	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	15	-	-	15	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	2	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	7	798	6	4	1703	11	7	0	3	3	0	17

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1728	0	0	808	0	0	1681	2555	407	2145	2553	873
Stage 1	-	-	-	-	-	-	819	819	-	1731	1731	-
Stage 2	-	-	-	-	-	-	862	1736	-	414	822	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	370	-	-	826	-	-	63	27	599	28	27	297
Stage 1	-	-	-	-	-	-	340	392	-	93	144	-
Stage 2	-	-	-	-	-	-	320	143	-	592	391	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	366	-	-	823	-	-	58	26	597	27	26	293
Mov Cap-2 Maneuver	-	-	-	-	-	-	58	26	-	27	26	-
Stage 1	-	-	-	-	-	-	333	383	-	90	142	-
Stage 2	-	-	-	-	-	-	300	141	-	577	382	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.1	0	56.6	42.7
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	80	366	-	-	823	-	-	115
HCM Lane V/C Ratio	0.13	0.02	-	-	0.005	-	-	0.172
HCM Ctrl Dly (s/v)	56.6	15	-	-	9.4	-	-	42.7
HCM Lane LOS	F	C	-	-	A	-	-	E
HCM 95th %tile Q (veh)	0.4	0.1	-	-	0	-	-	0.6

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	769	2	7	1648	1	1	0	10	1	0	1
Future Vol, veh/h	1	769	2	7	1648	1	1	0	10	1	0	1
Conflicting Peds, #/hr	13	0	2	2	0	13	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	15	-	-	15	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	2	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	1	809	2	7	1735	1	1	0	11	1	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1749	0	0	813	0	0	1697	2577	408	2170	2578	882
Stage 1	-	-	-	-	-	-	814	814	-	1763	1763	-
Stage 2	-	-	-	-	-	-	883	1763	-	407	815	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	363	-	-	823	-	-	61	26	598	27	26	293
Stage 1	-	-	-	-	-	-	342	394	-	89	139	-
Stage 2	-	-	-	-	-	-	311	139	-	597	394	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	359	-	-	822	-	-	60	25	597	26	25	290
Mov Cap-2 Maneuver	-	-	-	-	-	-	60	25	-	26	25	-
Stage 1	-	-	-	-	-	-	341	392	-	88	136	-
Stage 2	-	-	-	-	-	-	307	136	-	585	392	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	16.3	83.4
HCM LOS			C	F

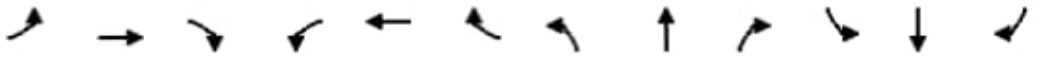
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	329	359	-	-	822	-	-	48
HCM Lane V/C Ratio	0.035	0.003	-	-	0.009	-	-	0.044
HCM Ctrl Dly (s/v)	16.3	15.1	-	-	9.4	-	-	83.4
HCM Lane LOS	C	C	-	-	A	-	-	F
HCM 95th %tile Q (veh)	0.1	0	-	-	0	-	-	0.1

Lane Group	WBL	WBT	WBR	NBL	NBT	NBR	SBT
Lane Configurations							
Traffic Volume (vph)	160	12	88	74	1426	364	1900
Future Volume (vph)	160	12	88	74	1426	364	1900
Lane Group Flow (vph)	88	87	90	76	1455	371	1942
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	NA
Protected Phases		8		5	2		6
Permitted Phases	8		8	2		2	
Detector Phase	8	8	8	5	2	2	6
Switch Phase							
Minimum Initial (s)	8.0	8.0	8.0	7.0	8.0	8.0	8.0
Minimum Split (s)	37.0	37.0	37.0	11.0	28.0	28.0	28.0
Total Split (s)	43.0	43.0	43.0	11.0	77.0	77.0	66.0
Total Split (%)	35.8%	35.8%	35.8%	9.2%	64.2%	64.2%	55.0%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	4.0	6.0	6.0	6.0
Lead/Lag				Lead			Lag
Lead-Lag Optimize?				Yes			Yes
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max
v/c Ratio	0.54	0.53	0.43	0.38	0.36	0.30	0.54
Control Delay (s/veh)	63.0	62.3	24.8	8.8	6.7	3.6	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	63.0	62.3	24.8	8.8	6.7	3.6	9.6
Queue Length 50th (m)	22.2	22.0	6.0	6.3	56.8	18.4	76.7
Queue Length 95th (m)	39.2	38.7	21.7	10.0	75.0	41.5	110.1
Internal Link Dist (m)		133.1			264.9		193.7
Turn Bay Length (m)				60.0		130.0	
Base Capacity (vph)	480	485	490	202	4052	1238	3617
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.18	0.18	0.38	0.36	0.30	0.54

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 100 (83%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Description: action plan 2 for am, 3 for pm

Splits and Phases: 5: Brant Street & Retail Access/QEW WB Off-Ramp / WB On-Ramp





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	160	12	88	74	1426	364	0	1900	3
Future Volume (vph)	0	0	0	160	12	88	74	1426	364	0	1900	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)				7.0	7.0	7.0	4.0	6.0	6.0		6.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.91	1.00		0.91	
Frpb, ped/bikes				1.00	1.00	0.99	1.00	1.00	0.97		1.00	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00	1.00		1.00	
Frt				1.00	1.00	0.85	1.00	1.00	0.85		1.00	
Flt Protected				0.95	0.96	1.00	0.95	1.00	1.00		1.00	
Satd. Flow (prot)				1600	1617	1486	1636	5129	1469		5077	
Flt Permitted				0.95	0.96	1.00	0.08	1.00	1.00		1.00	
Satd. Flow (perm)				1600	1617	1486	132	5129	1469		5077	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	163	12	90	76	1455	371	0	1939	3
RTOR Reduction (vph)	0	0	0	0	0	57	0	0	78	0	0	0
Lane Group Flow (vph)	0	0	0	88	87	33	76	1455	293	0	1942	0
Confl. Peds. (#/hr)	2					2	5		2	2		5
Heavy Vehicles (%)	0%	0%	0%	0%	42%	0%	3%	0%	0%	0%	1%	0%
Turn Type				Perm	NA	Perm	pm+pt	NA	Perm		NA	
Protected Phases					8		5	2			6	
Permitted Phases				8		8	2		2			
Actuated Green, G (s)				12.2	12.2	12.2	94.8	94.8	94.8		84.6	
Effective Green, g (s)				12.2	12.2	12.2	94.8	94.8	94.8		84.6	
Actuated g/C Ratio				0.10	0.10	0.10	0.79	0.79	0.79		0.71	
Clearance Time (s)				7.0	7.0	7.0	4.0	6.0	6.0		6.0	
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)				162	164	151	181	4051	1160		3579	
v/s Ratio Prot							0.02	c0.28			c0.38	
v/s Ratio Perm				c0.05	0.05	0.02	0.31		0.20			
v/c Ratio				0.54	0.53	0.22	0.42	0.36	0.25		0.54	
Uniform Delay, d1				51.3	51.2	49.5	6.1	3.7	3.3		8.5	
Progression Factor				1.00	1.00	1.00	1.15	1.65	7.41		1.00	
Incremental Delay, d2				3.7	3.3	0.7	1.5	0.2	0.5		0.6	
Delay (s)				54.9	54.5	50.2	8.5	6.3	25.0		9.1	
Level of Service				D	D	D	A	A	C		A	
Approach Delay (s/veh)		0.0			53.2			10.1			9.1	
Approach LOS		A			D			B			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	12.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		
Description: action plan 2 for am, 3 for pm			

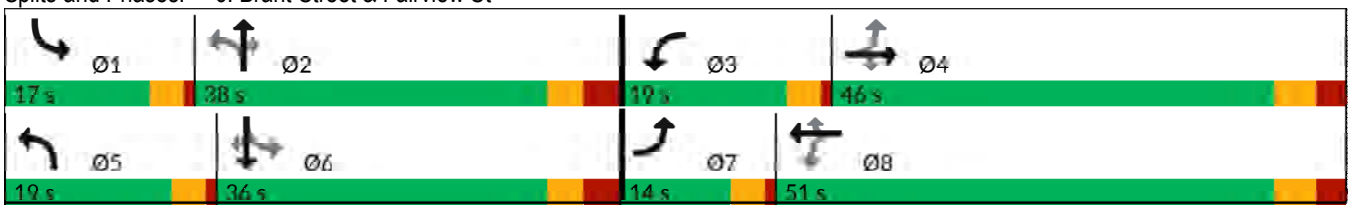
c Critical Lane Group

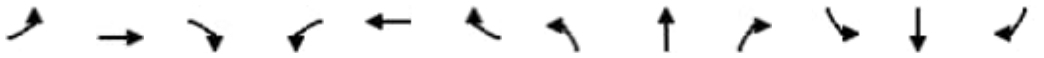
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	184	648	281	205	1145	287	252	630	147	201	606	145
Future Volume (vph)	184	648	281	205	1145	287	252	630	147	201	606	145
Lane Group Flow (vph)	194	682	296	216	1205	302	265	663	155	212	638	153
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	8.0	8.0	7.0	8.0	8.0	7.0	8.0	8.0	7.0	8.0	8.0
Minimum Split (s)	12.0	31.4	31.4	12.0	31.4	31.4	12.0	31.5	31.5	12.0	31.5	31.5
Total Split (s)	14.0	46.0	46.0	19.0	51.0	51.0	19.0	38.0	38.0	17.0	36.0	36.0
Total Split (%)	11.7%	38.3%	38.3%	15.8%	42.5%	42.5%	15.8%	31.7%	31.7%	14.2%	30.0%	30.0%
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.3	3.3	3.0	3.3	3.3
All-Red Time (s)	1.0	2.7	2.7	1.0	2.7	2.7	1.0	3.2	3.2	1.0	3.2	3.2
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)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.5	6.5	4.0	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
v/c Ratio	0.92	0.55	0.42	0.59	0.92	0.44	0.93	0.76	0.34	0.80	0.81	0.35
Control Delay (s/veh)	72.9	32.8	5.2	22.9	46.4	5.0	65.3	46.5	7.6	47.2	51.1	8.1
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 (s/veh)	72.9	32.8	5.2	22.9	46.4	5.0	65.3	46.5	7.6	47.2	51.1	8.1
Queue Length 50th (m)	30.4	69.6	0.0	27.7	142.8	0.0	44.6	78.5	0.0	34.2	77.0	0.0
Queue Length 95th (m)	#81.0	93.6	19.7	45.2	#192.4	18.9	#98.7	100.5	16.6	#64.2	98.7	17.0
Internal Link Dist (m)		607.3			241.7			325.5			422.3	
Turn Bay Length (m)	300.0		140.0	60.0		100.0	84.0		70.0	45.0		60.0
Base Capacity (vph)	211	1257	716	398	1393	715	286	993	498	272	921	486
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.54	0.41	0.54	0.87	0.42	0.93	0.67	0.31	0.78	0.69	0.31

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 113.7
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Description: pattern 2 for AM, 3 for PM (sched 1)
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Brant Street & Fairview St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	184	648	281	205	1145	287	252	630	147	201	606	145
Future Volume (vph)	184	648	281	205	1145	287	252	630	147	201	606	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.5	6.5	4.0	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.93	1.00	1.00	0.98
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	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1652	3535	1479	1684	3535	1352	1589	3570	1392	1600	3535	1432
Flt Permitted	0.10	1.00	1.00	0.26	1.00	1.00	0.17	1.00	1.00	0.22	1.00	1.00
Satd. Flow (perm)	175	3535	1479	455	3535	1352	284	3570	1392	363	3535	1432
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	194	682	296	216	1205	302	265	663	155	212	638	153
RTOR Reduction (vph)	0	0	193	0	0	190	0	0	117	0	0	119
Lane Group Flow (vph)	194	682	103	216	1205	112	265	663	38	212	638	34
Confl. Peds. (#/hr)	14		5	5		14	6		39	39		6
Confl. Bikes (#/hr)									1			1
Heavy Vehicles (%)	2%	1%	0%	0%	1%	8%	6%	0%	1%	5%	1%	3%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	49.8	39.7	39.7	55.0	42.3	42.3	42.9	27.8	27.8	37.9	25.3	25.3
Effective Green, g (s)	49.8	39.7	39.7	55.0	42.3	42.3	42.9	27.8	27.8	37.9	25.3	25.3
Actuated g/C Ratio	0.44	0.35	0.35	0.48	0.37	0.37	0.38	0.24	0.24	0.33	0.22	0.22
Clearance Time (s)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.5	6.5	4.0	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)	207	1234	516	357	1315	502	280	872	340	258	786	318
v/s Ratio Prot	c0.08	0.19		c0.07	c0.34		c0.13	0.19		0.09	0.18	
v/s Ratio Perm	0.33		0.07	0.22		0.08	c0.23		0.03	0.18		0.02
v/c Ratio	0.94	0.55	0.20	0.61	0.92	0.22	0.95	0.76	0.11	0.82	0.81	0.11
Uniform Delay, d1	28.2	29.8	25.9	18.7	34.0	24.5	28.4	39.9	33.4	30.0	41.9	35.2
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	44.7	0.5	0.2	2.9	10.1	0.2	39.1	3.9	0.1	18.6	6.4	0.1
Delay (s)	72.8	30.4	26.1	21.6	44.1	24.7	67.5	43.8	33.5	48.6	48.3	35.4
Level of Service	E	C	C	C	D	C	E	D	C	D	D	D
Approach Delay (s/veh)		36.3			37.9			48.1			46.4	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	41.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	113.7	Sum of lost time (s)	20.9
Intersection Capacity Utilization	90.6%	ICU Level of Service	E
Analysis Period (min)	15		
Description: pattern 2 for AM, 3 for PM (sched 1)			
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	61	746	1457	58	13	52
Future Vol, veh/h	61	746	1457	58	13	52
Conflicting Peds, #/hr	1	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	40	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	24	0	0
Mvmt Flow	62	761	1487	59	13	53

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1547	0	-	0	2023	774
Stage 1	-	-	-	-	1518	-
Stage 2	-	-	-	-	505	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	434	-	-	-	52	346
Stage 1	-	-	-	-	171	-
Stage 2	-	-	-	-	577	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	434	-	-	-	44	346
Mov Cap-2 Maneuver	-	-	-	-	118	-
Stage 1	-	-	-	-	146	-
Stage 2	-	-	-	-	576	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	1.1	0	21.7
HCM LOS			C

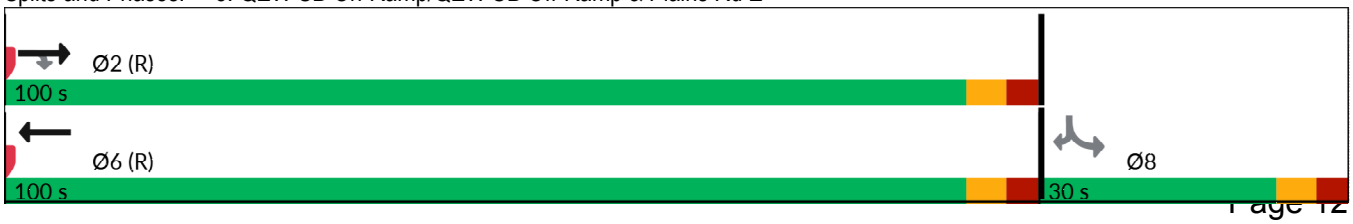
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	434	-	-	-	118	346
HCM Lane V/C Ratio	0.143	-	-	-	0.112	0.153
HCM Ctrl Dly (s/v)	14.7	-	-	-	39.3	17.3
HCM Lane LOS	B	-	-	-	E	C
HCM 95th %tile Q (veh)	0.5	-	-	-	0.4	0.5

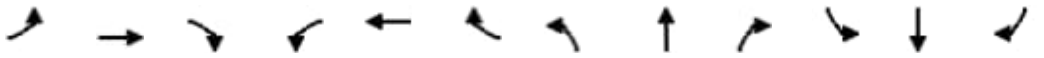
Lane Group	EBT	EBR	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	907	328	1479	442	236
Future Volume (vph)	907	328	1479	442	236
Lane Group Flow (vph)	945	342	1541	460	246
Turn Type	NA	Perm	NA	Perm	Perm
Protected Phases	2		6		
Permitted Phases		2		8	8
Detector Phase	2	2	6	8	8
Switch Phase					
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	41.0	41.0	41.0	30.0	30.0
Total Split (s)	100.0	100.0	100.0	30.0	30.0
Total Split (%)	76.9%	76.9%	76.9%	23.1%	23.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	C-Max	None	None
v/c Ratio	0.25	0.30	0.41	0.85	0.83
Control Delay (s/veh)	6.3	1.3	9.9	67.9	61.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	6.3	1.3	9.9	67.9	61.7
Queue Length 50th (m)	29.2	0.0	86.0	62.0	48.8
Queue Length 95th (m)	34.9	8.2	m101.4	#83.4	#91.2
Internal Link Dist (m)	279.6		287.3		
Turn Bay Length (m)		70.0			
Base Capacity (vph)	3718	1154	3718	572	311
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.25	0.30	0.41	0.80	0.79

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 31 (24%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Description: Pattern 2 for AM, 3 for PM
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: QEW SB On-Ramp/QEW SB Off-Ramp & Plains Rd E





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑					↰↰		↱
Traffic Volume (vph)	0	907	328	0	1479	0	0	0	0	442	0	236
Future Volume (vph)	0	907	328	0	1479	0	0	0	0	442	0	236
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)		7.0	7.0		7.0					7.0		7.0
Lane Util. Factor		0.91	1.00		0.91					0.97		1.00
Frpb, ped/bikes		1.00	0.97		1.00					1.00		0.98
Flpb, ped/bikes		1.00	1.00		1.00					1.00		1.00
Frt		1.00	0.85		1.00					1.00		0.85
Flt Protected		1.00	1.00		1.00					0.95		1.00
Satd. Flow (prot)		5129	1463		5129					3236		1479
Flt Permitted		1.00	1.00		1.00					0.95		1.00
Satd. Flow (perm)		5129	1463		5129					3236		1479
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	945	342	0	1541	0	0	0	0	460	0	246
RTOR Reduction (vph)	0	0	94	0	0	0	0	0	0	0	0	51
Lane Group Flow (vph)	0	945	248	0	1541	0	0	0	0	460	0	195
Confl. Peds. (#/hr)	2		5	5		2	4					4
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%
Turn Type		NA	Perm		NA					Perm		Perm
Protected Phases		2			6							
Permitted Phases			2							8		8
Actuated Green, G (s)		94.2	94.2		94.2					21.8		21.8
Effective Green, g (s)		94.2	94.2		94.2					21.8		21.8
Actuated g/C Ratio		0.72	0.72		0.72					0.17		0.17
Clearance Time (s)		7.0	7.0		7.0					7.0		7.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0		3.0
Lane Grp Cap (vph)		3716	1060		3716					542		248
v/s Ratio Prot		0.18			c0.30							
v/s Ratio Perm			0.17							c0.14		0.13
v/c Ratio		0.25	0.23		0.41					0.85		0.79
Uniform Delay, d1		6.0	5.9		7.0					52.5		51.9
Progression Factor		1.00	1.00		1.35					1.00		1.00
Incremental Delay, d2		0.2	0.5		0.1					11.8		15.1
Delay (s)		6.2	6.5		9.6					64.3		67.0
Level of Service		A	A		A					E		E
Approach Delay (s/veh)		6.3			9.6			0.0			65.2	
Approach LOS		A			A			A			E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	19.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	55.8%	ICU Level of Service	B
Analysis Period (min)	15		
Description: Pattern 2 for AM, 3 for PM			

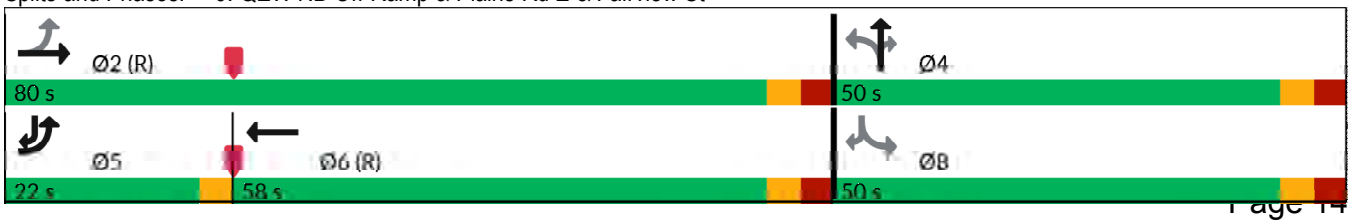
c Critical Lane Group

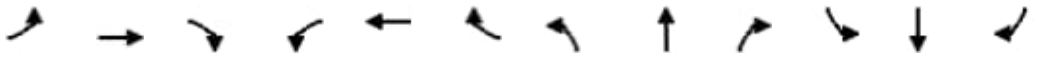
Lane Group	EBL	EBT	WBT	NBL	NBT	NBR	SBL	SBR
Lane Configurations								
Traffic Volume (vph)	266	1090	1905	195	243	290	44	752
Future Volume (vph)	266	1090	1905	195	243	290	44	752
Lane Group Flow (vph)	269	1101	1999	177	297	261	44	760
Turn Type	pm+pt	NA	NA	Perm	NA	Perm	Perm	pm+ov
Protected Phases	5	2	6		4			5
Permitted Phases	2			4		4	8	8
Detector Phase	5	2	6	4	4	4	8	8
Switch Phase								
Minimum Initial (s)	6.0	8.0	8.0	8.0	8.0	8.0	8.0	6.0
Minimum Split (s)	9.0	35.1	35.1	36.4	36.4	36.4	36.4	9.0
Total Split (s)	22.0	80.0	58.0	50.0	50.0	50.0	50.0	22.0
Total Split (%)	16.9%	61.5%	44.6%	38.5%	38.5%	38.5%	38.5%	16.9%
Yellow Time (s)	3.0	3.3	3.3	3.3	3.3	3.3	3.3	3.0
All-Red Time (s)	0.0	2.8	2.8	3.1	3.1	3.1	3.1	0.0
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	6.1	6.1	6.4	6.4	6.4	6.4	3.0
Lead/Lag	Lead		Lag					Lead
Lead-Lag Optimize?	Yes		Yes					Yes
Recall Mode	None	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.89	0.37	0.95	0.30	0.52	0.46	0.17	0.90
Control Delay (s/veh)	66.3	18.2	48.2	33.8	38.0	26.0	32.8	42.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	66.3	18.2	48.2	33.8	38.0	26.0	32.8	42.3
Queue Length 50th (m)	56.0	55.4	191.9	37.0	69.3	39.6	8.4	170.2
Queue Length 95th (m)	m#95.5	67.8	#230.3	58.3	101.7	67.6	18.5	#259.0
Internal Link Dist (m)		287.3	180.4		94.5			
Turn Bay Length (m)	35.0					50.0	80.0	
Base Capacity (vph)	321	2981	2106	581	573	568	257	844
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	0.84	0.37	0.95	0.30	0.52	0.46	0.17	0.90

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 119 (92%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated
Description: event plan 2 for AM, 3 for PM
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: QEW NB Off-Ramp & Plains Rd E & Fairview St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	266	1090	0	0	1905	74	195	243	290	44	0	752
Future Volume (vph)	266	1090	0	0	1905	74	195	243	290	44	0	752
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Total Lost time (s)	3.0	6.1			6.1		6.4	6.4	6.4	6.4		3.0
Lane Util. Factor	1.00	0.91			0.91		0.95	0.91	0.95	1.00		1.00
Frpb, ped/bikes	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
Frt	1.00	1.00			0.99		1.00	0.98	0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00	0.95		1.00
Satd. Flow (prot)	1789	5245			5127		1734	1698	1536	1825		1601
Flt Permitted	0.07	1.00			1.00		0.95	1.00	1.00	0.40		1.00
Satd. Flow (perm)	134	5245			5127		1734	1698	1536	766		1601
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	269	1101	0	0	1924	75	197	245	293	44	0	760
RTOR Reduction (vph)	0	0	0	0	3	0	0	3	53	0	0	14
Lane Group Flow (vph)	269	1101	0	0	1996	0	177	294	208	44	0	746
Confl. Peds. (#/hr)			7	7								
Heavy Vehicles (%)	2%	0%	0%	0%	0%	46%	0%	1%	1%	0%	0%	2%
Turn Type	pm+pt	NA			NA		Perm	NA	Perm	Perm		pm+ov
Protected Phases	5	2			6			4				5
Permitted Phases	2						4		4	8		8
Actuated Green, G (s)	73.9	73.9			53.4		43.6	43.6	43.6	43.6		61.1
Effective Green, g (s)	73.9	73.9			53.4		43.6	43.6	43.6	43.6		61.1
Actuated g/C Ratio	0.57	0.57			0.41		0.34	0.34	0.34	0.34		0.47
Clearance Time (s)	3.0	6.1			6.1		6.4	6.4	6.4	6.4		3.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	298	2981			2106		581	569	515	256		752
v/s Ratio Prot	0.12	0.21			c0.39							c0.13
v/s Ratio Perm	0.39						0.10	0.17	0.14	0.06		0.33
v/c Ratio	0.90	0.37			0.95		0.30	0.52	0.40	0.17		0.99
Uniform Delay, d1	40.7	15.3			37.0		32.0	34.7	33.2	30.5		34.2
Progression Factor	1.12	1.16			1.00		1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2	26.8	0.3			10.7		0.3	0.8	0.5	0.3		30.7
Delay (s)	72.4	18.1			47.6		32.3	35.5	33.7	30.8		65.0
Level of Service	E	B			D		C	D	C	C		E
Approach Delay (s/veh)		28.8			47.6			34.1			63.1	
Approach LOS		C			D			C			E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	42.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	113.5%	ICU Level of Service	H
Analysis Period (min)	15		
Description: event plan 2 for AM, 3 for PM			

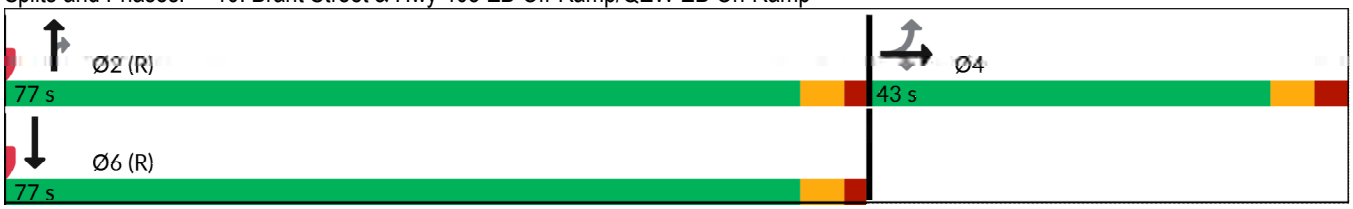
c Critical Lane Group

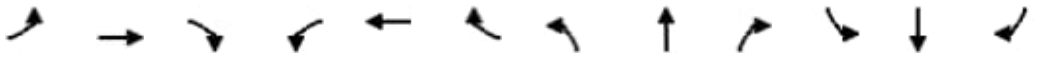
Lane Group	EBL	EBT	EBR	NBT	NBR	SBT
Lane Configurations						
Traffic Volume (vph)	203	0	187	1501	458	1396
Future Volume (vph)	203	0	187	1501	458	1396
Lane Group Flow (vph)	141	136	129	1564	477	1454
Turn Type	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		2		6
Permitted Phases	4		4		2	
Detector Phase	4	4	4	2	2	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	37.0	37.0	37.0	28.0	28.0	28.0
Total Split (s)	43.0	43.0	43.0	77.0	77.0	77.0
Total Split (%)	35.8%	35.8%	35.8%	64.2%	64.2%	64.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	C-Max	C-Max	C-Max
v/c Ratio	0.67	0.57	0.57	0.41	0.40	0.38
Control Delay (s/veh)	64.4	42.9	42.6	6.0	1.5	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	64.4	42.9	42.6	6.0	1.5	7.1
Queue Length 50th (m)	35.4	24.8	22.0	43.4	0.0	35.0
Queue Length 95th (m)	55.6	45.6	41.6	64.3	9.6	85.7
Internal Link Dist (m)		230.7		394.1		264.9
Turn Bay Length (m)					80.0	
Base Capacity (vph)	457	474	446	3793	1200	3793
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.29	0.29	0.41	0.40	0.38

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 49 (41%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Description: from project 24223.
pattern 2 for AM, 3 for PM (sched 1)

