Vriesman & Korhorn CIVIL

STATE OF MICHIGAN
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MEMO

Date: September 6, 2024 *Project Number:* 1139

To: Andy Patel

From: Aaron Van Proyen, P.E., PTOE AP

Regarding: Joe Hall Drive Hotel Traffic Impact Study Revision

INTRODUCTION

VK Civil has completed a Traffic Impact Assessment for the proposed Holiday Inn Express & Suites. This study includes updated traffic counts from 2024 as requested by the Planning Commission, but generally follows the same format as the original 2019 and updated 2022 study.

BACKGROUND TRAFFIC

The counts collected in 2024 were grown to a 2025 background year by applying a 0.5% growth rate per year as advised in the original study performed by ROWE in 2019. Also, an ALDI supermarket store and daycare facility are planned at the intersection of Huron Street and Brinker Way. It is anticipated that these developments will be opened before the hotel, so these background trips were added to the road network and analyzed with the background scenario, just before the opening of the hotel. Finally, an opening year scenario was analyzed which includes the hotel traffic on top of the background traffic.

TRIP GENERATION & DISTRIBUTION

The trip generation is from ITE's 11th Edition trip generation manual. The following table shows the proposed trip generation:

Land Use	Land Use Code	# of Rooms	AM Peak Hour			PM Peak Hour			Weekday
			In	Out	Total	In	Out	Total	Total
Business Hotel	312	93	14	21	35	17	15	32	421

The existing traffic distribution from the 2019 traffic impact assessment was reused for this memo. This distribution and justification can be seen in the attached document.

LEVELS OF SERVICE

For comparison purposes, the level of service analysis tables from the original 2019 TIA were revised based on the updated traffic volumes. The original 2019 TIA is attached to the end of this study.

Unsignalized Intersection of Joe Hall Drive and South Huron Street

The results of this study show that Joe Hall Drive will operate at LOS B in the future as compared to LOS A from the original 2019 TIA in the AM. In the PM, the results show LOS D in the future, different from the original 2019 TIA showing LOS A. However, the 2019 study included a signal at this intersection in the AM and PM scenarios, as a mitigation measure. No signal was included in this study as the Road Commission now proposes a signal at the intersection of South Huron Road and Brinker Way.

Level of Service Analysis S. Huron Street and Joe Hall Drive

AM Peak Hour			
Approach	**Existing**	**Background**	**Future**
Eastbound Joe Hall Drive	**F (73.5)**	**F (86.8)**	**F (178.7)**
Westbound Joe Hall Drive	**F (74.9)**	**F (84.0)**	**F (87.6)**
Northbound S. Huron Street	A (1.2)	A (1.2)	A (1.2)
Southbound S. Huron Street	A (0.2)	A (0.2)	A (0.2)
Overall	**A (4.3)**	**A (4.9)**	**B (10.3)**

Level of Service Analysis S. Huron Street and Joe Hall Drive

PM Peak Hour			
Approach	**Existing**	**Background**	**Future**
Eastbound Joe Hall Drive	**F (209.3)**	**F (294.1)**	**F (408.6)**
Westbound Joe Hall Drive	B (12.2)	B (12.9)	B (12.9)
Northbound S. Huron Street	A (1.5)	A (1.5)	A (1.7)
Southbound S. Huron Street	A (0.0)	A (0.0)	A (0.0)
Overall	**C (15.5)**	**C (21.2)**	**D (31.2)**

Signalized Intersection of James L Hart Parkway and South Huron Street

The results of this study show that James L. Hart Parkway will operate at LOS B during the future signal retiming mitigation period as compared to LOS C from the original 2019 TIA study in the AM. In the PM, the results show LOS C in the mitigation period, as compared to a LOS D in the original 2019 TIA.

Level of Service Analysis S. Huron Street and James L. Hart Parkway

AM Peak Hour				
Approach	**Existing**	**Background**	**Background w/ Mitigation**	**Future w/ Mitigation**
Eastbound James L. Hart Pkwy	D (46.9)	D (47.2)	C (23.0)	C (23.0)
Westbound James L. Hart Pkwy	C (29.3)	C (29.3)	B (18.9)	B (18.9)
Northbound S. Huron Street	B (19.6)	C (20.1)	B (10.6)	B (10.7)
Southbound S. Huron Street	B (15.1)	B (15.3)	A (8.2)	A (8.3)
Overall	**C (20.7)**	**C (21.0)**	**B (11.0)**	**B (11.1)**

Level of Service Analysis S. Huron Street and James L. Hart Parkway

PM Peak Hour				
Approach	**Existing**	**Background**	**Background w/ Mitigation**	**Future w/ Mitigation**
Eastbound James L. Hart Pkwy	**E (72.6)**	