Splits and Phases: 10: Brant Street & Hwy 403 EB Off-Ramp/QEW EB On-Ramp





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	203	0	187	0	0	0	0	1501	458	0	1396	0
Future Volume (vph)	203	0	187	0	0	0	0	1501	458	0	1396	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)	7.0	7.0	7.0					6.0	6.0		6.0	
Lane Util. Factor	0.95	0.91	0.95					0.91	1.00		0.91	
Frpb, ped/bikes	1.00	0.99	0.99					1.00	0.97		1.00	
Flpb, ped/bikes	1.00	1.00	1.00					1.00	1.00		1.00	
Frt	1.00	0.93	0.85					1.00	0.85		1.00	
Flt Protected	0.95	0.97	1.00					1.00	1.00		1.00	
Satd. Flow (prot)	1524	1489	1397					5029	1436		5029	
Flt Permitted	0.95	0.97	1.00					1.00	1.00		1.00	
Satd. Flow (perm)	1524	1489	1397					5029	1436		5029	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	211	0	195	0	0	0	0	1564	477	0	1454	0
RTOR Reduction (vph)	0	34	34	0	0	0	0	0	117	0	0	0
Lane Group Flow (vph)	141	102	95	0	0	0	0	1564	360	0	1454	0
Confl. Peds. (#/hr)			2	2			7		3	3		7
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	5%	0%	1%	0%	0%	0%	0%	2%	2%	0%	2%	0%
Turn Type	Perm	NA	Perm					NA	Perm		NA	
Protected Phases		4						2			6	
Permitted Phases	4		4						2			
Actuated Green, G (s)	16.5	16.5	16.5					90.5	90.5		90.5	
Effective Green, g (s)	16.5	16.5	16.5					90.5	90.5		90.5	
Actuated g/C Ratio	0.14	0.14	0.14					0.75	0.75		0.75	
Clearance Time (s)	7.0	7.0	7.0					6.0	6.0		6.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0	3.0		3.0	
Lane Grp Cap (vph)	209	204	192					3792	1082		3792	
v/s Ratio Prot								c0.31			0.29	
v/s Ratio Perm	c0.09	0.07	0.07						0.25			
v/c Ratio	0.67	0.50	0.50					0.41	0.33		0.38	
Uniform Delay, d1	49.2	47.9	47.9					5.3	4.8		5.1	
Progression Factor	1.00	1.00	1.00					1.00	1.00		1.24	
Incremental Delay, d2	8.3	1.9	2.0					0.3	0.8		0.3	
Delay (s)	57.5	49.9	49.9					5.6	5.7		6.6	
Level of Service	E	D	D					A	A		A	
Approach Delay (s/veh)		52.5			0.0			5.6			6.6	
Approach LOS		D			A			A			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	10.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	48.5%	ICU Level of Service	A
Analysis Period (min)	15		
Description: from project 24223.			
pattern 2 for AM, 3 for PM (sched 1)			

c Critical Lane Group

APPENDIX G

Future Total Intersection Capacity Analysis

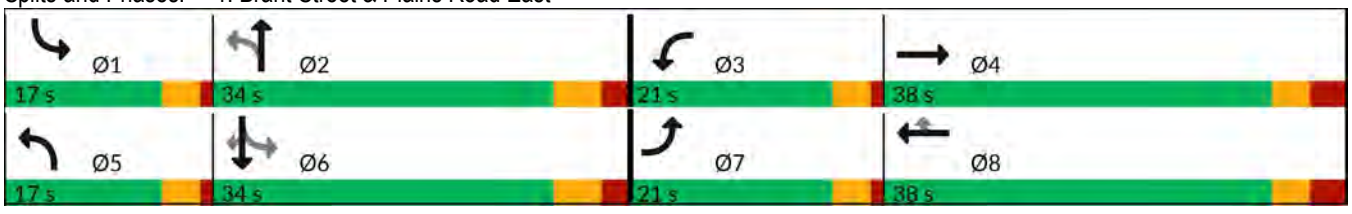
Future Total (2031) Horizon

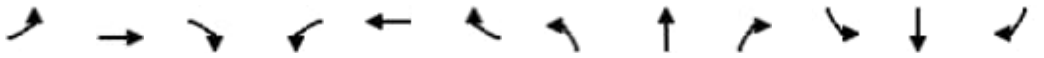
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	431	314	62	181	73	36	666	155	863	461
Future Volume (vph)	431	314	62	181	73	36	666	155	863	461
Lane Group Flow (vph)	444	372	64	187	75	37	822	160	890	475
Turn Type	Prot	NA	Prot	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8	2		6		6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	7.0	8.0	7.0	8.0	8.0	7.0	8.0	7.0	8.0	8.0
Minimum Split (s)	11.0	38.0	11.0	38.0	38.0	11.0	33.0	11.0	33.0	33.0
Total Split (s)	21.0	38.0	21.0	38.0	38.0	17.0	34.0	17.0	34.0	34.0
Total Split (%)	19.1%	34.5%	19.1%	34.5%	34.5%	15.5%	30.9%	15.5%	30.9%	30.9%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	3.0	1.0	3.0	3.0	1.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	6.0	4.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	Max	None	Max	Max
v/c Ratio	0.79	0.73	0.38	0.31	0.23	0.12	0.56	0.48	0.45	0.60
Control Delay (s/veh)	48.9	39.7	48.0	33.8	4.1	16.1	28.7	20.4	23.9	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	48.9	39.7	48.0	33.8	4.1	16.1	28.7	20.4	23.9	9.7
Queue Length 50th (m)	40.7	63.2	11.4	16.1	0.0	3.5	44.6	16.2	47.6	11.7
Queue Length 95th (m)	#77.0	103.7	26.6	26.3	5.4	10.7	70.5	35.3	73.9	52.7
Internal Link Dist (m)		240.4		173.9			422.3		394.1	
Turn Bay Length (m)	65.0		60.0		75.0	60.0		55.0		40.0
Base Capacity (vph)	589	635	309	1188	547	415	1467	367	1974	794
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.59	0.21	0.16	0.14	0.09	0.56	0.44	0.45	0.60

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 91.9
Natural Cycle: 95
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Brant Street & Plains Road East





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	431	314	47	62	181	73	36	666	131	155	863	461
Future Volume (vph)	431	314	47	62	181	73	36	666	131	155	863	461
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	0.97	1.00		1.00	0.95	1.00	1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3143	1789		1652	3368	1351	1684	4676		1635	4980	1422
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.30	1.00		0.22	1.00	1.00
Satd. Flow (perm)	3143	1789		1652	3368	1351	536	4676		386	4980	1422
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	444	324	48	64	187	75	37	687	135	160	890	475
RTOR Reduction (vph)	0	5	0	0	0	61	0	25	0	0	0	236
Lane Group Flow (vph)	444	367	0	64	187	14	37	797	0	160	890	239
Confl. Peds. (#/hr)	2					2	4		5	5		4
Confl. Bikes (#/hr)									1			5
Heavy Vehicles (%)	4%	3%	3%	2%	6%	10%	0%	7%	5%	3%	3%	4%
Turn Type	Prot	NA		Prot	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8	2			6		6
Actuated Green, G (s)	16.5	26.1		7.7	17.3	17.3	34.3	30.1		44.6	36.4	36.4
Effective Green, g (s)	16.5	26.1		7.7	17.3	17.3	34.3	30.1		44.6	36.4	36.4
Actuated g/C Ratio	0.17	0.28		0.08	0.18	0.18	0.36	0.32		0.47	0.39	0.39
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	549	494		134	617	247	245	1490		321	1920	548
v/s Ratio Prot	c0.14	c0.21		0.04	0.06		0.01	0.17		c0.06	0.18	
v/s Ratio Perm						0.01	0.05			c0.18		0.17
v/c Ratio	0.81	0.74		0.48	0.30	0.06	0.15	0.54		0.50	0.46	0.44
Uniform Delay, d1	37.4	31.1		41.4	33.3	31.8	19.6	26.4		15.4	21.7	21.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	8.6	6.0		2.7	0.3	0.1	0.3	1.4		1.2	0.8	2.5
Delay (s)	46.0	37.1		44.1	33.6	31.9	19.9	27.8		16.7	22.5	23.9
Level of Service	D	D		D	C	C	B	C		B	C	C
Approach Delay (s/veh)		41.9			35.3			27.4			22.3	
Approach LOS		D			D			C			C	

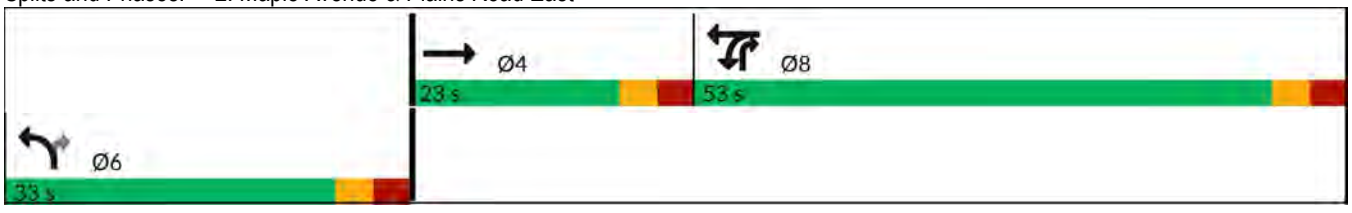
Intersection Summary			
HCM 2000 Control Delay (s/veh)	29.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	94.4	Sum of lost time (s)	20.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	377	252	424	16	330
Future Volume (vph)	377	252	424	16	330
Lane Group Flow (vph)	439	263	442	17	344
Turn Type	NA	Split	NA	Prot	pm+ov
Protected Phases	4	8	8	6	8
Permitted Phases					6
Detector Phase	4	8	8	6	8
Switch Phase					
Minimum Initial (s)	8.0	8.0	8.0	7.0	8.0
Minimum Split (s)	14.0	33.0	33.0	33.0	33.0
Total Split (s)	23.0	53.0	53.0	33.0	53.0
Total Split (%)	21.1%	48.6%	48.6%	30.3%	48.6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	Max	None	None	None	None
v/c Ratio	0.38	0.24	0.66	0.07	0.57
Control Delay (s/veh)	16.1	11.8	19.0	25.1	13.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	16.1	11.8	19.0	25.1	13.4
Queue Length 50th (m)	13.5	7.5	29.8	1.3	20.0
Queue Length 95th (m)	44.1	19.5	75.8	8.1	35.8
Internal Link Dist (m)	259.0		484.0	228.5	
Turn Bay Length (m)		85.0			
Base Capacity (vph)	1166	2799	1672	936	1319
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.38	0.09	0.26	0.02	0.26

Intersection Summary
Cycle Length: 109
Actuated Cycle Length: 50.8
Natural Cycle: 80
Control Type: Semi Act-Uncoord
Description: STP from video

Splits and Phases: 2: Maple Avenue & Plains Road East



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	377	44	252	424	16	330
Future Volume (vph)	377	44	252	424	16	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.0	3.0	3.5	3.0	3.0
Total Lost time (s)	6.0		6.0	6.0	6.0	6.0
Lane Util. Factor	0.95		0.97	1.00	1.00	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3317		3054	1824	1685	1436
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3317		3054	1824	1685	1436
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	393	46	262	442	17	344
RTOR Reduction (vph)	7	0	0	0	0	23
Lane Group Flow (vph)	432	0	263	442	17	321
Heavy Vehicles (%)	5%	14%	7%	3%	0%	5%
Turn Type	NA		Split	NA	Prot	pm+ov
Protected Phases	4		8	8	6	8
Permitted Phases						6
Actuated Green, G (s)	17.8		18.6	18.6	1.1	19.7
Effective Green, g (s)	17.8		18.6	18.6	1.1	19.7
Actuated g/C Ratio	0.32		0.34	0.34	0.02	0.35
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1063		1023	611	33	664
v/s Ratio Prot	c0.13		0.09	c0.24	0.01	c0.16
v/s Ratio Perm						0.06
v/c Ratio	0.41		0.26	0.72	0.52	0.48
Uniform Delay, d1	14.7		13.4	16.2	26.9	13.9
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	1.2		0.1	4.2	12.9	0.6
Delay (s)	15.9		13.6	20.4	39.8	14.5
Level of Service	B		B	C	D	B
Approach Delay (s/veh)	15.9			17.9	15.7	
Approach LOS	B			B	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	16.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	55.5	Sum of lost time (s)	18.0
Intersection Capacity Utilization	42.3%	ICU Level of Service	A
Analysis Period (min)	15		
Description: STP from video			
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	681	13	26	616	6	13	0	53	4	0	11
Future Vol, veh/h	10	681	13	26	616	6	13	0	53	4	0	11
Conflicting Peds, #/hr	18	0	4	4	0	18	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	15	-	-	15	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	5	0	0	4	0	0	0	0	0	0	0
Mvmt Flow	11	717	14	27	648	6	14	0	56	4	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	672	0	0	735	0	0	1128	1476	370	1104	1480	345
Stage 1	-	-	-	-	-	-	750	750	-	723	723	-
Stage 2	-	-	-	-	-	-	378	726	-	381	757	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	928	-	-	879	-	-	162	127	633	168	127	657
Stage 1	-	-	-	-	-	-	374	422	-	388	434	-
Stage 2	-	-	-	-	-	-	621	433	-	619	419	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	915	-	-	876	-	-	153	120	631	146	120	648
Mov Cap-2 Maneuver	-	-	-	-	-	-	153	120	-	146	120	-
Stage 1	-	-	-	-	-	-	368	416	-	378	414	-
Stage 2	-	-	-	-	-	-	591	414	-	557	413	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.1	0.4	16.2	16.2
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	391	915	-	-	876	-	-	338
HCM Lane V/C Ratio	0.178	0.012	-	-	0.031	-	-	0.047
HCM Ctrl Dly (s/v)	16.2	9	-	-	9.2	-	-	16.2
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q (veh)	0.6	0	-	-	0.1	-	-	0.1

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	702	0	0	643	0	0	0	0	0	0	0
Future Vol, veh/h	0	702	0	0	643	0	0	0	0	0	0	0
Conflicting Peds, #/hr	9	0	3	3	0	9	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	15	-	-	15	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	5	0	0	4	0	0	0	0	0	0	0
Mvmt Flow	0	747	0	0	684	0	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	693	0	0	750	0	0	1092	1443	377	1067	1443	351
Stage 1	-	-	-	-	-	-	750	750	-	693	693	-
Stage 2	-	-	-	-	-	-	342	693	-	374	750	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	912	-	-	868	-	-	172	133	626	179	133	651
Stage 1	-	-	-	-	-	-	374	422	-	405	448	-
Stage 2	-	-	-	-	-	-	652	448	-	624	422	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	906	-	-	866	-	-	172	132	625	178	132	646
Mov Cap-2 Maneuver	-	-	-	-	-	-	172	132	-	178	132	-
Stage 1	-	-	-	-	-	-	373	421	-	402	445	-
Stage 2	-	-	-	-	-	-	652	445	-	624	421	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	0	0
HCM LOS			A	A

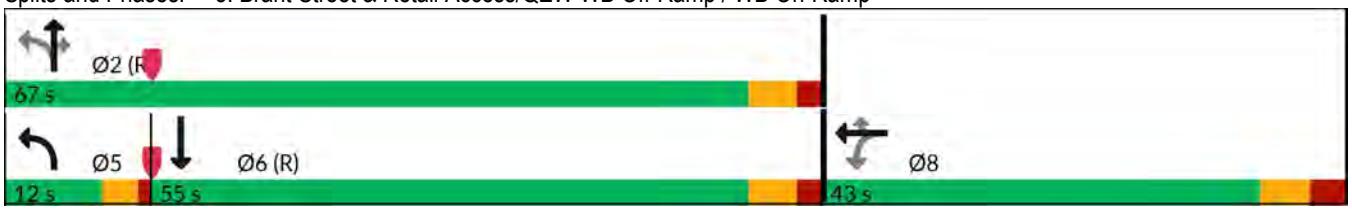
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	906	-	-	866	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Ctrl Dly (s/v)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q (veh)	-	0	-	-	0	-	-	-

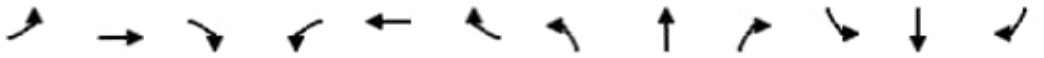
Lane Group	WBL	WBT	WBR	NBL	NBT	NBR	SBT
Lane Configurations							
Traffic Volume (vph)	336	14	347	28	817	195	1476
Future Volume (vph)	336	14	347	28	817	195	1476
Lane Group Flow (vph)	199	199	394	32	928	222	1678
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	NA
Protected Phases		8		5	2		6
Permitted Phases	8		8	2		2	
Detector Phase	8	8	8	5	2	2	6
Switch Phase							
Minimum Initial (s)	8.0	8.0	8.0	7.0	8.0	8.0	8.0
Minimum Split (s)	37.0	37.0	37.0	11.5	28.0	28.0	28.0
Total Split (s)	43.0	43.0	43.0	12.0	67.0	67.0	55.0
Total Split (%)	39.1%	39.1%	39.1%	10.9%	60.9%	60.9%	50.0%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	4.0	6.0	6.0	6.0
Lead/Lag				Lead			Lag
Lead-Lag Optimize?				Yes			Yes
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max
v/c Ratio	0.53	0.50	0.87	0.17	0.29	0.22	0.59
Control Delay (s/veh)	39.8	38.6	46.0	16.0	15.4	7.6	18.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	39.8	38.6	46.0	16.0	15.4	7.6	18.6
Queue Length 50th (m)	40.5	40.2	60.9	3.5	44.4	0.3	95.6
Queue Length 95th (m)	57.5	56.8	88.1	9.6	60.2	24.1	127.2
Internal Link Dist (m)		133.1			264.9		193.7
Turn Bay Length (m)				60.0		130.0	
Base Capacity (vph)	494	523	563	203	3191	989	2854
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.38	0.70	0.16	0.29	0.22	0.59

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 100 (91%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Description: action plan 2 for am, 3 for pm

Splits and Phases: 5: Brant Street & Retail Access/QEW WB Off-Ramp / WB On-Ramp





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	336	14	347	28	817	195	0	1476	1
Future Volume (vph)	0	0	0	336	14	347	28	817	195	0	1476	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)				7.0	7.0	7.0	4.0	6.0	6.0		6.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.91	1.00		0.91	
Frpb, ped/bikes				1.00	1.00	1.00	1.00	1.00	0.98		1.00	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00	1.00		1.00	
Frt				1.00	1.00	0.85	1.00	1.00	0.85		1.00	
Flt Protected				0.95	0.96	1.00	0.95	1.00	1.00		1.00	
Satd. Flow (prot)				1510	1600	1478	1620	5029	1431		4980	
Flt Permitted				0.95	0.96	1.00	0.09	1.00	1.00		1.00	
Satd. Flow (perm)				1510	1600	1478	148	5029	1431		4980	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	0	0	0	382	16	394	32	928	222	0	1677	1
RTOR Reduction (vph)	0	0	0	0	0	90	0	0	81	0	0	0
Lane Group Flow (vph)	0	0	0	199	199	304	32	928	141	0	1678	0
Confl. Peds. (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	6%	14%	2%	4%	2%	3%	0%	3%	0%
Turn Type				Perm	NA	Perm	pm+pt	NA	Perm		NA	
Protected Phases					8		5	2			6	
Permitted Phases				8		8	2		2			
Actuated Green, G (s)				27.2	27.2	27.2	69.8	69.8	69.8		61.5	
Effective Green, g (s)				27.2	27.2	27.2	69.8	69.8	69.8		61.5	
Actuated g/C Ratio				0.25	0.25	0.25	0.63	0.63	0.63		0.56	
Clearance Time (s)				7.0	7.0	7.0	4.0	6.0	6.0		6.0	
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)				373	395	365	151	3191	908		2784	
v/s Ratio Prot							0.01	c0.18			c0.34	
v/s Ratio Perm				0.13	0.12	c0.21	0.13		0.10			
v/c Ratio				0.53	0.50	0.83	0.21	0.29	0.16		0.60	
Uniform Delay, d1				35.9	35.6	39.3	10.3	9.0	8.1		16.1	
Progression Factor				1.00	1.00	1.00	1.58	1.52	4.48		1.00	
Incremental Delay, d2				1.5	1.0	15.0	0.7	0.2	0.4		1.0	
Delay (s)				37.4	36.6	54.3	17.0	13.9	36.9		17.1	
Level of Service				D	D	D	B	B	D		B	
Approach Delay (s/veh)		0.0			45.6			18.3			17.1	
Approach LOS		A			D			B			B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	23.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	50.7%	ICU Level of Service	A
Analysis Period (min)	15		
Description: action plan 2 for am, 3 for pm			

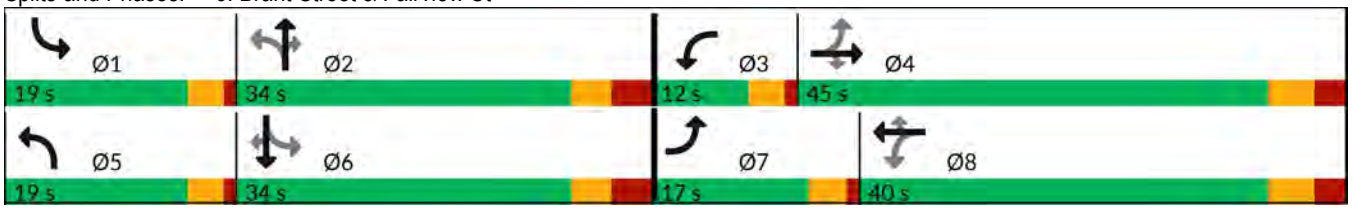
c Critical Lane Group

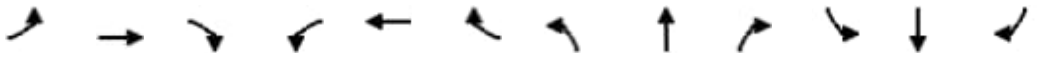
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	692	177	137	315	150	162	597	174	166	598	41
Future Volume (vph)	250	692	177	137	315	150	162	597	174	166	598	41
Lane Group Flow (vph)	253	699	179	138	318	152	164	603	176	168	604	41
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	8.0	8.0	7.0	8.0	8.0	7.0	8.0	8.0	7.0	8.0	8.0
Minimum Split (s)	12.0	31.4	31.4	12.0	31.4	31.4	12.0	31.5	31.5	12.0	31.5	31.5
Total Split (s)	17.0	45.0	45.0	12.0	40.0	40.0	19.0	34.0	34.0	19.0	34.0	34.0
Total Split (%)	15.5%	40.9%	40.9%	10.9%	36.4%	36.4%	17.3%	30.9%	30.9%	17.3%	30.9%	30.9%
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.3	3.3	3.0	3.3	3.3
All-Red Time (s)	1.0	2.7	2.7	1.0	2.7	2.7	1.0	3.2	3.2	1.0	3.2	3.2
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)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.5	6.5	4.0	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
v/c Ratio	0.53	0.72	0.34	0.51	0.42	0.35	0.48	0.71	0.38	0.50	0.71	0.10
Control Delay (s/veh)	20.7	32.7	6.0	23.2	30.5	7.5	20.2	35.6	7.3	20.9	35.6	0.4
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 (s/veh)	20.7	32.7	6.0	23.2	30.5	7.5	20.2	35.6	7.3	20.9	35.6	0.4
Queue Length 50th (m)	26.7	55.9	0.0	13.5	24.5	0.0	16.2	48.8	0.0	16.7	49.1	0.0
Queue Length 95th (m)	53.5	87.3	15.3	29.9	41.8	15.1	33.9	79.8	16.6	34.8	79.8	0.0
Internal Link Dist (m)		607.3			241.7			325.5			422.3	
Turn Bay Length (m)	300.0		140.0	60.0		100.0	84.0		70.0	45.0		60.0
Base Capacity (vph)	491	1634	772	278	1356	649	417	1187	587	411	1199	546
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.43	0.23	0.50	0.23	0.23	0.39	0.51	0.30	0.41	0.50	0.08

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 84.4
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Description: pattern 2 for AM, 3 for PM (sched 1)

Splits and Phases: 6: Brant Street & Fairview St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	692	177	137	315	150	162	597	174	166	598	41
Future Volume (vph)	250	692	177	137	315	150	162	597	174	166	598	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.5	6.5	4.0	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.98
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	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1634	3466	1440	1574	3305	1362	1635	3535	1413	1601	3570	1326
Flt Permitted	0.46	1.00	1.00	0.29	1.00	1.00	0.27	1.00	1.00	0.28	1.00	1.00
Satd. Flow (perm)	789	3466	1440	483	3305	1362	462	3535	1413	467	3570	1326
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	253	699	179	138	318	152	164	603	176	168	604	41
RTOR Reduction (vph)	0	0	128	0	0	117	0	0	134	0	0	31
Lane Group Flow (vph)	253	699	51	138	318	35	164	603	42	168	604	10
Confl. Peds. (#/hr)	3		4	4		3	3		22	22		3
Heavy Vehicles (%)	3%	3%	3%	7%	8%	9%	3%	1%	3%	5%	0%	12%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	35.7	23.7	23.7	27.4	19.4	19.4	31.4	20.2	20.2	31.0	20.0	20.0
Effective Green, g (s)	35.7	23.7	23.7	27.4	19.4	19.4	31.4	20.2	20.2	31.0	20.0	20.0
Actuated g/C Ratio	0.43	0.28	0.28	0.33	0.23	0.23	0.37	0.24	0.24	0.37	0.24	0.24
Clearance Time (s)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.5	6.5	4.0	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)	460	980	407	262	765	315	329	852	340	321	852	316
v/s Ratio Prot	c0.08	c0.20		0.05	0.10		0.07	c0.17		c0.07	0.17	
v/s Ratio Perm	0.15		0.04	0.12		0.03	0.12		0.03	0.12		0.01
v/c Ratio	0.55	0.71	0.12	0.53	0.42	0.11	0.50	0.71	0.12	0.52	0.71	0.03
Uniform Delay, d1	16.5	27.0	22.3	21.0	27.4	25.4	18.6	29.1	24.9	19.0	29.2	24.5
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	1.4	2.5	0.1	1.9	0.4	0.2	1.2	2.7	0.2	1.5	2.7	0.0
Delay (s)	17.9	29.5	22.5	22.9	27.7	25.6	19.8	31.8	25.0	20.5	32.0	24.5
Level of Service	B	C	C	C	C	C	B	C	C	C	C	C
Approach Delay (s/veh)		25.8			26.1			28.5			29.2	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	27.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	83.8	Sum of lost time (s)	20.9
Intersection Capacity Utilization	71.8%	ICU Level of Service	C
Analysis Period (min)	15		
Description: pattern 2 for AM, 3 for PM (sched 1)			

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	24	654	594	29	20	44
Future Vol, veh/h	24	654	594	29	20	44
Conflicting Peds, #/hr	1	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	40	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	3	4	4	0	3
Mvmt Flow	28	769	699	34	24	52

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	734	0	-	0	1158	368
Stage 1	-	-	-	-	717	-
Stage 2	-	-	-	-	441	-
Critical Hdwy	4.1	-	-	-	6.8	6.96
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.33
Pot Cap-1 Maneuver	880	-	-	-	192	626
Stage 1	-	-	-	-	450	-
Stage 2	-	-	-	-	622	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	879	-	-	-	185	626
Mov Cap-2 Maneuver	-	-	-	-	314	-
Stage 1	-	-	-	-	435	-
Stage 2	-	-	-	-	621	-

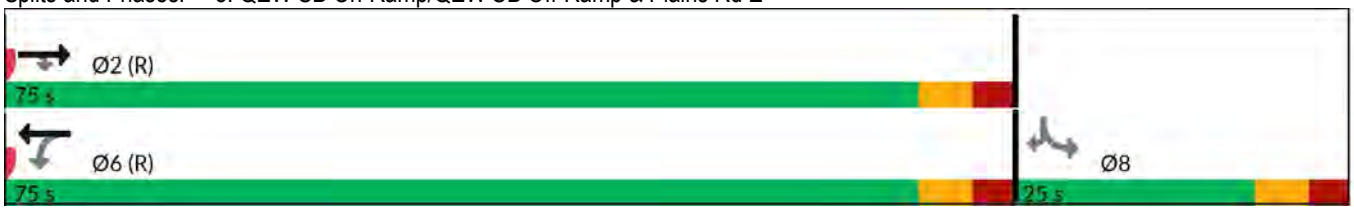
Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.3	0	13.2
HCM LOS			B

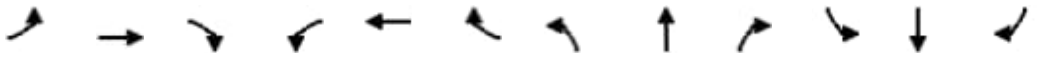
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	879	-	-	-	314	626
HCM Lane V/C Ratio	0.032	-	-	-	0.075	0.083
HCM Ctrl Dly (s/v)	9.2	-	-	-	17.4	11.3
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q (veh)	0.1	-	-	-	0.2	0.3

Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	963	196	5	689	195	79
Future Volume (vph)	963	196	5	689	195	79
Lane Group Flow (vph)	1070	218	0	772	217	88
Turn Type	NA	Perm	Perm	NA	Perm	Perm
Protected Phases	2			6		
Permitted Phases		2	6		8	8
Detector Phase	2	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	41.0	41.0	41.0	41.0	25.0	25.0
Total Split (s)	75.0	75.0	75.0	75.0	25.0	25.0
Total Split (%)	75.0%	75.0%	75.0%	75.0%	25.0%	25.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0		7.0	7.0	7.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
v/c Ratio	0.29	0.19		0.23	0.57	0.35
Control Delay (s/veh)	4.8	1.1		4.5	46.9	12.4
Queue Delay	0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	4.8	1.1		4.5	46.9	12.4
Queue Length 50th (m)	22.3	0.0		15.2	21.8	0.0
Queue Length 95th (m)	32.3	6.3		22.8	32.6	13.8
Internal Link Dist (m)	279.6			287.3		
Turn Bay Length (m)		70.0				
Base Capacity (vph)	3711	1136		3389	565	335
Starvation Cap Reductn	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0
Reduced v/c Ratio	0.29	0.19		0.23	0.38	0.26

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 31 (31%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Description: Pattern 2 for AM, 3 for PM

Splits and Phases: 8: QEW SB On-Ramp/QEW SB Off-Ramp & Plains Rd E





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	963	196	5	689	0	0	0	0	195	0	79
Future Volume (vph)	0	963	196	5	689	0	0	0	0	195	0	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)		7.0	7.0		7.0					7.0		7.0
Lane Util. Factor		0.91	1.00		0.91					0.97		1.00
Frpb, ped/bikes		1.00	1.00		1.00					1.00		1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00		1.00
Frt		1.00	0.85		1.00					1.00		0.85
Flt Protected		1.00	1.00		1.00					0.95		1.00
Satd. Flow (prot)		5029	1463		4932					3143		1463
Flt Permitted		1.00	1.00		0.93					0.95		1.00
Satd. Flow (perm)		5029	1463		4595					3143		1463
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)	0	1070	218	6	766	0	0	0	0	217	0	88
RTOR Reduction (vph)	0	0	57	0	0	0	0	0	0	0	0	77
Lane Group Flow (vph)	0	1070	161	0	772	0	0	0	0	217	0	11
Confl. Peds. (#/hr)	3					3						
Heavy Vehicles (%)	0%	2%	3%	0%	4%	0%	0%	0%	0%	4%	0%	3%
Turn Type		NA	Perm	Perm	NA					Perm		Perm
Protected Phases		2			6							
Permitted Phases			2	6						8		8
Actuated Green, G (s)		73.8	73.8		73.8					12.2		12.2
Effective Green, g (s)		73.8	73.8		73.8					12.2		12.2
Actuated g/C Ratio		0.74	0.74		0.74					0.12		0.12
Clearance Time (s)		7.0	7.0		7.0					7.0		7.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0		3.0
Lane Grp Cap (vph)		3711	1079		3391					383		178
v/s Ratio Prot		c0.21										
v/s Ratio Perm			0.11		0.17					c0.07		0.01
v/c Ratio		0.29	0.15		0.23					0.57		0.06
Uniform Delay, d1		4.4	3.9		4.1					41.4		38.8
Progression Factor		1.00	1.00		1.00					1.00		1.00
Incremental Delay, d2		0.2	0.3		0.2					1.9		0.1
Delay (s)		4.6	4.1		4.3					43.3		39.0
Level of Service		A	A		A					D		D
Approach Delay (s/veh)		4.5			4.3			0.0			42.1	
Approach LOS		A			A			A			D	

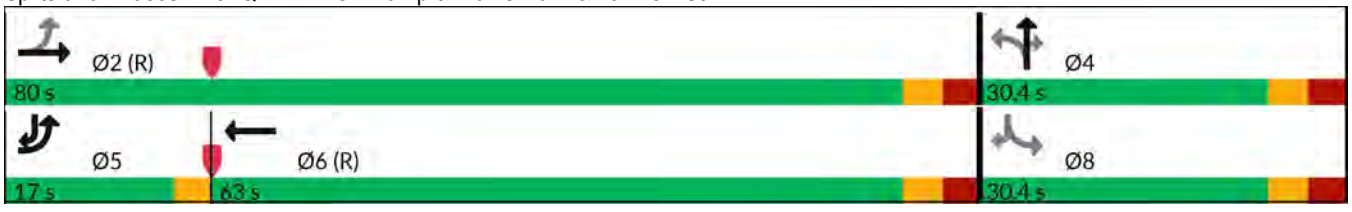
Intersection Summary			
HCM 2000 Control Delay (s/veh)	9.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		
Description: Pattern 2 for AM, 3 for PM			

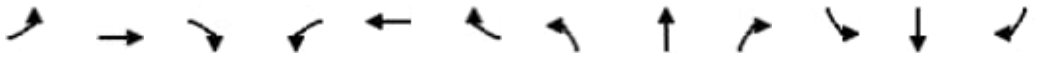
c Critical Lane Group

Lane Group	EBL	EBT	WBT	NBL	NBT	NBR	SBL	SBR
Lane Configurations								
Traffic Volume (vph)	188	863	649	89	204	331	49	527
Future Volume (vph)	188	863	649	89	204	331	49	527
Lane Group Flow (vph)	200	918	708	85	308	271	52	561
Turn Type	pm+pt	NA	NA	Perm	NA	Perm	Perm	pm+ov
Protected Phases	5	2	6		4			5
Permitted Phases	2			4		4	8	8
Detector Phase	5	2	6	4	4	4	8	5
Switch Phase								
Minimum Initial (s)	6.0	8.0	8.0	8.0	8.0	8.0	8.0	6.0
Minimum Split (s)	9.0	35.1	35.1	30.4	30.4	30.4	30.4	9.0
Total Split (s)	17.0	80.0	63.0	30.4	30.4	30.4	30.4	17.0
Total Split (%)	15.4%	72.5%	57.1%	27.5%	27.5%	27.5%	27.5%	15.4%
Yellow Time (s)	3.0	3.3	3.3	3.3	3.3	3.3	3.3	3.0
All-Red Time (s)	0.0	2.8	2.8	3.1	3.1	3.1	3.1	0.0
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	6.1	6.1	6.4	6.4	6.4	6.4	3.0
Lead/Lag	Lead		Lag					Lead
Lead-Lag Optimize?	Yes		Yes					Yes
Recall Mode	None	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.37	0.27	0.27	0.21	0.78	0.55	0.42	0.79
Control Delay (s/veh)	9.3	9.0	15.9	33.4	50.7	16.2	44.9	26.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	9.3	9.0	15.9	33.4	50.7	16.2	44.9	26.7
Queue Length 50th (m)	14.7	29.5	30.1	16.4	68.7	17.7	10.1	77.2
Queue Length 95th (m)	29.5	44.5	48.9	28.3	95.8	41.6	21.5	100.4
Internal Link Dist (m)		287.3	180.4		94.5			
Turn Bay Length (m)	35.0					50.0	80.0	
Base Capacity (vph)	580	3512	2793	422	419	512	130	757
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	0.34	0.26	0.25	0.20	0.74	0.53	0.40	0.74

Intersection Summary
Cycle Length: 110.4
Actuated Cycle Length: 110.4
Offset: 97 (88%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Description: event plan 2 for AM, 3 for PM

Splits and Phases: 9: QEW NB Off-Ramp & Plains Rd E & Fairview St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	188	863	0	0	649	17	89	204	331	49	0	527
Future Volume (vph)	188	863	0	0	649	17	89	204	331	49	0	527
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Total Lost time (s)	3.0	6.1			6.1		6.4	6.4	6.4	6.4		3.0
Lane Util. Factor	1.00	0.91			0.91		0.95	0.91	0.95	1.00		1.00
Frpb, ped/bikes	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
Frt	1.00	1.00			1.00		1.00	0.96	0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00	0.95		1.00
Satd. Flow (prot)	1789	5142			5026		1700	1644	1521	1825		1541
Flt Permitted	0.34	1.00			1.00		0.95	1.00	1.00	0.27		1.00
Satd. Flow (perm)	634	5142			5026		1700	1644	1521	526		1541
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)	200	918	0	0	690	18	95	217	352	52	0	561
RTOR Reduction (vph)	0	0	0	0	2	0	0	11	138	0	0	125
Lane Group Flow (vph)	200	918	0	0	706	0	85	297	133	52	0	436
Confl. Peds. (#/hr)	2					2						
Heavy Vehicles (%)	2%	2%	0%	0%	4%	0%	2%	2%	2%	0%	0%	6%
Turn Type	pm+pt	NA			NA		Perm	NA	Perm	Perm		pm+ov
Protected Phases	5	2			6			4				5
Permitted Phases	2						4		4	8		8
Actuated Green, G (s)	72.0	72.0			58.3		25.9	25.9	25.9	25.9		36.6
Effective Green, g (s)	72.0	72.0			58.3		25.9	25.9	25.9	25.9		36.6
Actuated g/C Ratio	0.65	0.65			0.53		0.23	0.23	0.23	0.23		0.33
Clearance Time (s)	3.0	6.1			6.1		6.4	6.4	6.4	6.4		3.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	525	3353			2654		398	385	356	123		510
v/s Ratio Prot	0.04	0.18			0.14							c0.08
v/s Ratio Perm	c0.21						0.05	0.18	0.09	0.10		0.20
v/c Ratio	0.38	0.27			0.27		0.21	0.77	0.37	0.42		0.85
Uniform Delay, d1	7.7	8.1			14.3		34.0	39.5	35.5	35.9		34.4
Progression Factor	1.00	1.00			1.00		1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2	0.5	0.2			0.2		0.3	9.2	0.7	2.3		13.2
Delay (s)	8.2	8.3			14.5		34.3	48.7	36.1	38.2		47.6
Level of Service	A	A			B		C	D	D	D		D
Approach Delay (s/veh)		8.3			14.5			41.7			46.8	
Approach LOS		A			B			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	24.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	110.4	Sum of lost time (s)	15.5
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		

Description: event plan 2 for AM, 3 for PM

c Critical Lane Group

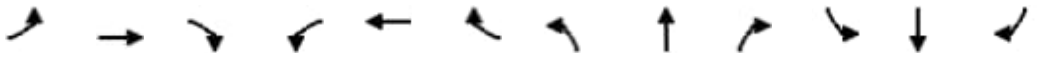
Lane Group	EBL	EBT	EBR	NBT	NBR	SBT
Lane Configurations						
Traffic Volume (vph)	125	0	178	910	361	1186
Future Volume (vph)	125	0	178	910	361	1186
Lane Group Flow (vph)	108	104	101	938	372	1223
Turn Type	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		2		6
Permitted Phases	4		4		2	
Detector Phase	4	4	4	2	2	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	37.0	37.0	37.0	28.0	28.0	28.0
Total Split (s)	43.0	43.0	43.0	67.0	67.0	67.0
Total Split (%)	39.1%	39.1%	39.1%	60.9%	60.9%	60.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	C-Max	C-Max	C-Max
v/c Ratio	0.58	0.47	0.48	0.25	0.32	0.32
Control Delay (s/veh)	57.6	29.0	28.8	4.2	1.2	9.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	57.6	29.0	28.8	4.2	1.2	9.4
Queue Length 50th (m)	24.7	10.8	9.6	18.7	0.0	70.8
Queue Length 95th (m)	42.1	28.5	26.5	29.1	7.8	94.9
Internal Link Dist (m)		230.7		394.1		264.9
Turn Bay Length (m)					80.0	
Base Capacity (vph)	518	508	487	3768	1159	3768
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.20	0.21	0.25	0.32	0.32

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 49 (45%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Description: from project 24223.
pattern 2 for AM, 3 for PM (sched 1)

Splits and Phases: 10: Brant Street & Hwy 403 EB Off-Ramp/QEW EB On-Ramp





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	125	0	178	0	0	0	0	910	361	0	1186	0
Future Volume (vph)	125	0	178	0	0	0	0	910	361	0	1186	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)	7.0	7.0	7.0					6.0	6.0		6.0	
Lane Util. Factor	0.95	0.91	0.95					0.91	1.00		0.91	
Frpb, ped/bikes	1.00	0.99	0.99					1.00	0.98		1.00	
Flpb, ped/bikes	1.00	1.00	1.00					1.00	1.00		1.00	
Frt	1.00	0.88	0.85					1.00	0.85		1.00	
Flt Protected	0.95	0.99	1.00					1.00	1.00		1.00	
Satd. Flow (prot)	1585	1436	1371					4932	1403		4932	
Flt Permitted	0.95	0.99	1.00					1.00	1.00		1.00	
Satd. Flow (perm)	1585	1436	1371					4932	1403		4932	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	129	0	184	0	0	0	0	938	372	0	1223	0
RTOR Reduction (vph)	0	50	50	0	0	0	0	0	88	0	0	0
Lane Group Flow (vph)	108	54	51	0	0	0	0	938	284	0	1223	0
Confl. Peds. (#/hr)									1	1		
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	1%	0%	3%	0%	0%	0%	0%	4%	5%	0%	4%	0%
Turn Type	Perm	NA	Perm					NA	Perm		NA	
Protected Phases		4						2			6	
Permitted Phases	4		4						2			
Actuated Green, G (s)	13.0	13.0	13.0					84.0	84.0		84.0	
Effective Green, g (s)	13.0	13.0	13.0					84.0	84.0		84.0	
Actuated g/C Ratio	0.12	0.12	0.12					0.76	0.76		0.76	
Clearance Time (s)	7.0	7.0	7.0					6.0	6.0		6.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0	3.0		3.0	
Lane Grp Cap (vph)	187	169	162					3766	1071		3766	
v/s Ratio Prot								0.19			c0.25	
v/s Ratio Perm	c0.07	0.04	0.04						0.20			
v/c Ratio	0.58	0.32	0.31					0.25	0.27		0.32	
Uniform Delay, d1	45.9	44.4	44.4					3.8	3.9		4.1	
Progression Factor	1.00	1.00	1.00					1.00	1.00		2.09	
Incremental Delay, d2	4.3	1.1	1.1					0.2	0.6		0.2	
Delay (s)	50.2	45.5	45.5					4.0	4.5		8.7	
Level of Service	D	D	D					A	A		A	
Approach Delay (s/veh)		47.1			0.0			4.1			8.7	
Approach LOS		D			A			A			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	10.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	41.1%	ICU Level of Service	A
Analysis Period (min)	15		
Description: from project 24223.			
pattern 2 for AM, 3 for PM (sched 1)			

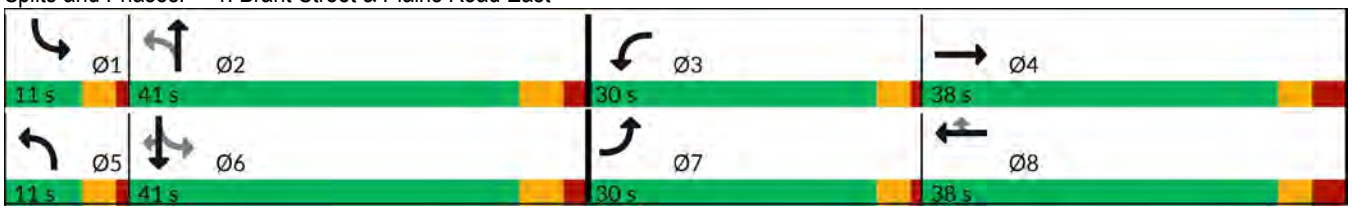
c Critical Lane Group

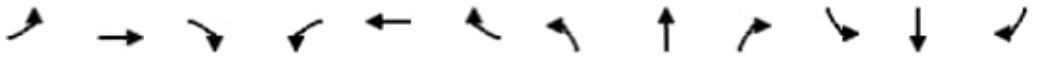
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	561	244	111	840	368	60	970	104	866	746
Future Volume (vph)	561	244	111	840	368	60	970	104	866	746
Lane Group Flow (vph)	578	327	114	866	379	62	1080	107	893	769
Turn Type	Prot	NA	Prot	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8	2		6		6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	7.0	8.0	7.0	8.0	8.0	7.0	8.0	7.0	8.0	8.0
Minimum Split (s)	11.0	38.0	11.0	38.0	38.0	11.0	33.0	11.0	33.0	33.0
Total Split (s)	30.0	38.0	30.0	38.0	38.0	11.0	41.0	11.0	41.0	41.0
Total Split (%)	25.0%	31.7%	25.0%	31.7%	31.7%	9.2%	34.2%	9.2%	34.2%	34.2%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	3.0	1.0	3.0	3.0	1.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	6.0	4.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	Max	None	Max	Max
v/c Ratio	0.87	0.52	0.60	0.93	0.78	0.29	0.73	0.65	0.56	0.95
Control Delay (s/veh)	59.5	32.8	62.9	59.6	39.0	26.0	40.6	43.1	36.0	37.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	59.5	32.8	62.9	59.6	39.0	26.0	40.6	43.1	36.0	37.3
Queue Length 50th (m)	70.9	59.7	27.4	110.4	59.4	9.5	87.9	16.8	69.8	84.0
Queue Length 95th (m)	#97.1	95.3	45.1	#149.6	#107.4	19.0	105.4	#33.7	85.0	#177.2
Internal Link Dist (m)		240.4		173.9			422.3		394.1	
Turn Bay Length (m)	65.0		60.0		75.0	60.0		55.0		40.0
Base Capacity (vph)	716	632	369	953	493	216	1472	165	1599	806
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.52	0.31	0.91	0.77	0.29	0.73	0.65	0.56	0.95

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 117.6
Natural Cycle: 115
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Brant Street & Plains Road East





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	561	244	73	111	840	368	60	970	78	104	866	746
Future Volume (vph)	561	244	73	111	840	368	60	970	78	104	866	746
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	0.97	1.00		1.00	0.95	1.00	1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3236	1741		1668	3500	1467	1651	4915		1620	5029	1449
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.22	1.00		0.13	1.00	1.00
Satd. Flow (perm)	3236	1741		1668	3500	1467	377	4915		214	5029	1449
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	578	252	75	114	866	379	62	1000	80	107	893	769
RTOR Reduction (vph)	0	8	0	0	0	94	0	8	0	0	0	346
Lane Group Flow (vph)	578	319	0	114	866	285	62	1072	0	107	893	423
Confl. Peds. (#/hr)	2		5	5		2	11		4	4		11
Confl. Bikes (#/hr)						3						4
Heavy Vehicles (%)	1%	4%	3%	1%	2%	1%	2%	3%	4%	4%	2%	1%
Turn Type	Prot	NA		Prot	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8	2			6		6
Actuated Green, G (s)	24.3	42.2		13.4	31.3	31.3	41.4	35.9		44.4	37.4	37.4
Effective Green, g (s)	24.3	42.2		13.4	31.3	31.3	41.4	35.9		44.4	37.4	37.4
Actuated g/C Ratio	0.21	0.36		0.11	0.26	0.26	0.35	0.30		0.37	0.32	0.32
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	663	620		188	924	387	190	1489		163	1587	457
v/s Ratio Prot	c0.18	0.18		0.07	c0.25		0.02	0.22		c0.04	0.18	
v/s Ratio Perm						0.19	0.10			0.21		c0.29
v/c Ratio	0.87	0.51		0.61	0.94	0.74	0.33	0.72		0.66	0.56	0.92
Uniform Delay, d1	45.6	30.1		50.0	42.6	39.8	26.6	36.8		26.8	33.7	39.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	12.1	0.7		5.4	16.4	7.1	1.0	3.0		9.2	1.4	27.0
Delay (s)	57.7	30.8		55.5	59.0	46.9	27.6	39.9		35.9	35.2	66.2
Level of Service	E	C		E	E	D	C	D		D	D	E
Approach Delay (s/veh)		48.0			55.3			39.2			48.7	
Approach LOS		D			E			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	48.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	118.5	Sum of lost time (s)	20.0
Intersection Capacity Utilization	89.9%	ICU Level of Service	E
Analysis Period (min)	15		

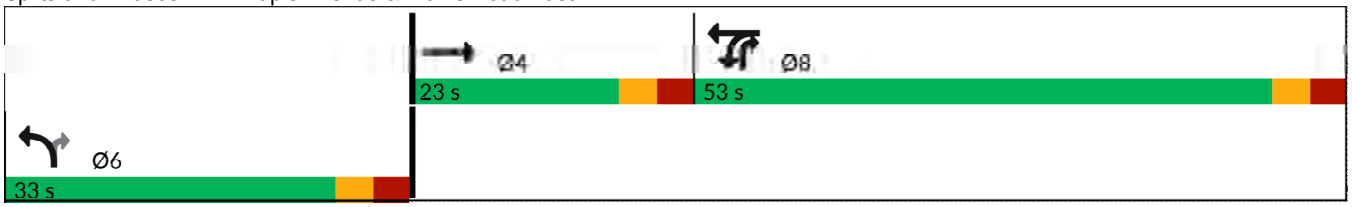
c Critical Lane Group

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	436	881	699	65	429
Future Volume (vph)	436	881	699	65	429
Lane Group Flow (vph)	535	968	768	71	471
Turn Type	NA	Split	NA	Prot	pm+ov
Protected Phases	4	8	8	6	8
Permitted Phases					6
Detector Phase	4	8	8	6	8
Switch Phase					
Minimum Initial (s)	8.0	8.0	8.0	7.0	8.0
Minimum Split (s)	14.0	33.0	33.0	33.0	33.0
Total Split (s)	23.0	53.0	53.0	33.0	53.0
Total Split (%)	21.1%	48.6%	48.6%	30.3%	48.6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	Max	None	None	None	None
v/c Ratio	0.78	0.57	0.81	0.39	0.52
Control Delay (s/veh)	43.2	16.7	26.8	44.6	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	43.2	16.7	26.8	44.6	9.2
Queue Length 50th (m)	49.6	60.2	112.1	12.5	33.6
Queue Length 95th (m)	#81.1	85.6	#196.4	25.8	52.4
Internal Link Dist (m)	259.0		484.0	228.5	
Turn Bay Length (m)		85.0			
Base Capacity (vph)	690	1820	1026	539	974
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.78	0.53	0.75	0.13	0.48

Intersection Summary

Cycle Length: 109
Actuated Cycle Length: 86.3
Natural Cycle: 100
Control Type: Semi Act-Uncoord
Description: STP from video
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Maple Avenue & Plains Road East



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	436	51	881	699	65	429
Future Volume (vph)	436	51	881	699	65	429
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.0	3.0	3.5	3.0	3.0
Total Lost time (s)	6.0		6.0	6.0	6.0	6.0
Lane Util. Factor	0.95		0.97	1.00	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3389		3268	1842	1685	1504
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3389		3268	1842	1685	1504
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	479	56	968	768	71	471
RTOR Reduction (vph)	8	0	0	0	0	6
Lane Group Flow (vph)	527	0	968	768	71	465
Confl. Peds. (#/hr)						5
Heavy Vehicles (%)	2%	18%	0%	2%	0%	0%
Turn Type	NA		Split	NA	Prot	pm+ov
Protected Phases	4		8	8	6	8
Permitted Phases						6
Actuated Green, G (s)	17.4		44.6	44.6	7.5	52.1
Effective Green, g (s)	17.4		44.6	44.6	7.5	52.1
Actuated g/C Ratio	0.20		0.51	0.51	0.09	0.60
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	673		1665	938	144	998
v/s Ratio Prot	c0.16		0.30	c0.42	0.04	c0.24
v/s Ratio Perm						0.07
v/c Ratio	0.78		0.58	0.82	0.49	0.47
Uniform Delay, d1	33.3		14.9	18.0	38.2	9.9
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	8.9		0.5	5.6	2.6	0.3
Delay (s)	42.1		15.5	23.7	40.8	10.3
Level of Service	D		B	C	D	B
Approach Delay (s/veh)	42.1			19.1	14.3	
Approach LOS	D			B	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	22.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	87.5	Sum of lost time (s)	18.0
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		
Description: STP from video			

c Critical Lane Group

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	762	27	47	1629	11	18	0	48	3	0	16
Future Vol, veh/h	7	762	27	47	1629	11	18	0	48	3	0	16
Conflicting Peds, #/hr	14	0	4	4	0	14	2	0	1	1	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	15	-	-	15	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	2	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	7	794	28	49	1697	11	19	0	50	3	0	17

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1722	0	0	826	0	0	1775	2646	416	2227	2655	870
Stage 1	-	-	-	-	-	-	826	826	-	1815	1815	-
Stage 2	-	-	-	-	-	-	949	1820	-	412	840	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	372	-	-	813	-	-	54	24	591	24	23	299
Stage 1	-	-	-	-	-	-	337	389	-	83	131	-
Stage 2	-	-	-	-	-	-	284	130	-	593	384	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	368	-	-	810	-	-	48	22	589	20	21	295
Mov Cap-2 Maneuver	-	-	-	-	-	-	48	22	-	20	21	-
Stage 1	-	-	-	-	-	-	330	380	-	81	122	-
Stage 2	-	-	-	-	-	-	251	121	-	532	376	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.1	0.3	50.4	53.9
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	145	368	-	-	810	-	-	93
HCM Lane V/C Ratio	0.474	0.02	-	-	0.06	-	-	0.213
HCM Ctrl Dly (s/v)	50.4	15	-	-	9.7	-	-	53.9
HCM Lane LOS	F	B	-	-	A	-	-	F
HCM 95th %tile Q (veh)	2.2	0.1	-	-	0.2	-	-	0.8

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	786	0	0	1653	1	0	0	0	1	0	1
Future Vol, veh/h	1	786	0	0	1653	1	0	0	0	1	0	1
Conflicting Peds, #/hr	13	0	2	2	0	13	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	15	-	-	15	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	2	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	1	827	0	0	1740	1	0	0	0	1	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1754	0	0	829	0	0	1702	2585	416	2170	2585	885
Stage 1	-	-	-	-	-	-	831	831	-	1754	1754	-
Stage 2	-	-	-	-	-	-	871	1754	-	416	831	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	362	-	-	811	-	-	61	26	591	27	26	292
Stage 1	-	-	-	-	-	-	334	387	-	90	140	-
Stage 2	-	-	-	-	-	-	316	140	-	590	387	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	358	-	-	810	-	-	61	26	590	27	26	289
Mov Cap-2 Maneuver	-	-	-	-	-	-	61	26	-	27	26	-
Stage 1	-	-	-	-	-	-	333	385	-	89	139	-
Stage 2	-	-	-	-	-	-	315	139	-	588	385	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	0	81.7
HCM LOS			A	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	358	-	-	810	-	-	49
HCM Lane V/C Ratio	-	0.003	-	-	-	-	-	0.043
HCM Ctrl Dly (s/v)	0	15.1	-	-	0	-	-	81.7
HCM Lane LOS	A	C	-	-	A	-	-	F
HCM 95th %tile Q (veh)	-	0	-	-	0	-	-	0.1

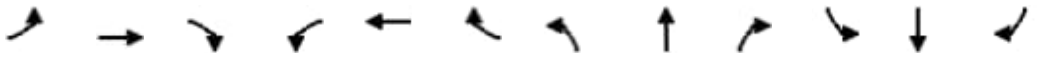
Lane Group	WBL	WBT	WBR	NBL	NBT	NBR	SBT
Lane Configurations							
Traffic Volume (vph)	166	12	88	74	1422	374	1900
Future Volume (vph)	166	12	88	74	1422	374	1900
Lane Group Flow (vph)	90	91	90	76	1451	382	1942
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	NA
Protected Phases		8		5	2		6
Permitted Phases	8		8	2		2	
Detector Phase	8	8	8	5	2	2	6
Switch Phase							
Minimum Initial (s)	8.0	8.0	8.0	7.0	8.0	8.0	8.0
Minimum Split (s)	37.0	37.0	37.0	11.0	28.0	28.0	28.0
Total Split (s)	43.0	43.0	43.0	11.0	77.0	77.0	66.0
Total Split (%)	35.8%	35.8%	35.8%	9.2%	64.2%	64.2%	55.0%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	4.0	6.0	6.0	6.0
Lead/Lag				Lead			Lag
Lead-Lag Optimize?				Yes			Yes
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max
v/c Ratio	0.55	0.55	0.43	0.38	0.36	0.31	0.54
Control Delay (s/veh)	63.1	62.9	24.6	8.7	6.7	3.6	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	63.1	62.9	24.6	8.7	6.7	3.6	9.7
Queue Length 50th (m)	22.7	22.9	6.0	6.3	56.8	19.7	77.0
Queue Length 95th (m)	39.6	39.8	21.7	9.8	75.5	43.4	110.9
Internal Link Dist (m)		133.1			264.9		193.7
Turn Bay Length (m)				60.0		130.0	
Base Capacity (vph)	480	486	490	202	4047	1239	3612
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.19	0.18	0.38	0.36	0.31	0.54

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 100 (83%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Description: action plan 2 for am, 3 for pm

Splits and Phases: 5: Brant Street & Retail Access/QEW WB Off-Ramp / WB On-Ramp





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	166	12	88	74	1422	374	0	1900	3
Future Volume (vph)	0	0	0	166	12	88	74	1422	374	0	1900	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)				7.0	7.0	7.0	4.0	6.0	6.0		6.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.91	1.00		0.91	
Frpb, ped/bikes				1.00	1.00	0.99	1.00	1.00	0.97		1.00	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00	1.00		1.00	
Frt				1.00	1.00	0.85	1.00	1.00	0.85		1.00	
Flt Protected				0.95	0.96	1.00	0.95	1.00	1.00		1.00	
Satd. Flow (prot)				1600	1621	1486	1636	5129	1469		5077	
Flt Permitted				0.95	0.96	1.00	0.08	1.00	1.00		1.00	
Satd. Flow (perm)				1600	1621	1486	132	5129	1469		5077	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	169	12	90	76	1451	382	0	1939	3
RTOR Reduction (vph)	0	0	0	0	0	57	0	0	81	0	0	0
Lane Group Flow (vph)	0	0	0	90	91	33	76	1451	301	0	1942	0
Confl. Peds. (#/hr)	2					2	5		2	2		5
Heavy Vehicles (%)	0%	0%	0%	0%	42%	0%	3%	0%	0%	0%	1%	0%
Turn Type				Perm	NA	Perm	pm+pt	NA	Perm		NA	
Protected Phases					8		5	2			6	
Permitted Phases				8		8	2		2			
Actuated Green, G (s)				12.3	12.3	12.3	94.7	94.7	94.7		84.5	
Effective Green, g (s)				12.3	12.3	12.3	94.7	94.7	94.7		84.5	
Actuated g/C Ratio				0.10	0.10	0.10	0.79	0.79	0.79		0.70	
Clearance Time (s)				7.0	7.0	7.0	4.0	6.0	6.0		6.0	
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)				164	166	152	181	4047	1159		3575	
v/s Ratio Prot							0.02	c0.28			c0.38	
v/s Ratio Perm				c0.06	0.06	0.02	0.31		0.21			
v/c Ratio				0.55	0.55	0.21	0.42	0.36	0.26		0.54	
Uniform Delay, d1				51.2	51.2	49.4	6.1	3.7	3.4		8.5	
Progression Factor				1.00	1.00	1.00	1.11	1.62	7.36		1.00	
Incremental Delay, d2				3.7	3.7	0.7	1.5	0.2	0.5		0.6	
Delay (s)				54.9	54.9	50.1	8.3	6.3	25.2		9.1	
Level of Service				D	D	D	A	A	C		A	
Approach Delay (s/veh)		0.0			53.3			10.1			9.1	
Approach LOS		A			D			B			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	12.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		
Description: action plan 2 for am, 3 for pm			

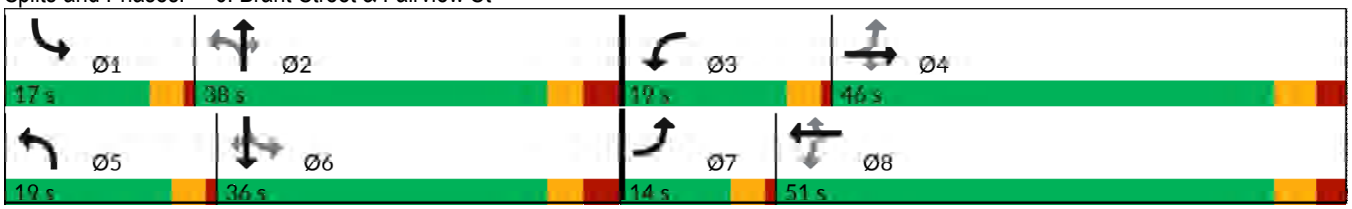
c Critical Lane Group

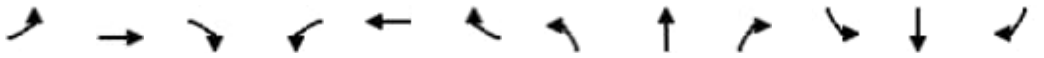
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	184	648	281	205	1145	292	252	626	147	205	601	145
Future Volume (vph)	184	648	281	205	1145	292	252	626	147	205	601	145
Lane Group Flow (vph)	194	682	296	216	1205	307	265	659	155	216	633	153
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	8.0	8.0	7.0	8.0	8.0	7.0	8.0	8.0	7.0	8.0	8.0
Minimum Split (s)	12.0	31.4	31.4	12.0	31.4	31.4	12.0	31.5	31.5	12.0	31.5	31.5
Total Split (s)	14.0	46.0	46.0	19.0	51.0	51.0	19.0	38.0	38.0	17.0	36.0	36.0
Total Split (%)	11.7%	38.3%	38.3%	15.8%	42.5%	42.5%	15.8%	31.7%	31.7%	14.2%	30.0%	30.0%
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.3	3.3	3.0	3.3	3.3
All-Red Time (s)	1.0	2.7	2.7	1.0	2.7	2.7	1.0	3.2	3.2	1.0	3.2	3.2
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)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.5	6.5	4.0	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
v/c Ratio	0.92	0.55	0.42	0.59	0.92	0.44	0.92	0.76	0.34	0.81	0.81	0.35
Control Delay (s/veh)	72.7	32.8	5.2	22.9	46.3	5.0	64.0	46.5	7.6	48.4	50.9	8.1
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 (s/veh)	72.7	32.8	5.2	22.9	46.3	5.0	64.0	46.5	7.6	48.4	50.9	8.1
Queue Length 50th (m)	30.3	69.5	0.0	27.6	142.4	0.0	44.6	78.0	0.0	35.0	76.2	0.0
Queue Length 95th (m)	#81.0	93.6	19.7	45.2	#192.4	19.1	#98.0	99.7	16.6	#65.8	97.8	17.0
Internal Link Dist (m)		607.3			241.7			325.5			422.3	
Turn Bay Length (m)	300.0		140.0	60.0		100.0	84.0		70.0	45.0		60.0
Base Capacity (vph)	211	1258	717	398	1395	718	287	995	498	272	922	486
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.54	0.41	0.54	0.86	0.43	0.92	0.66	0.31	0.79	0.69	0.31

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 113.6
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Description: pattern 2 for AM, 3 for PM (sched 1)
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Brant Street & Fairview St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	184	648	281	205	1145	292	252	626	147	205	601	145
Future Volume (vph)	184	648	281	205	1145	292	252	626	147	205	601	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.5	6.5	4.0	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.93	1.00	1.00	0.98
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	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1652	3535	1479	1684	3535	1352	1589	3570	1392	1600	3535	1432
Flt Permitted	0.10	1.00	1.00	0.26	1.00	1.00	0.17	1.00	1.00	0.22	1.00	1.00
Satd. Flow (perm)	176	3535	1479	455	3535	1352	289	3570	1392	368	3535	1432
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	194	682	296	216	1205	307	265	659	155	216	633	153
RTOR Reduction (vph)	0	0	193	0	0	193	0	0	117	0	0	119
Lane Group Flow (vph)	194	682	103	216	1205	114	265	659	38	216	633	34
Confl. Peds. (#/hr)	14		5	5		14	6		39	39		6
Confl. Bikes (#/hr)									1			1
Heavy Vehicles (%)	2%	1%	0%	0%	1%	8%	6%	0%	1%	5%	1%	3%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	49.7	39.6	39.6	54.9	42.2	42.2	42.8	27.7	27.7	37.8	25.2	25.2
Effective Green, g (s)	49.7	39.6	39.6	54.9	42.2	42.2	42.8	27.7	27.7	37.8	25.2	25.2
Actuated g/C Ratio	0.44	0.35	0.35	0.48	0.37	0.37	0.38	0.24	0.24	0.33	0.22	0.22
Clearance Time (s)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.5	6.5	4.0	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)	208	1233	516	357	1314	502	281	871	339	259	784	317
v/s Ratio Prot	c0.08	0.19		c0.07	c0.34		c0.13	0.18		0.09	0.18	
v/s Ratio Perm	0.33		0.07	0.22		0.08	c0.23		0.03	0.18		0.02
v/c Ratio	0.93	0.55	0.20	0.61	0.92	0.23	0.94	0.76	0.11	0.83	0.81	0.11
Uniform Delay, d1	28.1	29.8	25.9	18.7	34.0	24.5	28.3	39.8	33.3	30.0	41.8	35.2
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	43.6	0.5	0.2	2.9	10.2	0.2	38.4	3.8	0.1	20.0	6.1	0.1
Delay (s)	71.7	30.4	26.1	21.6	44.2	24.7	66.7	43.6	33.5	50.1	48.0	35.3
Level of Service	E	C	C	C	D	C	E	D	C	D	D	D
Approach Delay (s/veh)		36.1			37.9			47.8			46.5	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	41.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	113.5	Sum of lost time (s)	20.9
Intersection Capacity Utilization	90.4%	ICU Level of Service	E
Analysis Period (min)	15		
Description: pattern 2 for AM, 3 for PM (sched 1)			
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	61	767	1468	58	13	52
Future Vol, veh/h	61	767	1468	58	13	52
Conflicting Peds, #/hr	1	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	40	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	24	0	0
Mvmt Flow	62	783	1498	59	13	53

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1558	0	-	0	2045	780
Stage 1	-	-	-	-	1529	-
Stage 2	-	-	-	-	516	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	430	-	-	-	50	342
Stage 1	-	-	-	-	168	-
Stage 2	-	-	-	-	570	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	430	-	-	-	43	342
Mov Cap-2 Maneuver	-	-	-	-	117	-
Stage 1	-	-	-	-	144	-
Stage 2	-	-	-	-	569	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	1.1	0	21.9
HCM LOS			C

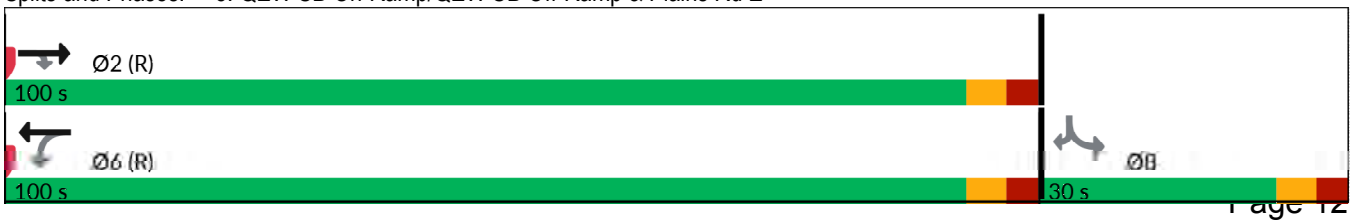
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	430	-	-	-	117	342
HCM Lane V/C Ratio	0.145	-	-	-	0.113	0.155
HCM Ctrl Dly (s/v)	14.8	-	-	-	39.7	17.5
HCM Lane LOS	B	-	-	-	E	C
HCM 95th %tile Q (veh)	0.5	-	-	-	0.4	0.5

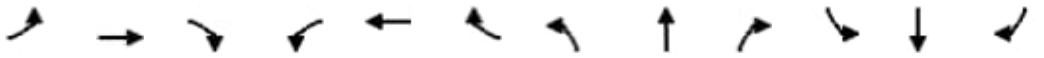
Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	908	328	4	1476	450	236
Future Volume (vph)	908	328	4	1476	450	236
Lane Group Flow (vph)	946	342	0	1542	469	246
Turn Type	NA	Perm	Perm	NA	Perm	Perm
Protected Phases	2			6		
Permitted Phases		2	6		8	8
Detector Phase	2	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	41.0	41.0	41.0	41.0	30.0	30.0
Total Split (s)	100.0	100.0	100.0	100.0	30.0	30.0
Total Split (%)	76.9%	76.9%	76.9%	76.9%	23.1%	23.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0		7.0	7.0	7.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
v/c Ratio	0.25	0.30		0.44	0.86	0.82
Control Delay (s/veh)	6.4	1.3		10.4	68.8	61.1
Queue Delay	0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	6.4	1.3		10.4	68.8	61.1
Queue Length 50th (m)	29.3	0.0		92.8	63.5	48.8
Queue Length 95th (m)	34.9	8.2		m108.4	#87.7	#91.2
Internal Link Dist (m)	279.6			287.3		
Turn Bay Length (m)		70.0				
Base Capacity (vph)	3711	1152		3481	572	311
Starvation Cap Reductn	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0
Reduced v/c Ratio	0.25	0.30		0.44	0.82	0.79

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 31 (24%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Description: Pattern 2 for AM, 3 for PM
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: QEW SB On-Ramp/QEW SB Off-Ramp & Plains Rd E





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	908	328	4	1476	0	0	0	0	450	0	236
Future Volume (vph)	0	908	328	4	1476	0	0	0	0	450	0	236
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)		7.0	7.0		7.0					7.0		7.0
Lane Util. Factor		0.91	1.00		0.91					0.97		1.00
Frpb, ped/bikes		1.00	0.97		1.00					1.00		0.98
Flpb, ped/bikes		1.00	1.00		1.00					1.00		1.00
Frt		1.00	0.85		1.00					1.00		0.85
Flt Protected		1.00	1.00		1.00					0.95		1.00
Satd. Flow (prot)		5129	1463		5129					3236		1479
Flt Permitted		1.00	1.00		0.94					0.95		1.00
Satd. Flow (perm)		5129	1463		4810					3236		1479
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	946	342	4	1538	0	0	0	0	469	0	246
RTOR Reduction (vph)	0	0	94	0	0	0	0	0	0	0	0	51
Lane Group Flow (vph)	0	946	248	0	1542	0	0	0	0	469	0	195
Confl. Peds. (#/hr)	2		5	5		2	4					4
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%
Turn Type		NA	Perm	Perm	NA					Perm		Perm
Protected Phases		2			6							
Permitted Phases			2	6						8		8
Actuated Green, G (s)		94.1	94.1		94.1					21.9		21.9
Effective Green, g (s)		94.1	94.1		94.1					21.9		21.9
Actuated g/C Ratio		0.72	0.72		0.72					0.17		0.17
Clearance Time (s)		7.0	7.0		7.0					7.0		7.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0		3.0
Lane Grp Cap (vph)		3712	1058		3481					545		249
v/s Ratio Prot		0.18										
v/s Ratio Perm			0.17		c0.32					c0.14		0.13
v/c Ratio		0.25	0.23		0.44					0.86		0.78
Uniform Delay, d1		6.1	6.0		7.3					52.6		51.8
Progression Factor		1.00	1.00		1.37					1.00		1.00
Incremental Delay, d2		0.2	0.5		0.2					13.1		14.9
Delay (s)		6.2	6.5		10.2					65.7		66.6
Level of Service		A	A		B					E		E
Approach Delay (s/veh)		6.3			10.2			0.0			66.0	
Approach LOS		A			B			A			E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	20.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		
Description: Pattern 2 for AM, 3 for PM			

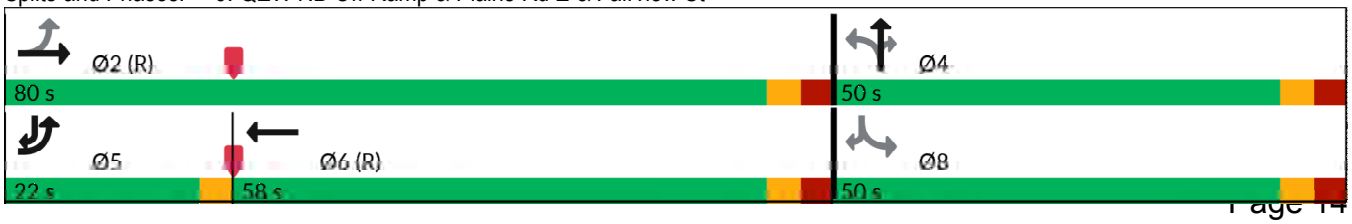
c Critical Lane Group

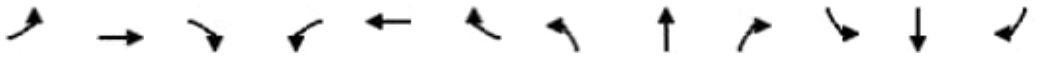
Lane Group	EBL	EBT	WBT	NBL	NBT	NBR	SBL	SBR
Lane Configurations								
Traffic Volume (vph)	276	1090	1905	195	248	290	44	753
Future Volume (vph)	276	1090	1905	195	248	290	44	753
Lane Group Flow (vph)	279	1101	1999	177	303	261	44	761
Turn Type	pm+pt	NA	NA	Perm	NA	Perm	Perm	pm+ov
Protected Phases	5	2	6		4			5
Permitted Phases	2			4		4	8	8
Detector Phase	5	2	6	4	4	4	8	8
Switch Phase								
Minimum Initial (s)	6.0	8.0	8.0	8.0	8.0	8.0	8.0	6.0
Minimum Split (s)	9.0	35.1	35.1	36.4	36.4	36.4	36.4	9.0
Total Split (s)	22.0	80.0	58.0	50.0	50.0	50.0	50.0	22.0
Total Split (%)	16.9%	61.5%	44.6%	38.5%	38.5%	38.5%	38.5%	16.9%
Yellow Time (s)	3.0	3.3	3.3	3.3	3.3	3.3	3.3	3.0
All-Red Time (s)	0.0	2.8	2.8	3.1	3.1	3.1	3.1	0.0
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	6.1	6.1	6.4	6.4	6.4	6.4	3.0
Lead/Lag	Lead		Lag					Lead
Lead-Lag Optimize?	Yes		Yes					Yes
Recall Mode	None	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.90	0.37	0.96	0.30	0.53	0.46	0.18	0.90
Control Delay (s/veh)	68.2	18.1	49.6	33.8	38.4	26.0	33.0	41.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	68.2	18.1	49.6	33.8	38.4	26.0	33.0	41.6
Queue Length 50th (m)	58.9	55.2	191.9	37.0	71.0	39.6	8.4	170.6
Queue Length 95th (m)	m#99.8	67.4	#230.3	58.3	104.3	67.6	18.5	#259.6
Internal Link Dist (m)		287.3	180.4		94.5			
Turn Bay Length (m)	35.0					50.0	80.0	
Base Capacity (vph)	322	2981	2088	581	573	568	251	849
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	0.87	0.37	0.96	0.30	0.53	0.46	0.18	0.90

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 119 (92%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated
Description: event plan 2 for AM, 3 for PM
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: QEW NB Off-Ramp & Plains Rd E & Fairview St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	276	1090	0	0	1905	74	195	248	290	44	0	753
Future Volume (vph)	276	1090	0	0	1905	74	195	248	290	44	0	753
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Total Lost time (s)	3.0	6.1			6.1		6.4	6.4	6.4	6.4		3.0
Lane Util. Factor	1.00	0.91			0.91		0.95	0.91	0.95	1.00		1.00
Frpb, ped/bikes	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
Frt	1.00	1.00			0.99		1.00	0.98	0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00	0.95		1.00
Satd. Flow (prot)	1789	5245			5127		1734	1699	1536	1825		1601
Flt Permitted	0.07	1.00			1.00		0.95	1.00	1.00	0.39		1.00
Satd. Flow (perm)	135	5245			5127		1734	1699	1536	750		1601
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	279	1101	0	0	1924	75	197	251	293	44	0	761
RTOR Reduction (vph)	0	0	0	0	3	0	0	3	53	0	0	14
Lane Group Flow (vph)	279	1101	0	0	1996	0	177	300	208	44	0	747
Confl. Peds. (#/hr)			7	7								
Heavy Vehicles (%)	2%	0%	0%	0%	0%	46%	0%	1%	1%	0%	0%	2%
Turn Type	pm+pt	NA			NA		Perm	NA	Perm	Perm		pm+ov
Protected Phases	5	2			6			4				5
Permitted Phases	2						4		4	8		8
Actuated Green, G (s)	73.9	73.9			52.9		43.6	43.6	43.6	43.6		61.6
Effective Green, g (s)	73.9	73.9			52.9		43.6	43.6	43.6	43.6		61.6
Actuated g/C Ratio	0.57	0.57			0.41		0.34	0.34	0.34	0.34		0.47
Clearance Time (s)	3.0	6.1			6.1		6.4	6.4	6.4	6.4		3.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	305	2981			2086		581	569	515	251		758
v/s Ratio Prot	0.13	0.21			c0.39							c0.14
v/s Ratio Perm	0.39						0.10	0.18	0.14	0.06		0.33
v/c Ratio	0.91	0.37			0.96		0.30	0.53	0.40	0.18		0.99
Uniform Delay, d1	41.1	15.3			37.4		32.0	34.9	33.2	30.5		33.8
Progression Factor	1.12	1.15			1.00		1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2	28.4	0.3			11.9		0.3	0.9	0.5	0.3		28.9
Delay (s)	74.5	18.0			49.3		32.3	35.8	33.7	30.8		62.7
Level of Service	E	B			D		C	D	C	C		E
Approach Delay (s/veh)		29.4			49.3			34.2			61.0	
Approach LOS		C			D			C			E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	43.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	113.7%	ICU Level of Service	H
Analysis Period (min)	15		
Description: event plan 2 for AM, 3 for PM			

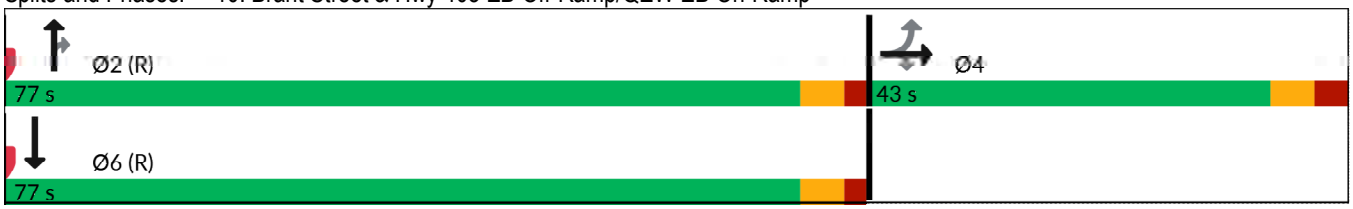
c Critical Lane Group

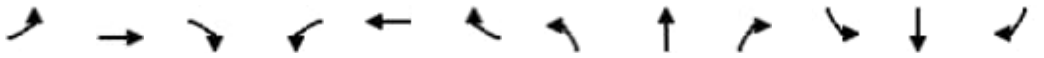
Lane Group	EBL	EBT	EBR	NBT	NBR	SBT
Lane Configurations						
Traffic Volume (vph)	203	0	197	1507	472	1402
Future Volume (vph)	203	0	197	1507	472	1402
Lane Group Flow (vph)	146	139	131	1570	492	1460
Turn Type	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		2		6
Permitted Phases	4		4		2	
Detector Phase	4	4	4	2	2	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	37.0	37.0	37.0	28.0	28.0	28.0
Total Split (s)	43.0	43.0	43.0	77.0	77.0	77.0
Total Split (%)	35.8%	35.8%	35.8%	64.2%	64.2%	64.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	C-Max	C-Max	C-Max
v/c Ratio	0.68	0.58	0.57	0.42	0.41	0.39
Control Delay (s/veh)	64.2	43.4	42.8	6.2	1.6	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	64.2	43.4	42.8	6.2	1.6	7.3
Queue Length 50th (m)	36.7	25.8	22.7	44.3	0.0	35.7
Queue Length 95th (m)	57.3	46.8	42.5	65.9	9.8	88.0
Internal Link Dist (m)		230.7		394.1		264.9
Turn Bay Length (m)					80.0	
Base Capacity (vph)	457	471	445	3775	1200	3775
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.30	0.29	0.42	0.41	0.39

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 49 (41%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Description: from project 24223.
pattern 2 for AM, 3 for PM (sched 1)

Splits and Phases: 10: Brant Street & Hwy 403 EB Off-Ramp/QEW EB On-Ramp





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	203	0	197	0	0	0	0	1507	472	0	1402	0
Future Volume (vph)	203	0	197	0	0	0	0	1507	472	0	1402	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)	7.0	7.0	7.0					6.0	6.0		6.0	
Lane Util. Factor	0.95	0.91	0.95					0.91	1.00		0.91	
Frpb, ped/bikes	1.00	0.99	0.99					1.00	0.97		1.00	
Flpb, ped/bikes	1.00	1.00	1.00					1.00	1.00		1.00	
Frt	1.00	0.92	0.85					1.00	0.85		1.00	
Flt Protected	0.95	0.98	1.00					1.00	1.00		1.00	
Satd. Flow (prot)	1524	1483	1397					5029	1436		5029	
Flt Permitted	0.95	0.98	1.00					1.00	1.00		1.00	
Satd. Flow (perm)	1524	1483	1397					5029	1436		5029	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	211	0	205	0	0	0	0	1570	492	0	1460	0
RTOR Reduction (vph)	0	33	33	0	0	0	0	0	123	0	0	0
Lane Group Flow (vph)	146	106	98	0	0	0	0	1570	369	0	1460	0
Confl. Peds. (#/hr)			2	2			7		3	3		7
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	5%	0%	1%	0%	0%	0%	0%	2%	2%	0%	2%	0%
Turn Type	Perm	NA	Perm					NA	Perm		NA	
Protected Phases		4						2			6	
Permitted Phases	4		4						2			
Actuated Green, G (s)	16.9	16.9	16.9					90.1	90.1		90.1	
Effective Green, g (s)	16.9	16.9	16.9					90.1	90.1		90.1	
Actuated g/C Ratio	0.14	0.14	0.14					0.75	0.75		0.75	
Clearance Time (s)	7.0	7.0	7.0					6.0	6.0		6.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0	3.0		3.0	
Lane Grp Cap (vph)	214	208	196					3775	1078		3775	
v/s Ratio Prot								c0.31			0.29	
v/s Ratio Perm	c0.10	0.07	0.07						0.26			
v/c Ratio	0.68	0.51	0.50					0.42	0.34		0.39	
Uniform Delay, d1	49.0	47.7	47.7					5.4	5.0		5.2	
Progression Factor	1.00	1.00	1.00					1.00	1.00		1.24	
Incremental Delay, d2	8.7	2.1	2.0					0.3	0.9		0.3	
Delay (s)	57.6	49.8	49.7					5.8	5.9		6.8	
Level of Service	E	D	D					A	A		A	
Approach Delay (s/veh)		52.5			0.0			5.8			6.8	
Approach LOS		D			A			A			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		
Description: from project 24223.			
pattern 2 for AM, 3 for PM (sched 1)			

c Critical Lane Group

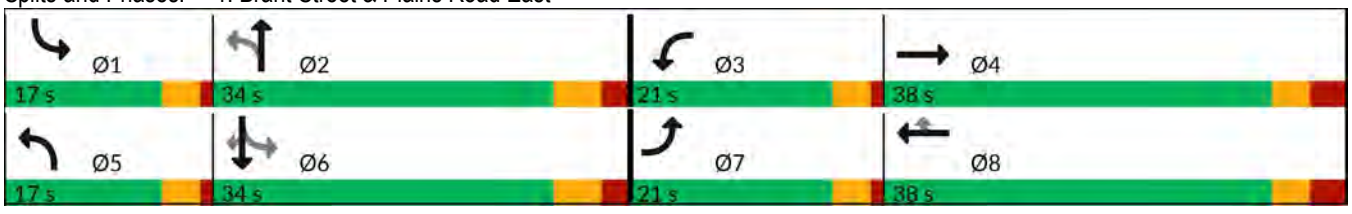
Future Total (2036) Horizon

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	431	317	62	185	73	36	672	155	871	461
Future Volume (vph)	431	317	62	185	73	36	672	155	871	461
Lane Group Flow (vph)	444	375	64	191	75	37	828	160	898	475
Turn Type	Prot	NA	Prot	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8	2		6		6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	7.0	8.0	7.0	8.0	8.0	7.0	8.0	7.0	8.0	8.0
Minimum Split (s)	11.0	38.0	11.0	38.0	38.0	11.0	33.0	11.0	33.0	33.0
Total Split (s)	21.0	38.0	21.0	38.0	38.0	17.0	34.0	17.0	34.0	34.0
Total Split (%)	19.1%	34.5%	19.1%	34.5%	34.5%	15.5%	30.9%	15.5%	30.9%	30.9%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	3.0	1.0	3.0	3.0	1.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	6.0	4.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	Max	None	Max	Max
v/c Ratio	0.79	0.73	0.38	0.32	0.23	0.12	0.56	0.49	0.46	0.60
Control Delay (s/veh)	49.0	39.9	48.1	33.8	4.1	16.2	28.9	20.5	24.0	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	49.0	39.9	48.1	33.8	4.1	16.2	28.9	20.5	24.0	9.9
Queue Length 50th (m)	40.8	63.8	11.4	16.5	0.0	3.5	45.2	16.3	48.3	12.3
Queue Length 95th (m)	#77.0	105.0	26.6	26.7	5.4	10.7	71.2	35.3	74.7	53.9
Internal Link Dist (m)		240.4		173.9			422.3		394.1	
Turn Bay Length (m)	65.0		60.0		75.0	60.0		55.0		40.0
Base Capacity (vph)	588	635	309	1186	546	413	1466	365	1972	791
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.59	0.21	0.16	0.14	0.09	0.56	0.44	0.46	0.60

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 92
Natural Cycle: 95
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Brant Street & Plains Road East



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	431	317	47	62	185	73	36	672	131	155	871	461
Future Volume (vph)	431	317	47	62	185	73	36	672	131	155	871	461
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	0.97	1.00		1.00	0.95	1.00	1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.99	1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3143	1789		1652	3368	1351	1684	4677		1635	4980	1422
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.30	1.00		0.22	1.00	1.00
Satd. Flow (perm)	3143	1789		1652	3368	1351	528	4677		381	4980	1422
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	444	327	48	64	191	75	37	693	135	160	898	475
RTOR Reduction (vph)	0	5	0	0	0	61	0	24	0	0	0	234
Lane Group Flow (vph)	444	370	0	64	191	14	37	804	0	160	898	241
Confl. Peds. (#/hr)	2					2	4		5	5		4
Confl. Bikes (#/hr)									1			5
Heavy Vehicles (%)	4%	3%	3%	2%	6%	10%	0%	7%	5%	3%	3%	4%
Turn Type	Prot	NA		Prot	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8	2			6		6
Actuated Green, G (s)	16.5	26.2		7.7	17.4	17.4	34.3	30.1		44.6	36.4	36.4
Effective Green, g (s)	16.5	26.2		7.7	17.4	17.4	34.3	30.1		44.6	36.4	36.4
Actuated g/C Ratio	0.17	0.28		0.08	0.18	0.18	0.36	0.32		0.47	0.39	0.39
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	548	495		134	620	248	243	1489		319	1918	547
v/s Ratio Prot	c0.14	c0.21		0.04	0.06		0.01	0.17		c0.06	0.18	
v/s Ratio Perm						0.01	0.05			c0.18		0.17
v/c Ratio	0.81	0.75		0.48	0.31	0.06	0.15	0.54		0.50	0.47	0.44
Uniform Delay, d1	37.5	31.1		41.5	33.3	31.8	19.6	26.5		15.5	21.8	21.5
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	8.8	6.1		2.7	0.3	0.1	0.3	1.4		1.2	0.8	2.6
Delay (s)	46.3	37.2		44.1	33.6	31.9	19.9	27.9		16.7	22.6	24.1
Level of Service	D	D		D	C	C	B	C		B	C	C
Approach Delay (s/veh)		42.2			35.3			27.6			22.5	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	29.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	94.5	Sum of lost time (s)	20.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

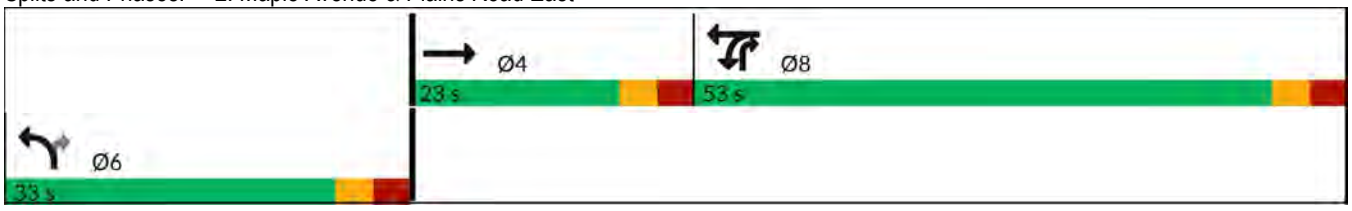
c Critical Lane Group

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	380	252	428	16	330
Future Volume (vph)	380	252	428	16	330
Lane Group Flow (vph)	442	263	446	17	344
Turn Type	NA	Split	NA	Prot	pm+ov
Protected Phases	4	8	8	6	8
Permitted Phases					6
Detector Phase	4	8	8	6	8
Switch Phase					
Minimum Initial (s)	8.0	8.0	8.0	7.0	8.0
Minimum Split (s)	14.0	33.0	33.0	33.0	33.0
Total Split (s)	23.0	53.0	53.0	33.0	53.0
Total Split (%)	21.1%	48.6%	48.6%	30.3%	48.6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	Max	None	None	None	None
v/c Ratio	0.38	0.23	0.66	0.07	0.57
Control Delay (s/veh)	16.2	11.7	19.0	25.2	13.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	16.2	11.7	19.0	25.2	13.4
Queue Length 50th (m)	13.7	7.5	30.2	1.3	20.2
Queue Length 95th (m)	44.5	19.4	76.3	8.1	35.8
Internal Link Dist (m)	259.0		484.0	228.5	
Turn Bay Length (m)		85.0			
Base Capacity (vph)	1163	2795	1669	933	1317
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.38	0.09	0.27	0.02	0.26

Intersection Summary

Cycle Length: 109
Actuated Cycle Length: 51
Natural Cycle: 80
Control Type: Semi Act-Uncoord
Description: STP from video

Splits and Phases: 2: Maple Avenue & Plains Road East





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	380	44	252	428	16	330
Future Volume (vph)	380	44	252	428	16	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.0	3.0	3.5	3.0	3.0
Total Lost time (s)	6.0		6.0	6.0	6.0	6.0
Lane Util. Factor	0.95		0.97	1.00	1.00	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3317		3054	1824	1685	1436
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3317		3054	1824	1685	1436
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	396	46	262	446	17	344
RTOR Reduction (vph)	7	0	0	0	0	22
Lane Group Flow (vph)	435	0	263	446	17	322
Heavy Vehicles (%)	5%	14%	7%	3%	0%	5%
Turn Type	NA		Split	NA	Prot	pm+ov
Protected Phases	4		8	8	6	8
Permitted Phases						6
Actuated Green, G (s)	17.8		18.8	18.8	1.1	19.9
Effective Green, g (s)	17.8		18.8	18.8	1.1	19.9
Actuated g/C Ratio	0.32		0.34	0.34	0.02	0.36
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1060		1030	615	33	667
v/s Ratio Prot	c0.13		0.09	c0.24	0.01	c0.16
v/s Ratio Perm						0.06
v/c Ratio	0.41		0.26	0.73	0.52	0.48
Uniform Delay, d1	14.8		13.4	16.2	27.0	13.9
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	1.2		0.1	4.2	12.9	0.6
Delay (s)	16.0		13.5	20.4	39.9	14.4
Level of Service	B		B	C	D	B
Approach Delay (s/veh)	16.0			17.9	15.7	
Approach LOS	B			B	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	16.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	55.7	Sum of lost time (s)	18.0
Intersection Capacity Utilization	42.3%	ICU Level of Service	A
Analysis Period (min)	15		
Description: STP from video			
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	684	13	26	620	6	13	0	53	4	0	11
Future Vol, veh/h	10	684	13	26	620	6	13	0	53	4	0	11
Conflicting Peds, #/hr	18	0	4	4	0	18	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	15	-	-	15	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	5	0	0	4	0	0	0	0	0	0	0
Mvmt Flow	11	720	14	27	653	6	14	0	56	4	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	677	0	0	738	0	0	1134	1484	371	1110	1488	348
Stage 1	-	-	-	-	-	-	753	753	-	728	728	-
Stage 2	-	-	-	-	-	-	381	731	-	382	760	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	924	-	-	877	-	-	160	126	632	166	125	654
Stage 1	-	-	-	-	-	-	372	420	-	386	432	-
Stage 2	-	-	-	-	-	-	619	430	-	618	417	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	911	-	-	874	-	-	152	119	630	144	118	645
Mov Cap-2 Maneuver	-	-	-	-	-	-	152	119	-	144	118	-
Stage 1	-	-	-	-	-	-	366	414	-	376	413	-
Stage 2	-	-	-	-	-	-	589	411	-	556	411	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.1	0.4	16.3	16.3
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	389	911	-	-	874	-	-	335
HCM Lane V/C Ratio	0.179	0.012	-	-	0.031	-	-	0.047
HCM Ctrl Dly (s/v)	16.3	9	-	-	9.3	-	-	16.3
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q (veh)	0.6	0	-	-	0.1	-	-	0.1

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	705	0	0	647	0	0	0	0	0	0	0
Future Vol, veh/h	0	705	0	0	647	0	0	0	0	0	0	0
Conflicting Peds, #/hr	9	0	3	3	0	9	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	15	-	-	15	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	5	0	0	4	0	0	0	0	0	0	0
Mvmt Flow	0	750	0	0	688	0	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	697	0	0	753	0	0	1097	1450	378	1072	1450	353
Stage 1	-	-	-	-	-	-	753	753	-	697	697	-
Stage 2	-	-	-	-	-	-	344	697	-	375	753	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	909	-	-	866	-	-	170	132	625	177	132	649
Stage 1	-	-	-	-	-	-	372	420	-	402	446	-
Stage 2	-	-	-	-	-	-	650	446	-	624	420	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	903	-	-	864	-	-	170	131	624	176	131	644
Mov Cap-2 Maneuver	-	-	-	-	-	-	170	131	-	176	131	-
Stage 1	-	-	-	-	-	-	371	419	-	399	443	-
Stage 2	-	-	-	-	-	-	650	443	-	624	419	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	0	0
HCM LOS			A	A

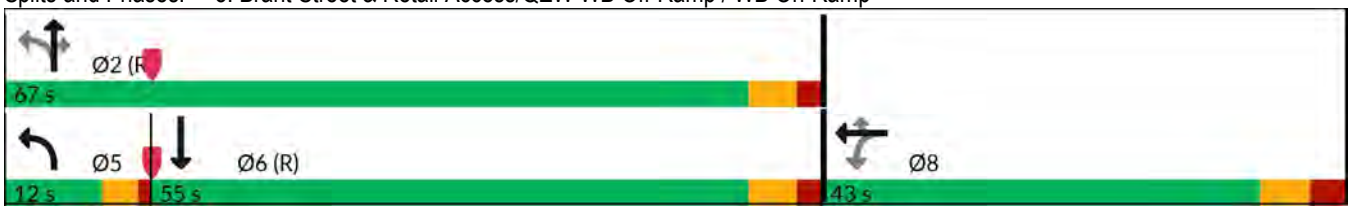
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	903	-	-	864	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Ctrl Dly (s/v)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q (veh)	-	0	-	-	0	-	-	-

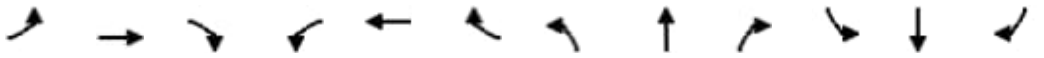
Lane Group	WBL	WBT	WBR	NBL	NBT	NBR	SBT
Lane Configurations							
Traffic Volume (vph)	340	14	347	28	820	198	1480
Future Volume (vph)	340	14	347	28	820	198	1480
Lane Group Flow (vph)	201	201	394	32	932	225	1683
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	NA
Protected Phases		8		5	2		6
Permitted Phases	8		8	2		2	
Detector Phase	8	8	8	5	2	2	6
Switch Phase							
Minimum Initial (s)	8.0	8.0	8.0	7.0	8.0	8.0	8.0
Minimum Split (s)	37.0	37.0	37.0	11.5	28.0	28.0	28.0
Total Split (s)	43.0	43.0	43.0	12.0	67.0	67.0	55.0
Total Split (%)	39.1%	39.1%	39.1%	10.9%	60.9%	60.9%	50.0%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	4.0	6.0	6.0	6.0
Lead/Lag				Lead			Lag
Lead-Lag Optimize?				Yes			Yes
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max
v/c Ratio	0.54	0.51	0.87	0.17	0.29	0.23	0.59
Control Delay (s/veh)	39.9	38.7	46.0	16.1	15.5	7.6	18.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	39.9	38.7	46.0	16.1	15.5	7.6	18.7
Queue Length 50th (m)	40.9	40.6	61.0	3.5	44.8	0.4	96.2
Queue Length 95th (m)	58.1	57.3	88.4	9.6	60.5	24.4	127.8
Internal Link Dist (m)		133.1			264.9		193.7
Turn Bay Length (m)				60.0		130.0	
Base Capacity (vph)	494	523	563	203	3188	989	2852
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.38	0.70	0.16	0.29	0.23	0.59

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 100 (91%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Description: action plan 2 for am, 3 for pm

Splits and Phases: 5: Brant Street & Retail Access/QEW WB Off-Ramp / WB On-Ramp





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	340	14	347	28	820	198	0	1480	1
Future Volume (vph)	0	0	0	340	14	347	28	820	198	0	1480	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)				7.0	7.0	7.0	4.0	6.0	6.0		6.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.91	1.00		0.91	
Frpb, ped/bikes				1.00	1.00	1.00	1.00	1.00	0.98		1.00	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00	1.00		1.00	
Frt				1.00	1.00	0.85	1.00	1.00	0.85		1.00	
Flt Protected				0.95	0.96	1.00	0.95	1.00	1.00		1.00	
Satd. Flow (prot)				1510	1600	1478	1620	5029	1431		4980	
Flt Permitted				0.95	0.96	1.00	0.09	1.00	1.00		1.00	
Satd. Flow (perm)				1510	1600	1478	146	5029	1431		4980	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	0	0	0	386	16	394	32	932	225	0	1682	1
RTOR Reduction (vph)	0	0	0	0	0	89	0	0	82	0	0	0
Lane Group Flow (vph)	0	0	0	201	201	305	32	932	143	0	1683	0
Confl. Peds. (#/hr)									1	1		
Heavy Vehicles (%)	0%	0%	0%	6%	14%	2%	4%	2%	3%	0%	3%	0%
Turn Type				Perm	NA	Perm	pm+pt	NA	Perm		NA	
Protected Phases					8		5	2			6	
Permitted Phases				8		8	2		2			
Actuated Green, G (s)				27.3	27.3	27.3	69.7	69.7	69.7		61.4	
Effective Green, g (s)				27.3	27.3	27.3	69.7	69.7	69.7		61.4	
Actuated g/C Ratio				0.25	0.25	0.25	0.63	0.63	0.63		0.56	
Clearance Time (s)				7.0	7.0	7.0	4.0	6.0	6.0		6.0	
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)				374	397	366	150	3186	906		2779	
v/s Ratio Prot							0.01	c0.19			c0.34	
v/s Ratio Perm				0.13	0.13	c0.21	0.13		0.10			
v/c Ratio				0.54	0.51	0.83	0.21	0.29	0.16		0.61	
Uniform Delay, d1				35.9	35.6	39.2	10.4	9.1	8.2		16.2	
Progression Factor				1.00	1.00	1.00	1.58	1.52	4.50		1.00	
Incremental Delay, d2				1.5	1.0	15.0	0.7	0.2	0.4		1.0	
Delay (s)				37.4	36.6	54.2	17.2	14.0	37.3		17.2	
Level of Service				D	D	D	B	B	D		B	
Approach Delay (s/veh)		0.0			45.5			18.5			17.2	
Approach LOS		A			D			B			B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	23.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	50.7%	ICU Level of Service	A
Analysis Period (min)	15		
Description: action plan 2 for am, 3 for pm			

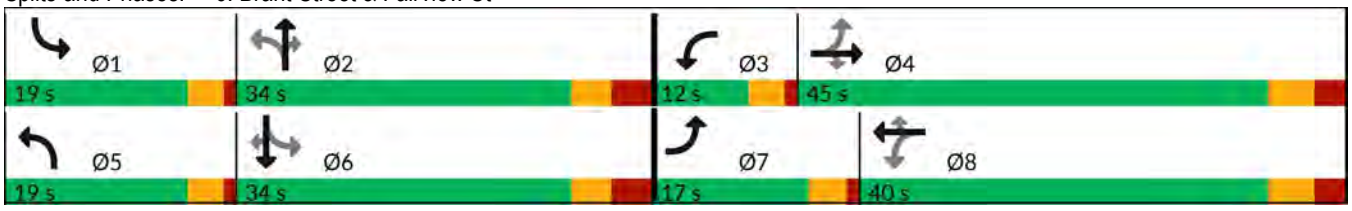
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	692	177	137	315	150	162	603	174	166	606	41
Future Volume (vph)	250	692	177	137	315	150	162	603	174	166	606	41
Lane Group Flow (vph)	253	699	179	138	318	152	164	609	176	168	612	41
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	8.0	8.0	7.0	8.0	8.0	7.0	8.0	8.0	7.0	8.0	8.0
Minimum Split (s)	12.0	31.4	31.4	12.0	31.4	31.4	12.0	31.5	31.5	12.0	31.5	31.5
Total Split (s)	17.0	45.0	45.0	12.0	40.0	40.0	19.0	34.0	34.0	19.0	34.0	34.0
Total Split (%)	15.5%	40.9%	40.9%	10.9%	36.4%	36.4%	17.3%	30.9%	30.9%	17.3%	30.9%	30.9%
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.3	3.3	3.0	3.3	3.3
All-Red Time (s)	1.0	2.7	2.7	1.0	2.7	2.7	1.0	3.2	3.2	1.0	3.2	3.2
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)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.5	6.5	4.0	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
v/c Ratio	0.53	0.72	0.34	0.51	0.42	0.35	0.48	0.72	0.37	0.51	0.72	0.09
Control Delay (s/veh)	20.8	32.7	6.0	23.3	30.6	7.5	20.3	35.7	7.3	21.0	35.8	0.4
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 (s/veh)	20.8	32.7	6.0	23.3	30.6	7.5	20.3	35.7	7.3	21.0	35.8	0.4
Queue Length 50th (m)	26.8	56.0	0.0	13.5	24.5	0.0	16.2	49.6	0.0	16.7	50.0	0.0
Queue Length 95th (m)	53.5	87.3	15.3	29.9	41.8	15.1	33.9	80.6	16.6	34.8	81.0	0.0
Internal Link Dist (m)		607.3			241.7			325.5			422.3	
Turn Bay Length (m)	300.0		140.0	60.0		100.0	84.0		70.0	45.0		60.0
Base Capacity (vph)	490	1631	771	277	1353	648	415	1185	587	409	1197	545
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.43	0.23	0.50	0.24	0.23	0.40	0.51	0.30	0.41	0.51	0.08

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 84.5
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Description: pattern 2 for AM, 3 for PM (sched 1)

Splits and Phases: 6: Brant Street & Fairview St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	692	177	137	315	150	162	603	174	166	606	41
Future Volume (vph)	250	692	177	137	315	150	162	603	174	166	606	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.5	6.5	4.0	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.98
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	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1634	3466	1440	1574	3305	1362	1635	3535	1413	1601	3570	1326
Flt Permitted	0.46	1.00	1.00	0.29	1.00	1.00	0.26	1.00	1.00	0.27	1.00	1.00
Satd. Flow (perm)	788	3466	1440	481	3305	1362	454	3535	1413	461	3570	1326
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	253	699	179	138	318	152	164	609	176	168	612	41
RTOR Reduction (vph)	0	0	128	0	0	117	0	0	133	0	0	31
Lane Group Flow (vph)	253	699	51	138	318	35	164	609	43	168	612	10
Confl. Peds. (#/hr)	3		4	4		3	3		22	22		3
Heavy Vehicles (%)	3%	3%	3%	7%	8%	9%	3%	1%	3%	5%	0%	12%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	35.7	23.7	23.7	27.4	19.4	19.4	31.6	20.4	20.4	31.2	20.2	20.2
Effective Green, g (s)	35.7	23.7	23.7	27.4	19.4	19.4	31.6	20.4	20.4	31.2	20.2	20.2
Actuated g/C Ratio	0.43	0.28	0.28	0.33	0.23	0.23	0.38	0.24	0.24	0.37	0.24	0.24
Clearance Time (s)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.5	6.5	4.0	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)	458	977	406	260	763	314	328	858	343	320	858	318
v/s Ratio Prot	c0.08	c0.20		0.05	0.10		0.07	c0.17		c0.07	0.17	
v/s Ratio Perm	0.15		0.04	0.12		0.03	0.12		0.03	0.13		0.01
v/c Ratio	0.55	0.72	0.12	0.53	0.42	0.11	0.50	0.71	0.12	0.53	0.71	0.03
Uniform Delay, d1	16.6	27.1	22.4	21.1	27.5	25.5	18.6	29.1	24.8	18.9	29.2	24.4
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	1.4	2.5	0.1	2.1	0.4	0.2	1.2	2.7	0.2	1.6	2.8	0.0
Delay (s)	18.0	29.6	22.6	23.2	27.9	25.7	19.8	31.8	25.0	20.5	32.1	24.5
Level of Service	B	C	C	C	C	C	B	C	C	C	C	C
Approach Delay (s/veh)		25.9			26.2			28.5			29.3	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	27.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	84.0	Sum of lost time (s)	20.9
Intersection Capacity Utilization	71.8%	ICU Level of Service	C
Analysis Period (min)	15		
Description: pattern 2 for AM, 3 for PM (sched 1)			

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	24	654	594	29	20	44
Future Vol, veh/h	24	654	594	29	20	44
Conflicting Peds, #/hr	1	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	40	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	3	4	4	0	3
Mvmt Flow	28	769	699	34	24	52

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	734	0	-	0	1158	368
Stage 1	-	-	-	-	717	-
Stage 2	-	-	-	-	441	-
Critical Hdwy	4.1	-	-	-	6.8	6.96
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.33
Pot Cap-1 Maneuver	880	-	-	-	192	626
Stage 1	-	-	-	-	450	-
Stage 2	-	-	-	-	622	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	879	-	-	-	185	626
Mov Cap-2 Maneuver	-	-	-	-	314	-
Stage 1	-	-	-	-	435	-
Stage 2	-	-	-	-	621	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.3	0	13.2
HCM LOS			B

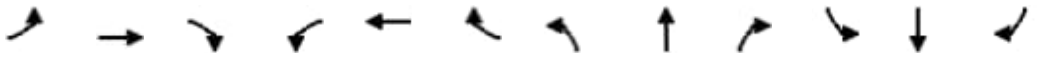
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	879	-	-	-	314	626
HCM Lane V/C Ratio	0.032	-	-	-	0.075	0.083
HCM Ctrl Dly (s/v)	9.2	-	-	-	17.4	11.3
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q (veh)	0.1	-	-	-	0.2	0.3

Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	964	196	5	693	197	79
Future Volume (vph)	964	196	5	693	197	79
Lane Group Flow (vph)	1071	218	0	776	219	88
Turn Type	NA	Perm	Perm	NA	Perm	Perm
Protected Phases	2			6		
Permitted Phases		2	6		8	8
Detector Phase	2	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	41.0	41.0	41.0	41.0	25.0	25.0
Total Split (s)	75.0	75.0	75.0	75.0	25.0	25.0
Total Split (%)	75.0%	75.0%	75.0%	75.0%	25.0%	25.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0		7.0	7.0	7.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
v/c Ratio	0.29	0.19		0.23	0.57	0.34
Control Delay (s/veh)	4.8	1.1		4.5	47.0	12.4
Queue Delay	0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	4.8	1.1		4.5	47.0	12.4
Queue Length 50th (m)	22.3	0.0		15.3	22.0	0.0
Queue Length 95th (m)	32.4	6.3		23.1	32.9	13.7
Internal Link Dist (m)	279.6			287.3		
Turn Bay Length (m)		70.0				
Base Capacity (vph)	3709	1136		3387	565	335
Starvation Cap Reductn	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0
Reduced v/c Ratio	0.29	0.19		0.23	0.39	0.26

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 31 (31%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Description: Pattern 2 for AM, 3 for PM

Splits and Phases: 8: QEW SB On-Ramp/QEW SB Off-Ramp & Plains Rd E





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	964	196	5	693	0	0	0	0	197	0	79
Future Volume (vph)	0	964	196	5	693	0	0	0	0	197	0	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)		7.0	7.0		7.0					7.0		7.0
Lane Util. Factor		0.91	1.00		0.91					0.97		1.00
Frpb, ped/bikes		1.00	1.00		1.00					1.00		1.00
Flpb, ped/bikes		1.00	1.00		1.00					1.00		1.00
Frt		1.00	0.85		1.00					1.00		0.85
Flt Protected		1.00	1.00		1.00					0.95		1.00
Satd. Flow (prot)		5029	1463		4932					3143		1463
Flt Permitted		1.00	1.00		0.93					0.95		1.00
Satd. Flow (perm)		5029	1463		4595					3143		1463
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)	0	1071	218	6	770	0	0	0	0	219	0	88
RTOR Reduction (vph)	0	0	57	0	0	0	0	0	0	0	0	77
Lane Group Flow (vph)	0	1071	161	0	776	0	0	0	0	219	0	11
Confl. Peds. (#/hr)	3					3						
Heavy Vehicles (%)	0%	2%	3%	0%	4%	0%	0%	0%	0%	4%	0%	3%
Turn Type		NA	Perm	Perm	NA					Perm		Perm
Protected Phases		2			6							
Permitted Phases			2	6						8		8
Actuated Green, G (s)		73.8	73.8		73.8					12.2		12.2
Effective Green, g (s)		73.8	73.8		73.8					12.2		12.2
Actuated g/C Ratio		0.74	0.74		0.74					0.12		0.12
Clearance Time (s)		7.0	7.0		7.0					7.0		7.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0		3.0
Lane Grp Cap (vph)		3711	1079		3391					383		178
v/s Ratio Prot		c0.21										
v/s Ratio Perm			0.11		0.17					c0.07		0.01
v/c Ratio		0.29	0.15		0.23					0.57		0.06
Uniform Delay, d1		4.4	3.9		4.1					41.4		38.8
Progression Factor		1.00	1.00		1.00					1.00		1.00
Incremental Delay, d2		0.2	0.3		0.2					2.1		0.1
Delay (s)		4.6	4.1		4.3					43.5		39.0
Level of Service		A	A		A					D		D
Approach Delay (s/veh)		4.5			4.3			0.0			42.2	
Approach LOS		A			A			A			D	

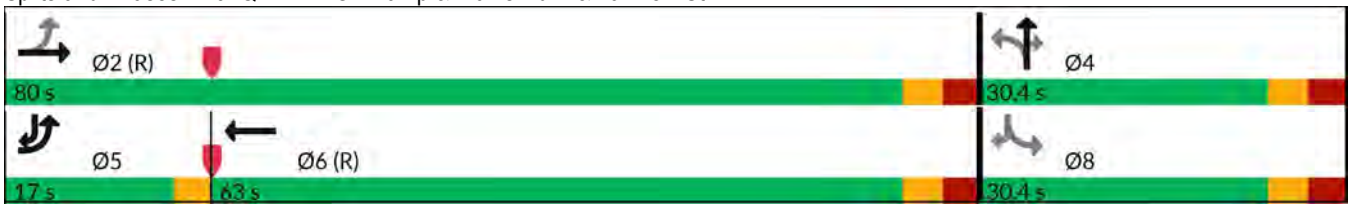
Intersection Summary			
HCM 2000 Control Delay (s/veh)	9.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		
Description: Pattern 2 for AM, 3 for PM			

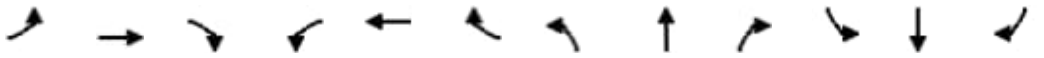
c Critical Lane Group

Lane Group	EBL	EBT	WBT	NBL	NBT	NBR	SBL	SBR
Lane Configurations								
Traffic Volume (vph)	191	863	649	89	204	331	49	531
Future Volume (vph)	191	863	649	89	204	331	49	531
Lane Group Flow (vph)	203	918	708	85	308	271	52	565
Turn Type	pm+pt	NA	NA	Perm	NA	Perm	Perm	pm+ov
Protected Phases	5	2	6		4			5
Permitted Phases	2			4		4	8	8
Detector Phase	5	2	6	4	4	4	8	5
Switch Phase								
Minimum Initial (s)	6.0	8.0	8.0	8.0	8.0	8.0	8.0	6.0
Minimum Split (s)	9.0	35.1	35.1	30.4	30.4	30.4	30.4	9.0
Total Split (s)	17.0	80.0	63.0	30.4	30.4	30.4	30.4	17.0
Total Split (%)	15.4%	72.5%	57.1%	27.5%	27.5%	27.5%	27.5%	15.4%
Yellow Time (s)	3.0	3.3	3.3	3.3	3.3	3.3	3.3	3.0
All-Red Time (s)	0.0	2.8	2.8	3.1	3.1	3.1	3.1	0.0
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	6.1	6.1	6.4	6.4	6.4	6.4	3.0
Lead/Lag	Lead		Lag					Lead
Lead-Lag Optimize?	Yes		Yes					Yes
Recall Mode	None	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.37	0.27	0.27	0.21	0.78	0.55	0.42	0.79
Control Delay (s/veh)	9.4	9.0	15.9	33.4	50.7	16.2	44.9	27.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	9.4	9.0	15.9	33.4	50.7	16.2	44.9	27.1
Queue Length 50th (m)	15.0	29.5	30.2	16.4	68.7	17.7	10.1	78.4
Queue Length 95th (m)	29.9	44.5	49.0	28.3	95.8	41.6	21.5	101.3
Internal Link Dist (m)		287.3	180.4		94.5			
Turn Bay Length (m)	35.0					50.0	80.0	
Base Capacity (vph)	580	3512	2792	422	419	512	130	758
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	0.35	0.26	0.25	0.20	0.74	0.53	0.40	0.75

Intersection Summary
Cycle Length: 110.4
Actuated Cycle Length: 110.4
Offset: 97 (88%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Description: event plan 2 for AM, 3 for PM

Splits and Phases: 9: QEW NB Off-Ramp & Plains Rd E & Fairview St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	191	863	0	0	649	17	89	204	331	49	0	531
Future Volume (vph)	191	863	0	0	649	17	89	204	331	49	0	531
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Total Lost time (s)	3.0	6.1			6.1		6.4	6.4	6.4	6.4		3.0
Lane Util. Factor	1.00	0.91			0.91		0.95	0.91	0.95	1.00		1.00
Frpb, ped/bikes	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
Frt	1.00	1.00			1.00		1.00	0.96	0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00	0.95		1.00
Satd. Flow (prot)	1789	5142			5026		1700	1644	1521	1825		1541
Flt Permitted	0.34	1.00			1.00		0.95	1.00	1.00	0.27		1.00
Satd. Flow (perm)	634	5142			5026		1700	1644	1521	526		1541
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)	203	918	0	0	690	18	95	217	352	52	0	565
RTOR Reduction (vph)	0	0	0	0	2	0	0	11	138	0	0	125
Lane Group Flow (vph)	203	918	0	0	706	0	85	297	133	52	0	440
Confl. Peds. (#/hr)	2					2						
Heavy Vehicles (%)	2%	2%	0%	0%	4%	0%	2%	2%	2%	0%	0%	6%
Turn Type	pm+pt	NA			NA		Perm	NA	Perm	Perm		pm+ov
Protected Phases	5	2			6			4				5
Permitted Phases	2						4		4	8		8
Actuated Green, G (s)	72.0	72.0			58.3		25.9	25.9	25.9	25.9		36.6
Effective Green, g (s)	72.0	72.0			58.3		25.9	25.9	25.9	25.9		36.6
Actuated g/C Ratio	0.65	0.65			0.53		0.23	0.23	0.23	0.23		0.33
Clearance Time (s)	3.0	6.1			6.1		6.4	6.4	6.4	6.4		3.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	525	3353			2654		398	385	356	123		510
v/s Ratio Prot	0.04	0.18			0.14							c0.08
v/s Ratio Perm	c0.21						0.05	0.18	0.09	0.10		0.20
v/c Ratio	0.39	0.27			0.27		0.21	0.77	0.37	0.42		0.86
Uniform Delay, d1	7.7	8.1			14.3		34.0	39.5	35.5	35.9		34.5
Progression Factor	1.00	1.00			1.00		1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2	0.5	0.2			0.2		0.3	9.2	0.7	2.3		14.0
Delay (s)	8.2	8.3			14.5		34.3	48.7	36.1	38.2		48.6
Level of Service	A	A			B		C	D	D	D		D
Approach Delay (s/veh)		8.3			14.5			41.7			47.7	
Approach LOS		A			B			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	24.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	110.4	Sum of lost time (s)	15.5
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		
Description: event plan 2 for AM, 3 for PM			

c Critical Lane Group

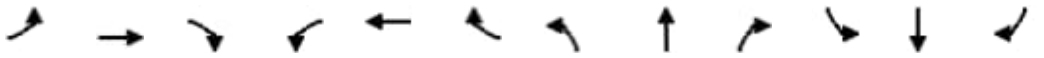
Lane Group	EBL	EBT	EBR	NBT	NBR	SBT
Lane Configurations						
Traffic Volume (vph)	125	0	178	916	361	1194
Future Volume (vph)	125	0	178	916	361	1194
Lane Group Flow (vph)	108	104	101	944	372	1231
Turn Type	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		2		6
Permitted Phases	4		4		2	
Detector Phase	4	4	4	2	2	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	37.0	37.0	37.0	28.0	28.0	28.0
Total Split (s)	43.0	43.0	43.0	67.0	67.0	67.0
Total Split (%)	39.1%	39.1%	39.1%	60.9%	60.9%	60.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	C-Max	C-Max	C-Max
v/c Ratio	0.58	0.48	0.48	0.25	0.32	0.33
Control Delay (s/veh)	57.6	29.4	29.3	4.2	1.2	9.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	57.6	29.4	29.3	4.2	1.2	9.4
Queue Length 50th (m)	24.7	11.0	9.8	18.9	0.0	71.6
Queue Length 95th (m)	42.1	28.7	26.7	29.4	7.8	95.6
Internal Link Dist (m)		230.7		394.1		264.9
Turn Bay Length (m)					80.0	
Base Capacity (vph)	518	507	487	3768	1159	3768
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.21	0.21	0.25	0.32	0.33

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 49 (45%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Description: from project 24223.
pattern 2 for AM, 3 for PM (sched 1)

Splits and Phases: 10: Brant Street & Hwy 403 EB Off-Ramp/QEW EB On-Ramp





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	125	0	178	0	0	0	0	916	361	0	1194	0
Future Volume (vph)	125	0	178	0	0	0	0	916	361	0	1194	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)	7.0	7.0	7.0					6.0	6.0		6.0	
Lane Util. Factor	0.95	0.91	0.95					0.91	1.00		0.91	
Frpb, ped/bikes	1.00	0.99	0.99					1.00	0.98		1.00	
Flpb, ped/bikes	1.00	1.00	1.00					1.00	1.00		1.00	
Frt	1.00	0.88	0.85					1.00	0.85		1.00	
Flt Protected	0.95	0.99	1.00					1.00	1.00		1.00	
Satd. Flow (prot)	1585	1436	1371					4932	1403		4932	
Flt Permitted	0.95	0.99	1.00					1.00	1.00		1.00	
Satd. Flow (perm)	1585	1436	1371					4932	1403		4932	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	129	0	184	0	0	0	0	944	372	0	1231	0
RTOR Reduction (vph)	0	49	49	0	0	0	0	0	88	0	0	0
Lane Group Flow (vph)	108	55	52	0	0	0	0	944	284	0	1231	0
Confl. Peds. (#/hr)									1	1		
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	1%	0%	3%	0%	0%	0%	0%	4%	5%	0%	4%	0%
Turn Type	Perm	NA	Perm					NA	Perm		NA	
Protected Phases		4						2			6	
Permitted Phases	4		4						2			
Actuated Green, G (s)	13.0	13.0	13.0					84.0	84.0		84.0	
Effective Green, g (s)	13.0	13.0	13.0					84.0	84.0		84.0	
Actuated g/C Ratio	0.12	0.12	0.12					0.76	0.76		0.76	
Clearance Time (s)	7.0	7.0	7.0					6.0	6.0		6.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0	3.0		3.0	
Lane Grp Cap (vph)	187	169	162					3766	1071		3766	
v/s Ratio Prot								0.19			c0.25	
v/s Ratio Perm	c0.07	0.04	0.04						0.20			
v/c Ratio	0.58	0.32	0.32					0.25	0.27		0.33	
Uniform Delay, d1	45.9	44.5	44.4					3.8	3.9		4.1	
Progression Factor	1.00	1.00	1.00					1.00	1.00		2.08	
Incremental Delay, d2	4.3	1.1	1.1					0.2	0.6		0.2	
Delay (s)	50.2	45.6	45.6					4.0	4.5		8.7	
Level of Service	D	D	D					A	A		A	
Approach Delay (s/veh)		47.2			0.0			4.1			8.7	
Approach LOS		D			A			A			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	10.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	41.3%	ICU Level of Service	A
Analysis Period (min)	15		
Description: from project 24223.			
pattern 2 for AM, 3 for PM (sched 1)			

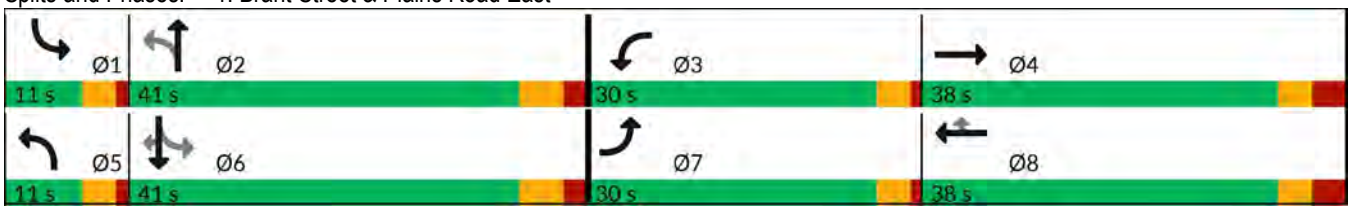
c Critical Lane Group

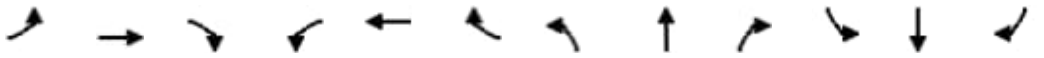
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	561	248	111	846	368	60	980	104	875	746
Future Volume (vph)	561	248	111	846	368	60	980	104	875	746
Lane Group Flow (vph)	578	331	114	872	379	62	1090	107	902	769
Turn Type	Prot	NA	Prot	NA	Perm	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	7	4	3	8		5	2	1	6	
Permitted Phases					8	2		6		6
Detector Phase	7	4	3	8	8	5	2	1	6	6
Switch Phase										
Minimum Initial (s)	7.0	8.0	7.0	8.0	8.0	7.0	8.0	7.0	8.0	8.0
Minimum Split (s)	11.0	38.0	11.0	38.0	38.0	11.0	33.0	11.0	33.0	33.0
Total Split (s)	30.0	38.0	30.0	38.0	38.0	11.0	41.0	11.0	41.0	41.0
Total Split (%)	25.0%	31.7%	25.0%	31.7%	31.7%	9.2%	34.2%	9.2%	34.2%	34.2%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	4.0	3.0	4.0	4.0
All-Red Time (s)	1.0	3.0	1.0	3.0	3.0	1.0	2.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0	4.0	6.0	6.0	4.0	6.0	4.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	Max	None	Max	Max
v/c Ratio	0.87	0.52	0.60	0.94	0.78	0.29	0.74	0.65	0.56	0.96
Control Delay (s/veh)	59.6	33.0	62.9	60.3	39.0	26.1	40.8	43.7	36.2	37.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	59.6	33.0	62.9	60.3	39.0	26.1	40.8	43.7	36.2	37.6
Queue Length 50th (m)	70.9	60.6	27.4	111.3	59.4	9.5	89.0	16.8	70.6	84.5
Queue Length 95th (m)	#97.1	96.8	45.1	#151.3	#107.4	19.0	106.5	#34.5	85.9	#177.5
Internal Link Dist (m)		240.4		173.9			422.3		394.1	
Turn Bay Length (m)	65.0		60.0		75.0	60.0		55.0		40.0
Base Capacity (vph)	716	632	369	953	492	214	1471	164	1598	805
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.52	0.31	0.92	0.77	0.29	0.74	0.65	0.56	0.96

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 117.6
Natural Cycle: 115
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Brant Street & Plains Road East





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	561	248	73	111	846	368	60	980	78	104	875	746
Future Volume (vph)	561	248	73	111	846	368	60	980	78	104	875	746
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0
Lane Util. Factor	0.97	1.00		1.00	0.95	1.00	1.00	0.91		1.00	0.91	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.98	1.00	1.00		1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3236	1742		1668	3500	1467	1651	4915		1620	5029	1449
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.21	1.00		0.12	1.00	1.00
Satd. Flow (perm)	3236	1742		1668	3500	1467	370	4915		209	5029	1449
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	578	256	75	114	872	379	62	1010	80	107	902	769
RTOR Reduction (vph)	0	8	0	0	0	94	0	8	0	0	0	346
Lane Group Flow (vph)	578	323	0	114	872	285	62	1082	0	107	902	423
Confl. Peds. (#/hr)	2		5	5		2	11		4	4		11
Confl. Bikes (#/hr)						3						4
Heavy Vehicles (%)	1%	4%	3%	1%	2%	1%	2%	3%	4%	4%	2%	1%
Turn Type	Prot	NA		Prot	NA	Perm	pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8	2			6		6
Actuated Green, G (s)	24.3	42.2		13.4	31.3	31.3	41.4	35.9		44.4	37.4	37.4
Effective Green, g (s)	24.3	42.2		13.4	31.3	31.3	41.4	35.9		44.4	37.4	37.4
Actuated g/C Ratio	0.21	0.36		0.11	0.26	0.26	0.35	0.30		0.37	0.32	0.32
Clearance Time (s)	4.0	6.0		4.0	6.0	6.0	4.0	6.0		4.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	663	620		188	924	387	188	1489		161	1587	457
v/s Ratio Prot	c0.18	0.19		0.07	c0.25		0.02	0.22		c0.04	0.18	
v/s Ratio Perm						0.19	0.10			0.21		c0.29
v/c Ratio	0.87	0.52		0.61	0.94	0.74	0.33	0.73		0.66	0.57	0.93
Uniform Delay, d1	45.6	30.2		50.0	42.7	39.8	26.6	36.9		26.9	33.8	39.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	12.1	0.8		5.4	17.5	7.1	1.0	3.1		9.9	1.5	27.2
Delay (s)	57.7	31.0		55.5	60.2	46.9	27.6	40.1		36.7	35.3	66.4
Level of Service	E	C		E	E	D	C	D		D	D	E
Approach Delay (s/veh)		48.0			56.1			39.4			48.9	
Approach LOS		D			E			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	48.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	118.5	Sum of lost time (s)	20.0
Intersection Capacity Utilization	90.1%	ICU Level of Service	E
Analysis Period (min)	15		

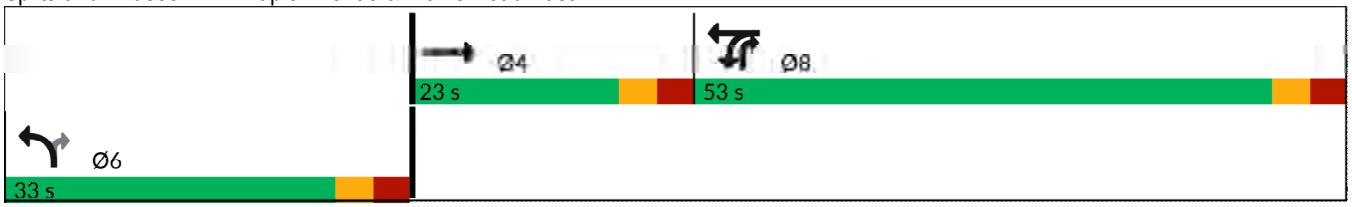
c Critical Lane Group

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Traffic Volume (vph)	440	881	705	65	429
Future Volume (vph)	440	881	705	65	429
Lane Group Flow (vph)	540	968	775	71	471
Turn Type	NA	Split	NA	Prot	pm+ov
Protected Phases	4	8	8	6	8
Permitted Phases					6
Detector Phase	4	8	8	6	8
Switch Phase					
Minimum Initial (s)	8.0	8.0	8.0	7.0	8.0
Minimum Split (s)	14.0	33.0	33.0	33.0	33.0
Total Split (s)	23.0	53.0	53.0	33.0	53.0
Total Split (%)	21.1%	48.6%	48.6%	30.3%	48.6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	Max	None	None	None	None
v/c Ratio	0.79	0.57	0.81	0.39	0.51
Control Delay (s/veh)	44.1	16.7	26.9	44.7	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	44.1	16.7	26.9	44.7	9.1
Queue Length 50th (m)	50.2	60.2	113.8	12.5	33.6
Queue Length 95th (m)	#82.2	85.6	#199.2	25.8	52.4
Internal Link Dist (m)	259.0		484.0	228.5	
Turn Bay Length (m)		85.0			
Base Capacity (vph)	684	1803	1016	534	966
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.79	0.54	0.76	0.13	0.49

Intersection Summary

Cycle Length: 109
Actuated Cycle Length: 86.8
Natural Cycle: 100
Control Type: Semi Act-Uncoord
Description: STP from video
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Maple Avenue & Plains Road East



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	440	51	881	705	65	429
Future Volume (vph)	440	51	881	705	65	429
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.0	3.0	3.5	3.0	3.0
Total Lost time (s)	6.0		6.0	6.0	6.0	6.0
Lane Util. Factor	0.95		0.97	1.00	1.00	1.00
Frpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3390		3268	1842	1685	1504
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3390		3268	1842	1685	1504
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	484	56	968	775	71	471
RTOR Reduction (vph)	8	0	0	0	0	6
Lane Group Flow (vph)	532	0	968	775	71	465
Confl. Peds. (#/hr)						5
Heavy Vehicles (%)	2%	18%	0%	2%	0%	0%
Turn Type	NA		Split	NA	Prot	pm+ov
Protected Phases	4		8	8	6	8
Permitted Phases						6
Actuated Green, G (s)	17.3		45.1	45.1	7.6	52.7
Effective Green, g (s)	17.3		45.1	45.1	7.6	52.7
Actuated g/C Ratio	0.20		0.51	0.51	0.09	0.60
Clearance Time (s)	6.0		6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	666		1674	944	145	1003
v/s Ratio Prot	c0.16		0.30	c0.42	0.04	c0.24
v/s Ratio Perm						0.07
v/c Ratio	0.80		0.58	0.82	0.49	0.46
Uniform Delay, d1	33.7		14.9	18.1	38.3	9.8
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	9.7		0.5	5.8	2.6	0.3
Delay (s)	43.4		15.3	23.9	40.9	10.1
Level of Service	D		B	C	D	B
Approach Delay (s/veh)	43.4			19.1	14.2	
Approach LOS	D			B	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	22.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	88.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	62.3%	ICU Level of Service	B
Analysis Period (min)	15		
Description: STP from video			

c Critical Lane Group

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	766	27	47	1635	11	18	0	48	3	0	16
Future Vol, veh/h	7	766	27	47	1635	11	18	0	48	3	0	16
Conflicting Peds, #/hr	14	0	4	4	0	14	2	0	1	1	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	15	-	-	15	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	2	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	7	798	28	49	1703	11	19	0	50	3	0	17

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1728	0	0	830	0	0	1782	2656	418	2235	2665	873
Stage 1	-	-	-	-	-	-	830	830	-	1821	1821	-
Stage 2	-	-	-	-	-	-	952	1826	-	414	844	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	370	-	-	811	-	-	53	23	589	24	23	297
Stage 1	-	-	-	-	-	-	335	388	-	82	130	-
Stage 2	-	-	-	-	-	-	283	129	-	592	382	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	366	-	-	808	-	-	47	21	587	20	21	293
Mov Cap-2 Maneuver	-	-	-	-	-	-	47	21	-	20	21	-
Stage 1	-	-	-	-	-	-	328	379	-	80	121	-
Stage 2	-	-	-	-	-	-	250	120	-	531	374	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.1	0.3	52.1	53.9
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	142	366	-	-	808	-	-	93
HCM Lane V/C Ratio	0.484	0.02	-	-	0.061	-	-	0.213
HCM Ctrl Dly (s/v)	52.1	15	-	-	9.7	-	-	53.9
HCM Lane LOS	F	C	-	-	A	-	-	F
HCM 95th %tile Q (veh)	2.3	0.1	-	-	0.2	-	-	0.8

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	790	0	0	1659	1	0	0	0	1	0	1
Future Vol, veh/h	1	790	0	0	1659	1	0	0	0	1	0	1
Conflicting Peds, #/hr	13	0	2	2	0	13	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	15	-	-	15	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	2	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	1	832	0	0	1746	1	0	0	0	1	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1760	0	0	834	0	0	1710	2596	418	2178	2596	888
Stage 1	-	-	-	-	-	-	836	836	-	1760	1760	-
Stage 2	-	-	-	-	-	-	874	1760	-	418	836	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	360	-	-	808	-	-	60	25	589	26	25	291
Stage 1	-	-	-	-	-	-	332	385	-	90	139	-
Stage 2	-	-	-	-	-	-	315	139	-	588	385	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	356	-	-	807	-	-	60	25	588	26	25	288
Mov Cap-2 Maneuver	-	-	-	-	-	-	60	25	-	26	25	-
Stage 1	-	-	-	-	-	-	331	383	-	89	138	-
Stage 2	-	-	-	-	-	-	314	138	-	586	383	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	0	83.4
HCM LOS			A	F

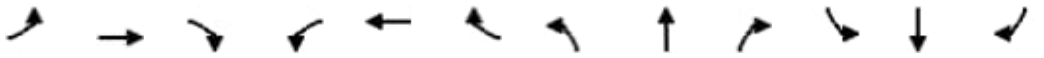
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	356	-	-	807	-	-	48
HCM Lane V/C Ratio	-	0.003	-	-	-	-	-	0.044
HCM Ctrl Dly (s/v)	0	15.1	-	-	0	-	-	83.4
HCM Lane LOS	A	C	-	-	A	-	-	F
HCM 95th %tile Q (veh)	-	0	-	-	0	-	-	0.1

Lane Group	WBL	WBT	WBR	NBL	NBT	NBR	SBT
Lane Configurations							
Traffic Volume (vph)	171	12	88	74	1427	379	1904
Future Volume (vph)	171	12	88	74	1427	379	1904
Lane Group Flow (vph)	92	94	90	76	1456	387	1946
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	NA
Protected Phases		8		5	2		6
Permitted Phases	8		8	2		2	
Detector Phase	8	8	8	5	2	2	6
Switch Phase							
Minimum Initial (s)	8.0	8.0	8.0	7.0	8.0	8.0	8.0
Minimum Split (s)	37.0	37.0	37.0	11.0	28.0	28.0	28.0
Total Split (s)	43.0	43.0	43.0	11.0	77.0	77.0	66.0
Total Split (%)	35.8%	35.8%	35.8%	9.2%	64.2%	64.2%	55.0%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	4.0	6.0	6.0	6.0
Lead/Lag				Lead			Lag
Lead-Lag Optimize?				Yes			Yes
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max
v/c Ratio	0.55	0.56	0.43	0.38	0.36	0.31	0.54
Control Delay (s/veh)	63.0	63.0	24.4	8.9	6.8	3.7	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	63.0	63.0	24.4	8.9	6.8	3.7	9.8
Queue Length 50th (m)	23.2	23.7	6.0	6.3	57.2	20.1	77.8
Queue Length 95th (m)	40.2	40.9	21.6	9.9	76.3	44.1	111.8
Internal Link Dist (m)		133.1			264.9		193.7
Turn Bay Length (m)				60.0		130.0	
Base Capacity (vph)	480	486	490	200	4039	1238	3604
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.19	0.18	0.38	0.36	0.31	0.54

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 100 (83%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Description: action plan 2 for am, 3 for pm

Splits and Phases: 5: Brant Street & Retail Access/QEW WB Off-Ramp / WB On-Ramp





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	171	12	88	74	1427	379	0	1904	3
Future Volume (vph)	0	0	0	171	12	88	74	1427	379	0	1904	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)				7.0	7.0	7.0	4.0	6.0	6.0		6.0	
Lane Util. Factor				0.95	0.95	1.00	1.00	0.91	1.00		0.91	
Frpb, ped/bikes				1.00	1.00	0.99	1.00	1.00	0.97		1.00	
Flpb, ped/bikes				1.00	1.00	1.00	1.00	1.00	1.00		1.00	
Frt				1.00	1.00	0.85	1.00	1.00	0.85		1.00	
Flt Protected				0.95	0.96	1.00	0.95	1.00	1.00		1.00	
Satd. Flow (prot)				1600	1623	1486	1636	5129	1469		5077	
Flt Permitted				0.95	0.96	1.00	0.08	1.00	1.00		1.00	
Satd. Flow (perm)				1600	1623	1486	131	5129	1469		5077	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	174	12	90	76	1456	387	0	1943	3
RTOR Reduction (vph)	0	0	0	0	0	57	0	0	82	0	0	0
Lane Group Flow (vph)	0	0	0	92	94	33	76	1456	305	0	1946	0
Confl. Peds. (#/hr)	2					2	5		2	2		5
Heavy Vehicles (%)	0%	0%	0%	0%	42%	0%	3%	0%	0%	0%	1%	0%
Turn Type				Perm	NA	Perm	pm+pt	NA	Perm		NA	
Protected Phases					8		5	2			6	
Permitted Phases				8		8	2		2			
Actuated Green, G (s)				12.5	12.5	12.5	94.5	94.5	94.5		84.3	
Effective Green, g (s)				12.5	12.5	12.5	94.5	94.5	94.5		84.3	
Actuated g/C Ratio				0.10	0.10	0.10	0.79	0.79	0.79		0.70	
Clearance Time (s)				7.0	7.0	7.0	4.0	6.0	6.0		6.0	
Vehicle Extension (s)				3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)				166	169	154	180	4039	1156		3566	
v/s Ratio Prot							0.02	c0.28			c0.38	
v/s Ratio Perm				0.06	0.06	0.02	0.31		0.21			
v/c Ratio				0.55	0.56	0.21	0.42	0.36	0.26		0.55	
Uniform Delay, d1				51.1	51.1	49.2	6.2	3.8	3.4		8.6	
Progression Factor				1.00	1.00	1.00	1.03	1.62	7.39		1.00	
Incremental Delay, d2				4.0	3.9	0.7	1.5	0.2	0.5		0.6	
Delay (s)				55.1	55.0	49.9	8.0	6.4	25.8		9.2	
Level of Service				E	E	D	A	A	C		A	
Approach Delay (s/veh)		0.0			53.4			10.3			9.2	
Approach LOS		A			D			B			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	12.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	64.7%	ICU Level of Service	C
Analysis Period (min)	15		
Description: action plan 2 for am, 3 for pm			

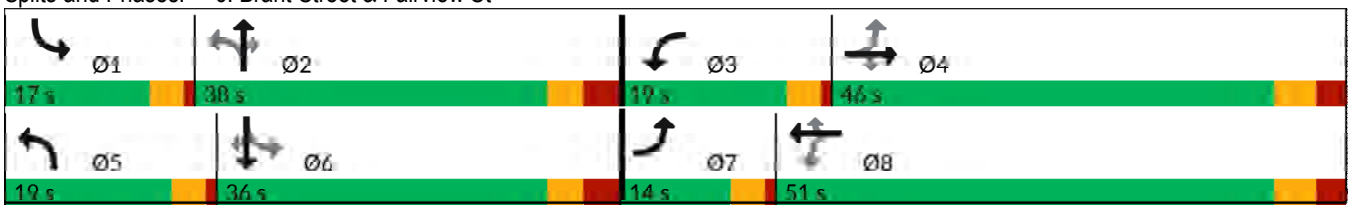
c Critical Lane Group

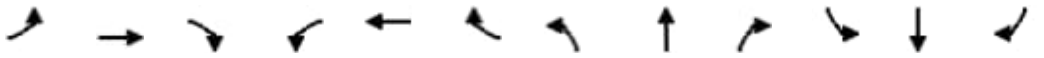
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	184	648	281	205	1145	292	252	636	147	205	610	145
Future Volume (vph)	184	648	281	205	1145	292	252	636	147	205	610	145
Lane Group Flow (vph)	194	682	296	216	1205	307	265	669	155	216	642	153
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	8.0	8.0	7.0	8.0	8.0	7.0	8.0	8.0	7.0	8.0	8.0
Minimum Split (s)	12.0	31.4	31.4	12.0	31.4	31.4	12.0	31.5	31.5	12.0	31.5	31.5
Total Split (s)	14.0	46.0	46.0	19.0	51.0	51.0	19.0	38.0	38.0	17.0	36.0	36.0
Total Split (%)	11.7%	38.3%	38.3%	15.8%	42.5%	42.5%	15.8%	31.7%	31.7%	14.2%	30.0%	30.0%
Yellow Time (s)	3.0	3.7	3.7	3.0	3.7	3.7	3.0	3.3	3.3	3.0	3.3	3.3
All-Red Time (s)	1.0	2.7	2.7	1.0	2.7	2.7	1.0	3.2	3.2	1.0	3.2	3.2
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)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.5	6.5	4.0	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
v/c Ratio	0.92	0.55	0.42	0.59	0.92	0.44	0.93	0.77	0.34	0.82	0.81	0.35
Control Delay (s/veh)	72.9	32.9	5.2	23.0	46.5	5.0	65.9	46.8	7.6	49.6	51.3	8.1
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 (s/veh)	72.9	32.9	5.2	23.0	46.5	5.0	65.9	46.8	7.6	49.6	51.3	8.1
Queue Length 50th (m)	30.5	70.0	0.0	27.9	143.2	0.0	44.6	79.4	0.0	35.0	77.5	0.0
Queue Length 95th (m)	#81.0	93.6	19.7	45.2	#192.4	19.1	#99.0	101.4	16.6	#67.6	99.4	17.0
Internal Link Dist (m)		607.3			241.7			325.5			422.3	
Turn Bay Length (m)	300.0		140.0	60.0		100.0	84.0		70.0	45.0		60.0
Base Capacity (vph)	211	1256	716	397	1391	717	285	992	497	269	920	485
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.54	0.41	0.54	0.87	0.43	0.93	0.67	0.31	0.80	0.70	0.32

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 113.9
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Description: pattern 2 for AM, 3 for PM (sched 1)
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Brant Street & Fairview St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	184	648	281	205	1145	292	252	636	147	205	610	145
Future Volume (vph)	184	648	281	205	1145	292	252	636	147	205	610	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.5	6.5	4.0	6.5	6.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.97	1.00	1.00	0.93	1.00	1.00	0.98
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	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1652	3535	1479	1684	3535	1352	1589	3570	1392	1600	3535	1432
Flt Permitted	0.10	1.00	1.00	0.26	1.00	1.00	0.17	1.00	1.00	0.21	1.00	1.00
Satd. Flow (perm)	175	3535	1479	454	3535	1352	283	3570	1392	354	3535	1432
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	194	682	296	216	1205	307	265	669	155	216	642	153
RTOR Reduction (vph)	0	0	193	0	0	193	0	0	117	0	0	119
Lane Group Flow (vph)	194	682	103	216	1205	114	265	669	38	216	642	34
Confl. Peds. (#/hr)	14		5	5		14	6		39	39		6
Confl. Bikes (#/hr)									1			1
Heavy Vehicles (%)	2%	1%	0%	0%	1%	8%	6%	0%	1%	5%	1%	3%
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	49.8	39.7	39.7	55.0	42.3	42.3	43.0	27.9	27.9	38.2	25.5	25.5
Effective Green, g (s)	49.8	39.7	39.7	55.0	42.3	42.3	43.0	27.9	27.9	38.2	25.5	25.5
Actuated g/C Ratio	0.44	0.35	0.35	0.48	0.37	0.37	0.38	0.24	0.24	0.34	0.22	0.22
Clearance Time (s)	4.0	6.4	6.4	4.0	6.4	6.4	4.0	6.5	6.5	4.0	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)	207	1232	515	356	1312	502	279	874	340	257	791	320
v/s Ratio Prot	c0.08	0.19		c0.07	c0.34		c0.13	0.19		0.09	0.18	
v/s Ratio Perm	0.33		0.07	0.23		0.08	c0.23		0.03	0.19		0.02
v/c Ratio	0.94	0.55	0.20	0.61	0.92	0.23	0.95	0.77	0.11	0.84	0.81	0.11
Uniform Delay, d1	28.3	29.9	26.0	18.8	34.2	24.6	28.4	40.0	33.4	30.0	41.9	35.1
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	44.7	0.5	0.2	2.9	10.3	0.2	39.9	4.0	0.1	21.2	6.3	0.1
Delay (s)	72.9	30.5	26.2	21.8	44.5	24.8	68.3	44.0	33.5	51.2	48.3	35.3
Level of Service	E	C	C	C	D	C	E	D	C	D	D	D
Approach Delay (s/veh)		36.4			38.1			48.4			46.9	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	41.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	113.9	Sum of lost time (s)	20.9
Intersection Capacity Utilization	90.7%	ICU Level of Service	E
Analysis Period (min)	15		
Description: pattern 2 for AM, 3 for PM (sched 1)			
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	61	767	1468	58	13	52
Future Vol, veh/h	61	767	1468	58	13	52
Conflicting Peds, #/hr	1	0	0	1	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	40	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	0	0	0	24	0	0
Mvmt Flow	62	783	1498	59	13	53

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1558	0	-	0	2045	780
Stage 1	-	-	-	-	1529	-
Stage 2	-	-	-	-	516	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	430	-	-	-	50	342
Stage 1	-	-	-	-	168	-
Stage 2	-	-	-	-	570	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	430	-	-	-	43	342
Mov Cap-2 Maneuver	-	-	-	-	117	-
Stage 1	-	-	-	-	144	-
Stage 2	-	-	-	-	569	-

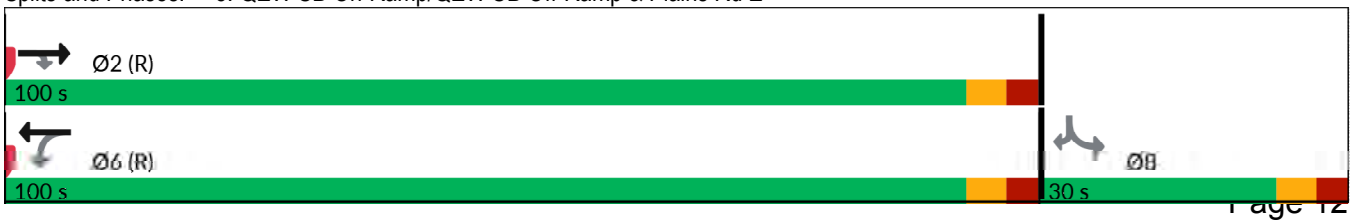
Approach	EB	WB	SB
HCM Ctrl Dly, s/v	1.1	0	21.9
HCM LOS			C

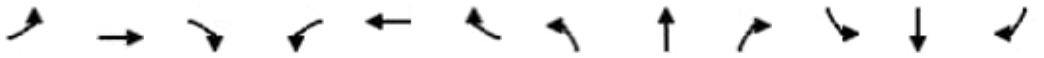
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	430	-	-	-	117	342
HCM Lane V/C Ratio	0.145	-	-	-	0.113	0.155
HCM Ctrl Dly (s/v)	14.8	-	-	-	39.7	17.5
HCM Lane LOS	B	-	-	-	E	C
HCM 95th %tile Q (veh)	0.5	-	-	-	0.4	0.5

Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	910	328	4	1482	452	236
Future Volume (vph)	910	328	4	1482	452	236
Lane Group Flow (vph)	948	342	0	1548	471	246
Turn Type	NA	Perm	Perm	NA	Perm	Perm
Protected Phases	2			6		
Permitted Phases		2	6		8	8
Detector Phase	2	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	41.0	41.0	41.0	41.0	30.0	30.0
Total Split (s)	100.0	100.0	100.0	100.0	30.0	30.0
Total Split (%)	76.9%	76.9%	76.9%	76.9%	23.1%	23.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0		7.0	7.0	7.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Max	C-Max	C-Max	C-Max	None	None
v/c Ratio	0.26	0.30		0.44	0.86	0.82
Control Delay (s/veh)	6.4	1.3		10.4	68.9	61.1
Queue Delay	0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	6.4	1.3		10.4	68.9	61.1
Queue Length 50th (m)	29.3	0.0		93.0	63.8	49.1
Queue Length 95th (m)	35.1	8.2		m108.7	#88.5	#91.6
Internal Link Dist (m)	279.6			287.3		
Turn Bay Length (m)		70.0				
Base Capacity (vph)	3710	1152		3480	572	311
Starvation Cap Reductn	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0
Reduced v/c Ratio	0.26	0.30		0.44	0.82	0.79

Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 31 (24%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Description: Pattern 2 for AM, 3 for PM
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: QEW SB On-Ramp/QEW SB Off-Ramp & Plains Rd E





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	910	328	4	1482	0	0	0	0	452	0	236
Future Volume (vph)	0	910	328	4	1482	0	0	0	0	452	0	236
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)		7.0	7.0		7.0					7.0		7.0
Lane Util. Factor		0.91	1.00		0.91					0.97		1.00
Frpb, ped/bikes		1.00	0.97		1.00					1.00		0.98
Flpb, ped/bikes		1.00	1.00		1.00					1.00		1.00
Frt		1.00	0.85		1.00					1.00		0.85
Flt Protected		1.00	1.00		1.00					0.95		1.00
Satd. Flow (prot)		5129	1463		5129					3236		1479
Flt Permitted		1.00	1.00		0.94					0.95		1.00
Satd. Flow (perm)		5129	1463		4810					3236		1479
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	948	342	4	1544	0	0	0	0	471	0	246
RTOR Reduction (vph)	0	0	95	0	0	0	0	0	0	0	0	50
Lane Group Flow (vph)	0	948	247	0	1548	0	0	0	0	471	0	196
Confl. Peds. (#/hr)	2		5	5		2	4					4
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%
Turn Type		NA	Perm	Perm	NA					Perm		Perm
Protected Phases		2			6							
Permitted Phases			2	6						8		8
Actuated Green, G (s)		94.0	94.0		94.0					22.0		22.0
Effective Green, g (s)		94.0	94.0		94.0					22.0		22.0
Actuated g/C Ratio		0.72	0.72		0.72					0.17		0.17
Clearance Time (s)		7.0	7.0		7.0					7.0		7.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0		3.0
Lane Grp Cap (vph)		3708	1057		3478					547		250
v/s Ratio Prot		0.18										
v/s Ratio Perm			0.17		c0.32					c0.15		0.13
v/c Ratio		0.26	0.23		0.45					0.86		0.78
Uniform Delay, d1		6.1	6.0		7.4					52.5		51.7
Progression Factor		1.00	1.00		1.37					1.00		1.00
Incremental Delay, d2		0.2	0.5		0.2					13.1		14.8
Delay (s)		6.3	6.5		10.2					65.6		66.6
Level of Service		A	A		B					E		E
Approach Delay (s/veh)		6.3			10.2			0.0			65.9	
Approach LOS		A			B			A			E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	20.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	68.7%	ICU Level of Service	C
Analysis Period (min)	15		
Description: Pattern 2 for AM, 3 for PM			

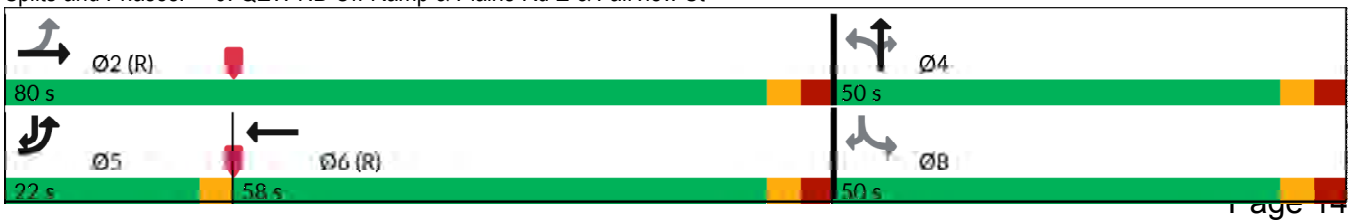
c Critical Lane Group

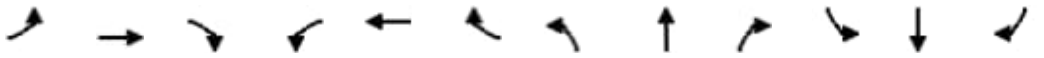
Lane Group	EBL	EBT	WBT	NBL	NBT	NBR	SBL	SBR
Lane Configurations								
Traffic Volume (vph)	280	1090	1905	195	248	290	44	759
Future Volume (vph)	280	1090	1905	195	248	290	44	759
Lane Group Flow (vph)	283	1101	1999	177	303	261	44	767
Turn Type	pm+pt	NA	NA	Perm	NA	Perm	Perm	pm+ov
Protected Phases	5	2	6		4			5
Permitted Phases	2			4		4	8	8
Detector Phase	5	2	6	4	4	4	8	8
Switch Phase								
Minimum Initial (s)	6.0	8.0	8.0	8.0	8.0	8.0	8.0	6.0
Minimum Split (s)	9.0	35.1	35.1	36.4	36.4	36.4	36.4	9.0
Total Split (s)	22.0	80.0	58.0	50.0	50.0	50.0	50.0	22.0
Total Split (%)	16.9%	61.5%	44.6%	38.5%	38.5%	38.5%	38.5%	16.9%
Yellow Time (s)	3.0	3.3	3.3	3.3	3.3	3.3	3.3	3.0
All-Red Time (s)	0.0	2.8	2.8	3.1	3.1	3.1	3.1	0.0
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	6.1	6.1	6.4	6.4	6.4	6.4	3.0
Lead/Lag	Lead		Lag					Lead
Lead-Lag Optimize?	Yes		Yes					Yes
Recall Mode	None	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.91	0.37	0.96	0.30	0.53	0.46	0.18	0.90
Control Delay (s/veh)	69.7	18.1	49.9	33.8	38.4	26.0	33.0	42.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	69.7	18.1	49.9	33.8	38.4	26.0	33.0	42.3
Queue Length 50th (m)	60.2	55.0	191.9	37.0	71.0	39.6	8.4	173.1
Queue Length 95th (m)	m#102.3	67.3	#230.3	58.3	104.3	67.6	18.5	#263.0
Internal Link Dist (m)		287.3	180.4		94.5			
Turn Bay Length (m)	35.0					50.0	80.0	
Base Capacity (vph)	322	2981	2084	581	573	568	251	850
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	0.88	0.37	0.96	0.30	0.53	0.46	0.18	0.90

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 119 (92%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated
Description: event plan 2 for AM, 3 for PM
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 9: QEW NB Off-Ramp & Plains Rd E & Fairview St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	280	1090	0	0	1905	74	195	248	290	44	0	759
Future Volume (vph)	280	1090	0	0	1905	74	195	248	290	44	0	759
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
Total Lost time (s)	3.0	6.1			6.1		6.4	6.4	6.4	6.4		3.0
Lane Util. Factor	1.00	0.91			0.91		0.95	0.91	0.95	1.00		1.00
Frpb, ped/bikes	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
Frt	1.00	1.00			0.99		1.00	0.98	0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00	0.95		1.00
Satd. Flow (prot)	1789	5245			5127		1734	1699	1536	1825		1601
Flt Permitted	0.07	1.00			1.00		0.95	1.00	1.00	0.39		1.00
Satd. Flow (perm)	135	5245			5127		1734	1699	1536	750		1601
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	283	1101	0	0	1924	75	197	251	293	44	0	767
RTOR Reduction (vph)	0	0	0	0	3	0	0	3	53	0	0	14
Lane Group Flow (vph)	283	1101	0	0	1996	0	177	300	208	44	0	753
Confl. Peds. (#/hr)			7	7								
Heavy Vehicles (%)	2%	0%	0%	0%	0%	46%	0%	1%	1%	0%	0%	2%
Turn Type	pm+pt	NA			NA		Perm	NA	Perm	Perm		pm+ov
Protected Phases	5	2			6			4				5
Permitted Phases	2						4		4	8		8
Actuated Green, G (s)	73.9	73.9			52.8		43.6	43.6	43.6	43.6		61.7
Effective Green, g (s)	73.9	73.9			52.8		43.6	43.6	43.6	43.6		61.7
Actuated g/C Ratio	0.57	0.57			0.41		0.34	0.34	0.34	0.34		0.47
Clearance Time (s)	3.0	6.1			6.1		6.4	6.4	6.4	6.4		3.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	307	2981			2082		581	569	515	251		759
v/s Ratio Prot	0.13	0.21			0.39							c0.14
v/s Ratio Perm	c0.40						0.10	0.18	0.14	0.06		0.33
v/c Ratio	0.92	0.37			0.96		0.30	0.53	0.40	0.18		0.99
Uniform Delay, d1	41.3	15.3			37.5		32.0	34.9	33.2	30.5		33.9
Progression Factor	1.12	1.15			1.00		1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2	29.8	0.3			12.1		0.3	0.9	0.5	0.3		30.7
Delay (s)	75.9	18.0			49.7		32.3	35.8	33.7	30.8		64.6
Level of Service	E	B			D		C	D	C	C		E
Approach Delay (s/veh)		29.8			49.7			34.2			62.7	
Approach LOS		C			D			C			E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	43.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	114.1%	ICU Level of Service	H
Analysis Period (min)	15		
Description: event plan 2 for AM, 3 for PM			

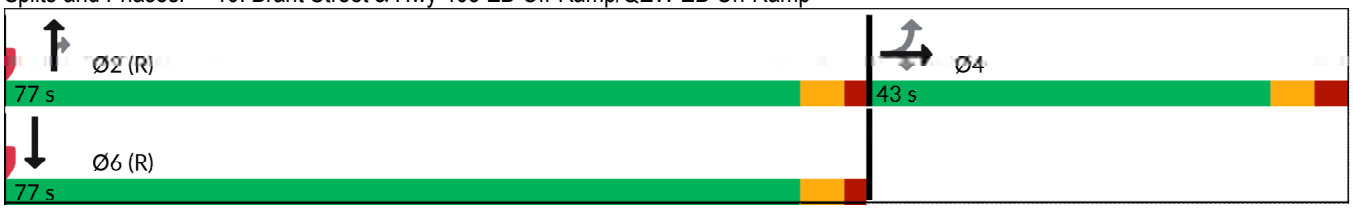
c Critical Lane Group

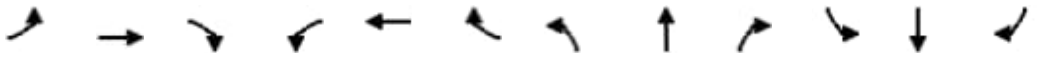
Lane Group	EBL	EBT	EBR	NBT	NBR	SBT
Lane Configurations						
Traffic Volume (vph)	203	0	197	1517	472	1411
Future Volume (vph)	203	0	197	1517	472	1411
Lane Group Flow (vph)	146	139	131	1580	492	1470
Turn Type	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		2		6
Permitted Phases	4		4		2	
Detector Phase	4	4	4	2	2	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	8.0	8.0	8.0	8.0
Minimum Split (s)	37.0	37.0	37.0	28.0	28.0	28.0
Total Split (s)	43.0	43.0	43.0	77.0	77.0	77.0
Total Split (%)	35.8%	35.8%	35.8%	64.2%	64.2%	64.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	3.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	6.0	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	C-Max	C-Max	C-Max
v/c Ratio	0.68	0.58	0.57	0.42	0.41	0.39
Control Delay (s/veh)	64.2	43.9	43.3	6.2	1.6	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	64.2	43.9	43.3	6.2	1.6	7.4
Queue Length 50th (m)	36.7	26.1	23.0	44.8	0.0	35.8
Queue Length 95th (m)	57.3	47.1	42.7	66.6	9.8	89.3
Internal Link Dist (m)		230.7		394.1		264.9
Turn Bay Length (m)					80.0	
Base Capacity (vph)	457	470	445	3775	1200	3775
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.30	0.29	0.42	0.41	0.39

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 49 (41%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Description: from project 24223.
pattern 2 for AM, 3 for PM (sched 1)

Splits and Phases: 10: Brant Street & Hwy 403 EB Off-Ramp/QEW EB On-Ramp





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	203	0	197	0	0	0	0	1517	472	0	1411	0
Future Volume (vph)	203	0	197	0	0	0	0	1517	472	0	1411	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0	3.0	3.5	3.0
Total Lost time (s)	7.0	7.0	7.0					6.0	6.0		6.0	
Lane Util. Factor	0.95	0.91	0.95					0.91	1.00		0.91	
Frpb, ped/bikes	1.00	0.99	0.99					1.00	0.97		1.00	
Flpb, ped/bikes	1.00	1.00	1.00					1.00	1.00		1.00	
Frt	1.00	0.92	0.85					1.00	0.85		1.00	
Flt Protected	0.95	0.98	1.00					1.00	1.00		1.00	
Satd. Flow (prot)	1524	1483	1397					5029	1436		5029	
Flt Permitted	0.95	0.98	1.00					1.00	1.00		1.00	
Satd. Flow (perm)	1524	1483	1397					5029	1436		5029	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	211	0	205	0	0	0	0	1580	492	0	1470	0
RTOR Reduction (vph)	0	32	32	0	0	0	0	0	123	0	0	0
Lane Group Flow (vph)	146	107	99	0	0	0	0	1580	369	0	1470	0
Confl. Peds. (#/hr)			2	2			7		3	3		7
Confl. Bikes (#/hr)						1						
Heavy Vehicles (%)	5%	0%	1%	0%	0%	0%	0%	2%	2%	0%	2%	0%
Turn Type	Perm	NA	Perm					NA	Perm		NA	
Protected Phases		4						2			6	
Permitted Phases	4		4						2			
Actuated Green, G (s)	16.9	16.9	16.9					90.1	90.1		90.1	
Effective Green, g (s)	16.9	16.9	16.9					90.1	90.1		90.1	
Actuated g/C Ratio	0.14	0.14	0.14					0.75	0.75		0.75	
Clearance Time (s)	7.0	7.0	7.0					6.0	6.0		6.0	
Vehicle Extension (s)	3.0	3.0	3.0					3.0	3.0		3.0	
Lane Grp Cap (vph)	214	208	196					3775	1078		3775	
v/s Ratio Prot								c0.31			0.29	
v/s Ratio Perm	c0.10	0.07	0.07						0.26			
v/c Ratio	0.68	0.52	0.51					0.42	0.34		0.39	
Uniform Delay, d1	49.0	47.8	47.7					5.4	5.0		5.3	
Progression Factor	1.00	1.00	1.00					1.00	1.00		1.26	
Incremental Delay, d2	8.7	2.2	2.1					0.3	0.9		0.3	
Delay (s)	57.6	49.9	49.7					5.8	5.9		6.9	
Level of Service	E	D	D					A	A		A	
Approach Delay (s/veh)		52.6			0.0			5.8			6.9	
Approach LOS		D			A			A			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		
Description: from project 24223.			
pattern 2 for AM, 3 for PM (sched 1)			

c Critical Lane Group

APPENDIX H

Functional Design Review

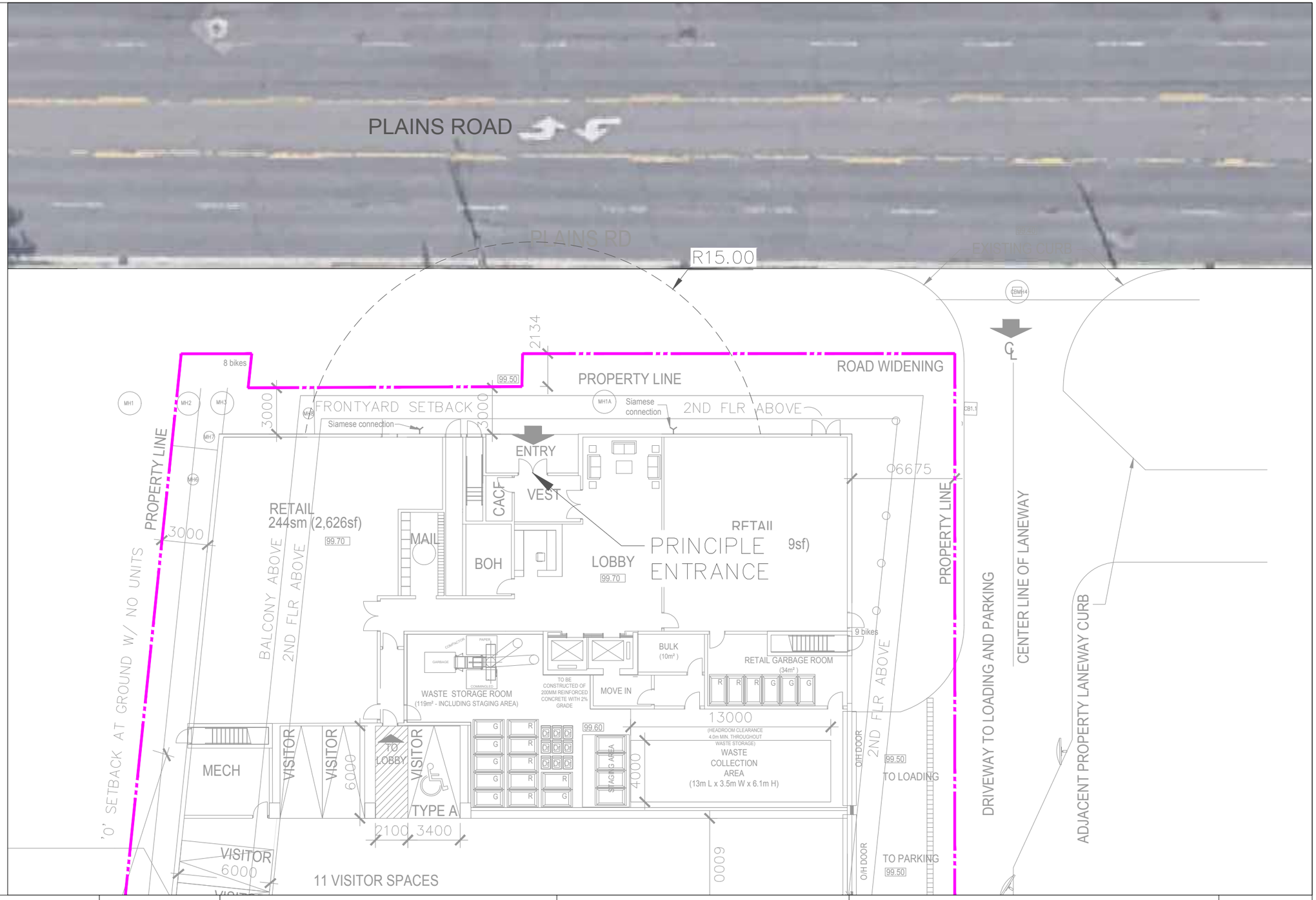
ONTARIO BUILDING CODE – FIRE ACCESS ROUTE:
PER ONTARIO BUILDING CODE SECTION 3.2.5.5:

1. ACCESS ROUTES REQUIRE THAT THE PRINCIPAL ENTRANCES ARE LOCATED NOT LESS THAN 3m AND NOT MORE THAN 15m FROM THE CLOSEST PORTION OF THE ACCESS ROUTE REQUIRED FOR FIRE DEPARTMENT USE, MEASURED HORIZONTALLY FROM THE FACE OF THE BUILDING. HENCE FIRE TRUCKS MAY PARK ALONG PLAINS RD FIRE HYDRANTS TO BE LOCATED AS SPECIFIED.

PER ONTARIO BUILDING CODE SECTION 3.2.5.6

2. A PORTION OF A ROADWAY OR YARD PROVIDED AS A REQUIRED ACCESS ROUTE FOR FIRE DEPARTMENT USE SHALL:

a. HAVE A CLEAR WIDTH NOT LESS THAN 6m, UNLESS IT CAN BE SHOWN THAT LESSER WIDTHS ARE SATISFACTORY;
b. HAVE A CENTRELINE RADIUS NOT LESS THAN 12m;
c. HAVE AN OVERHEAD CLEARANCE NOT LESS THAN 5m;
d. HAVE A CHANGE OF GRADIENT NOT MORE THAN 1 IN 12.5 OVER A MINIMUM DISTANCE OF 15m;
e. BE DESIGNED TO SUPPORT THE EXPECTED LOADS IMPOSED BY FIREFIGHTING EQUIPMENT AND BE SURFACED WITH CONCRETE, ASPHALT OR OTHER MATERIAL DESIGNED TO PERMIT ACCESSIBILITY UNDER ALL CLIMATIC CONDITIONS;
f. HAVE TURNAROUND FACILITIES FOR ANY DEAD–END PORTION OF THE ACCESS ROUTE MORE THAN 90m LONG AND;
g. BE CONNECTED WITH A PUBLIC THROUGHFARE.



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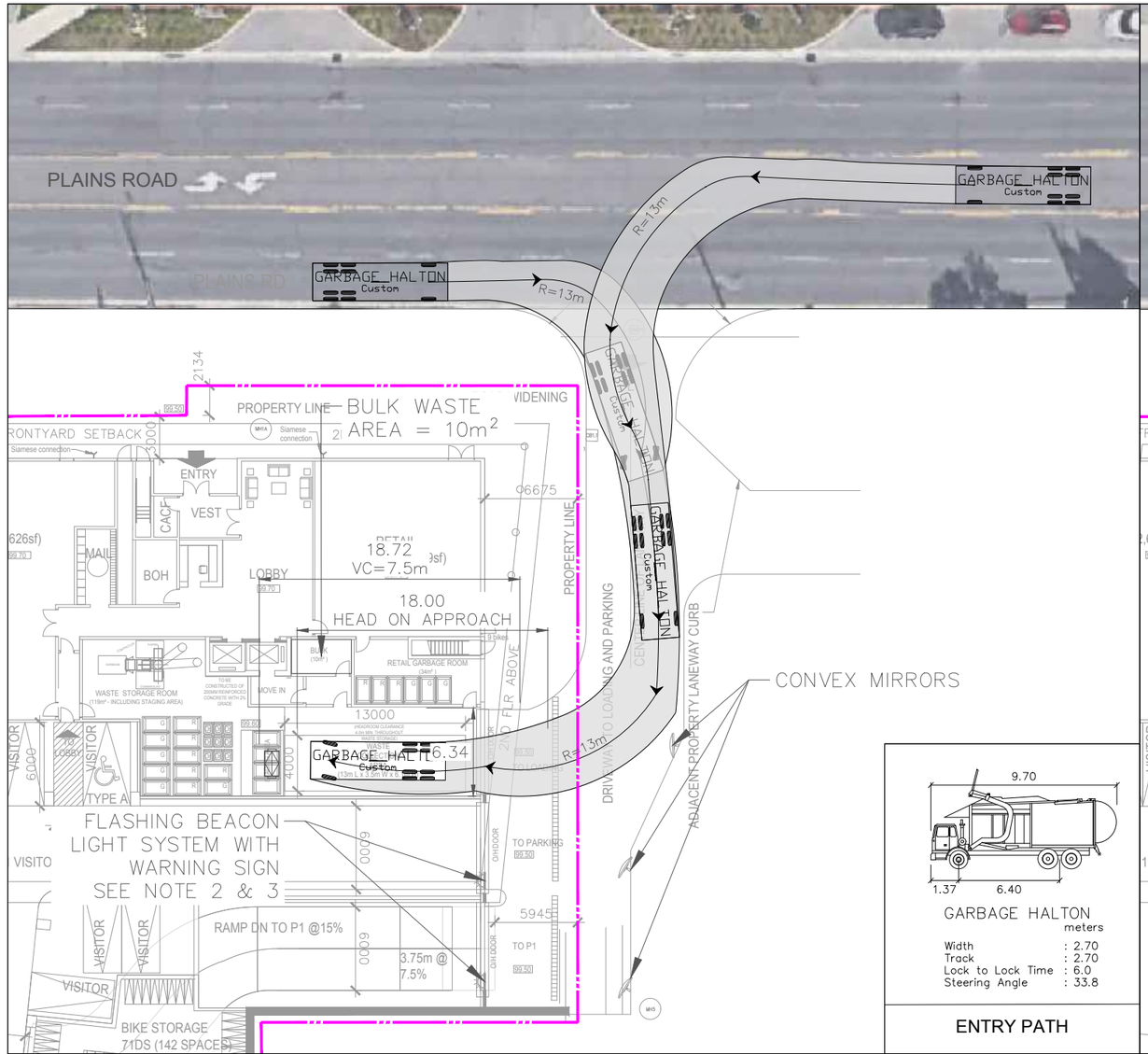
Date APR 15, 2026

1376 PLAINS RD E
BURLINGTON ONTARIO

2.5 0 2.5 5 7.5m
1:250

FIRE ROUTE REVIEW

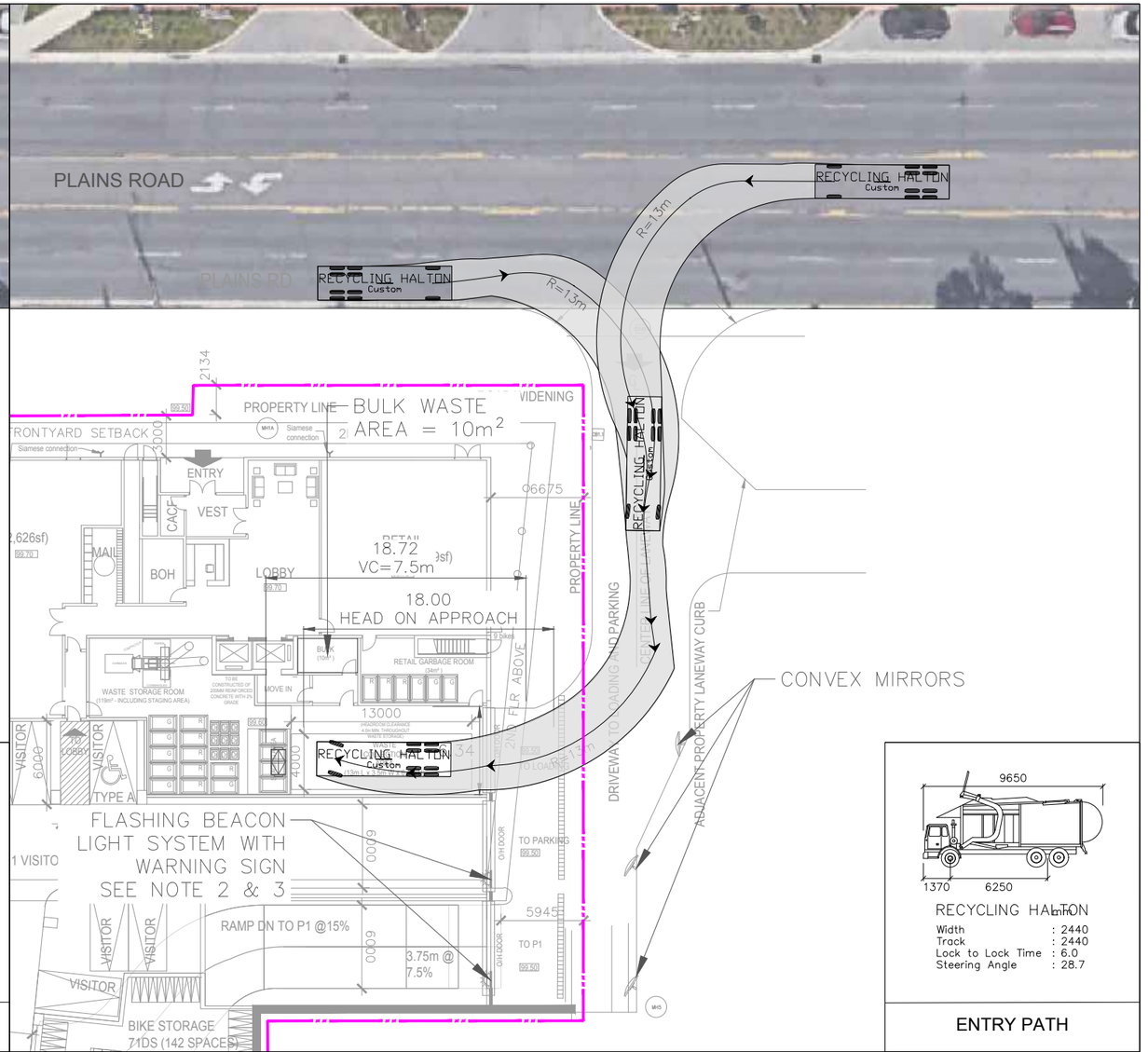
Drawing No. 00



GARBAGE HALTON

	meters
Width	: 2.70
Track	: 2.70
Lock to Lock Time	: 6.0
Steering Angle	: 33.8

ENTRY PATH



RECYCLING HALTON

Width	: 2440
Track	: 2440
Lock to Lock Time	: 6.0
Steering Angle	: 28.7

ENTRY PATH

NOTE:
1. A TRAINED ON-SITE STAFF TO BE AVAILABLE TO MANEUVRE THE WASTE COLLECTION BINS/CARTS TO THE COLLECTION POINT FOR THE COLLECTION DRIVER, AND ACT AS A FLAGMAN WHEN THE TRUCK IS REVERSING. IN THE EVENT WHEN THE ON-SITE STAFF MEMBER IS UNAVAILABLE AT THE TIME THE CITY COLLECTION VEHICLE ARRIVES AT THE SITE, THE COLLECTION VEHICLE WILL LEAVE THE SITE AND NOT RETURN UNTIL THE NEXT SCHEDULED COLLECTION DAY.
2. FLASHING WARNING LIGHT TO BE ACTIVATED WHEN TRUCKS ENTER AND EXIT THE SITE. THE SYSTEM TO REMAIN ACTIVATED DURING THE CITY GARBAGE COLLECTION ACTIVITY AND UNTIL THE TRUCK EXITS THE SITE. THE MAKER SHOWN IS FOR ILLUSTRATIVE PURPOSE AND IS NOT SCALE.
3. WARNING SIGN TO BE MOUNTED BELOW THE FLASH LIGHT. (SEE DETAIL A)

PER REGION OF HALTON DEVELOPMENT DESIGN GUIDELINES FOR SOURCE SEPARATION OF SOLID WASTE.
3. SECTION 2.3.1.4: A MINIMUM OF 18m STRAIGHT HEAD-ON APPROACH TO THE COLLECTION POINT IS REQUIRED.
4. APPENDIX 1: TRUCK TURNS SHALL HAVE A TURNING RADIUS FROM THE CENTRELINE OF 13m.
5. APPENDIX 4: FRONT END-COLLECTION COLLECTION AREA SHALL HAVE A MIN. WIDTH OF 6m.
6. SITE PLANS WILL ALSO REQUIRE A MINIMUM OVERHEAD CLEARANCE OF 7.5m

DETAIL A: WARNING SIGN

WATCH FOR
TURNING TRUCKS
WHEN FLASHING

(600X300)
BLACK LEGEND & BORDER
YELLOW REFL. BACKGROUND

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24224

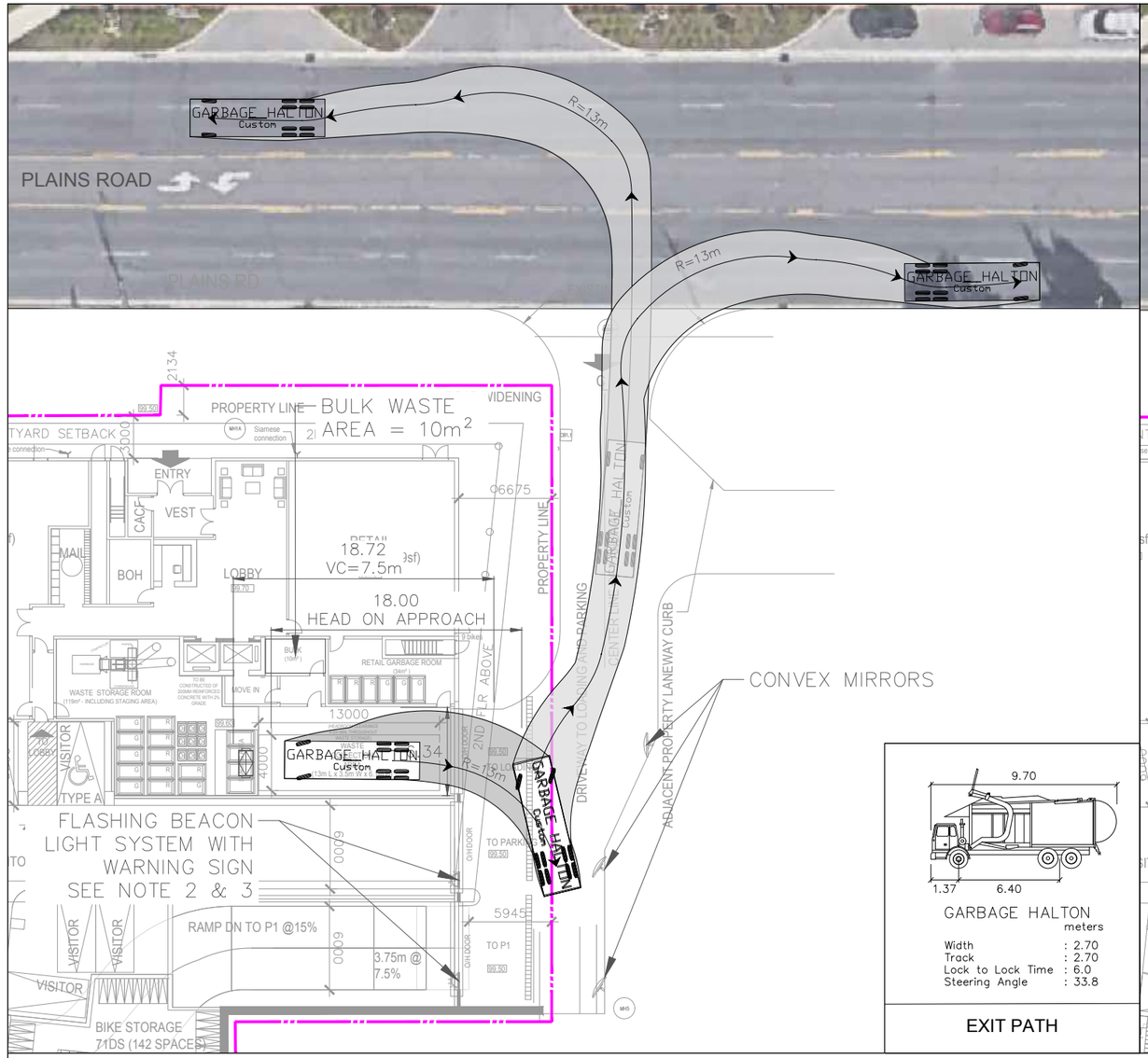
Date
APR 15, 2026

1376 PLAINS RD E
BURLINGTON ONTARIO

4 0 4 8 12m
1:400

WASTE LOADING REVIEW
GARBGAE & RECYCLING FRONT LOADER
ENTRY PATHS

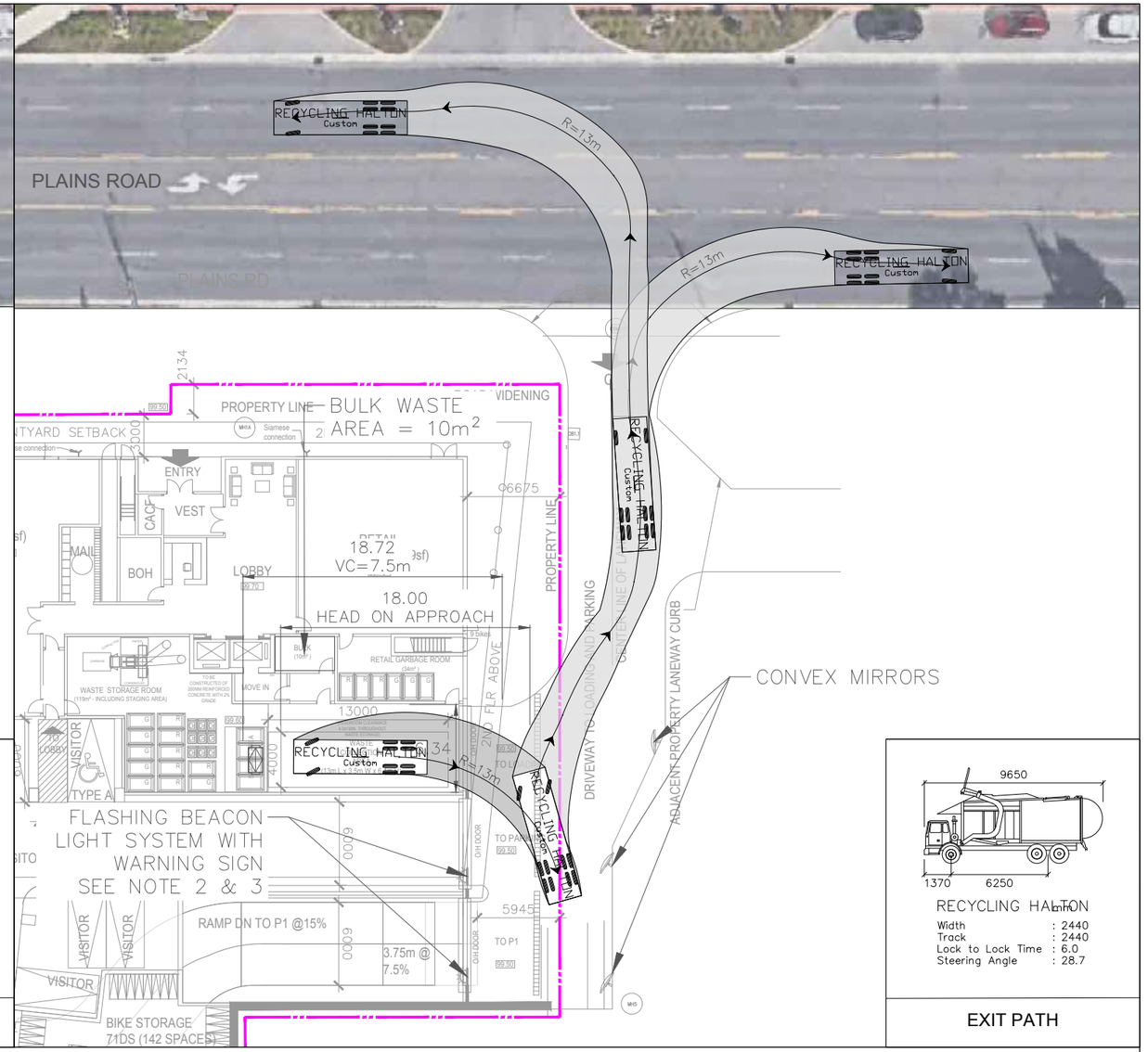
Drawing No.
01



GARBAGE HALTON
meters

Width	: 2.70
Track	: 2.70
Lock to Lock Time	: 6.0
Steering Angle	: 33.8

EXIT PATH



RECYCLING HALTON
meters

Width	: 2440
Track	: 2440
Lock to Lock Time	: 6.0
Steering Angle	: 28.7

EXIT PATH

NOTE:
1. A TRAINED ON-SITE STAFF TO BE AVAILABLE TO MANEUVRE THE WASTE COLLECTION BINS/CARTS TO THE COLLECTION POINT FOR THE COLLECTION DRIVER, AND ACT AS A FLAGMAN WHEN THE TRUCK IS REVERSING. IN THE EVENT WHEN THE ON-SITE STAFF MEMBER IS UNAVAILABLE AT THE TIME THE CITY COLLECTION VEHICLE ARRIVES AT THE SITE, THE COLLECTION VEHICLE WILL LEAVE THE SITE AND NOT RETURN UNTIL THE NEXT SCHEDULED COLLECTION DAY.
2. FLASHING WARNING LIGHT TO BE ACTIVATED WHEN TRUCKS ENTER AND EXIT THE SITE. THE SYSTEM TO REMAIN ACTIVATED DURING THE CITY GARBAGE COLLECTION ACTIVITY AND UNTIL THE TRUCK EXITS THE SITE. THE MAKER SHOWN IS FOR ILLUSTRATIVE PURPOSE AND IS NOT SCALE.
3. WARNING SIGN TO BE MOUNTED BELOW THE FLASH LIGHT. (SEE DETAIL A)

PER REGION OF HALTON DEVELOPMENT DESIGN GUIDELINES FOR SOURCE SEPARATION OF SOLID WASTE.
3. SECTION 2.3.1.4: A MINIMUM OF 18m STRAIGHT HEAD-ON APPROACH TO THE COLLECTION POINT IS REQUIRED.
4. APPENDIX 1: TRUCK TURNS SHALL HAVE A TURNING RADIUS FROM THE CENTRELINE OF 13m.
5. APPENDIX 4: FRONT END-COLLECTION COLLECTION AREA SHALL HAVE A MIN. WIDTH OF 6m.
6. SITE PLANS WILL ALSO REQUIRE A MINIMUM OVERHEAD CLEARANCE OF 7.5m

DETAIL A: WARNING SIGN

WATCH FOR
TURNING TRUCKS
WHEN FLASHING

(600X300)
BLACK LEGEND & BORDER
YELLOW REFL. BACKGROUND

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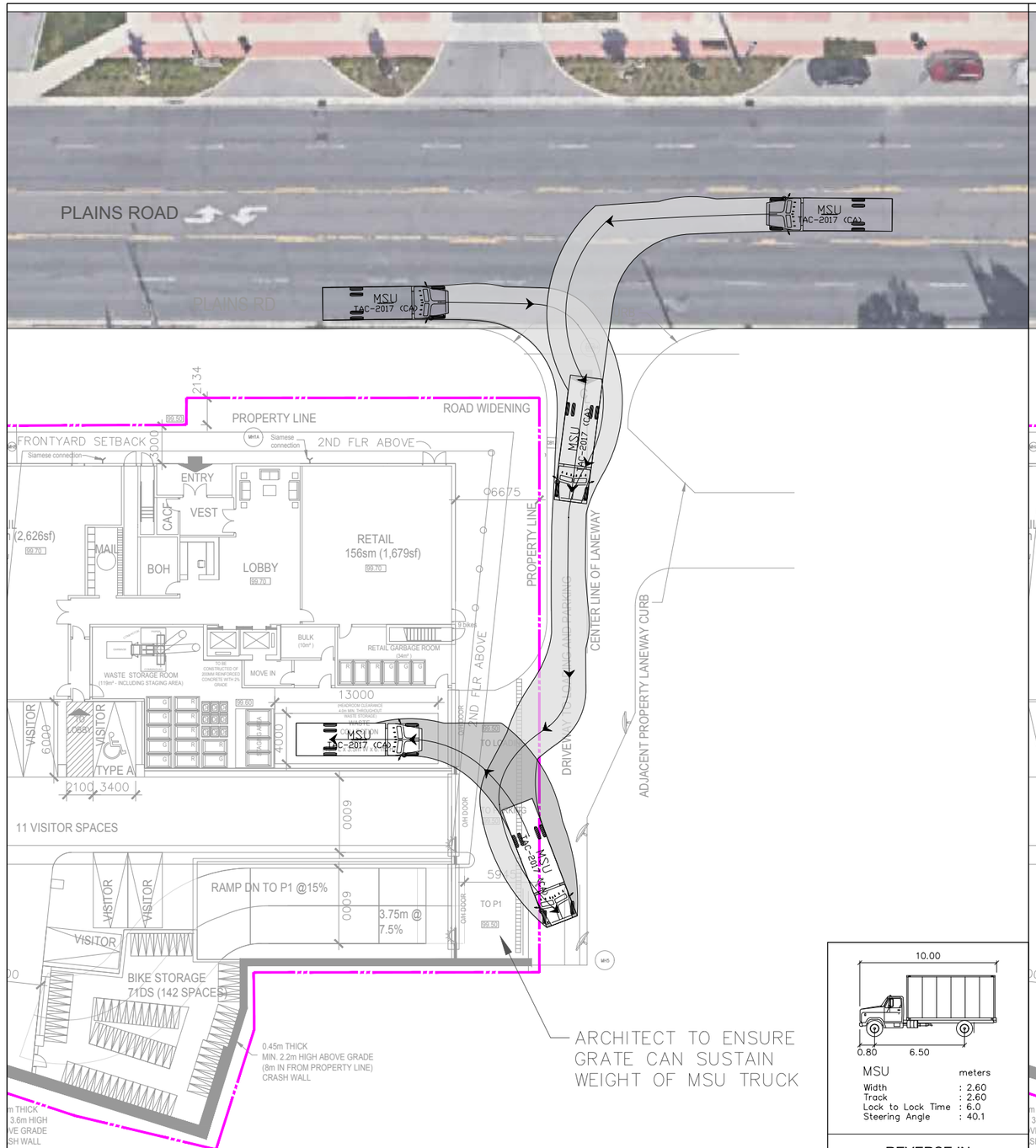
Date
APR 15, 2026

1376 PLAINS RD E
BURLINGTON ONTARIO

4 0 4 8 12m
1:400

WASTE LOADING REVIEW
GARBGAE & RECYCLING FRONT LOADER EXIT PATHS

Drawing No.
02



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Date
APR 15, 2026

1376 PLAINS RD E
BURLINGTON ONTARIO

4 0 4 8 12m
1:400

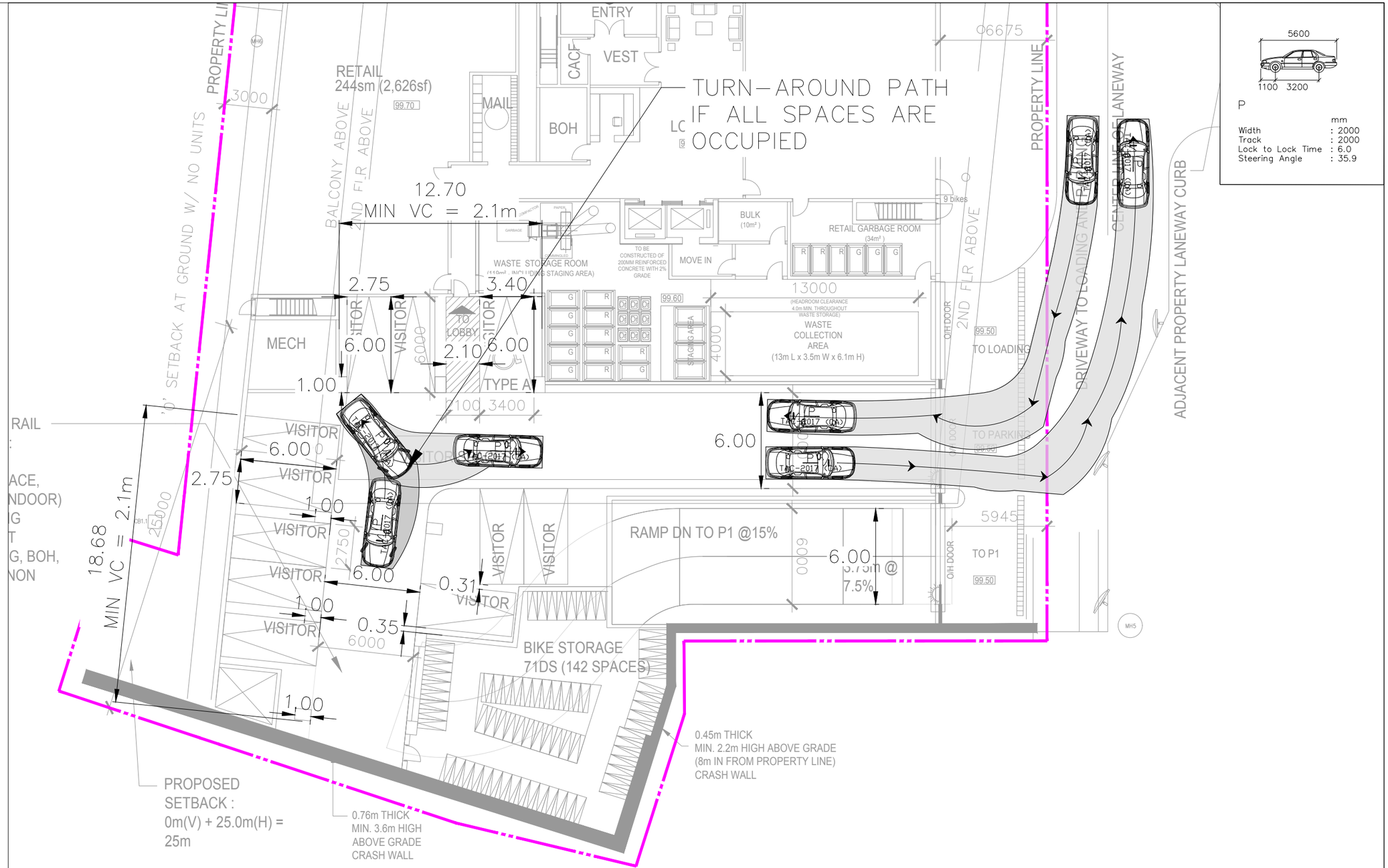
LOADING REVIEW
MOVING/DELIVERY TRUCK (MSU)
ENTRY & EXIT PATHS

Drawing No.
03

NOTES:

AS PER CITY OF BURLINGTON ZONING BY-LAW SECTION 2.26

1. THE PARKING STALL DIMENSIONS REQUIRE A MINIMUM WIDTH OF 2.75m AND A MINIMUM AREA OF 16.5sqm (EQUATING TO A LENGTH OF 6.0m FOR A WIDTH OF 2.75m)
2. THE PARKING WIDTH SHOULD BE INCREASED BY 0.30m FOR EACH OBSTRUCTED SIDE.
3. EACH DESIGNATED ACCESSIBLE PARKING SPACE SHALL MEET THE MINIMUM WIDTH AND AREA REQUIREMENT OF SECTION 1. (2.75m BY 6.0m) AND SHALL BE LOCATED ADJACENT TO A DELINEATED "ACCESSIBLE PARKING PATHWAY" WITH A MINIMUM WIDTH OF 2.0m.



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Date APR 15, 2026

1376 PLAINS RD E
BURLINGTON ONTARIO

2.5 0 2.5 5 7.5m
1:250

PARKING REVIEW
GROUND FLOOR

Drawing No. 04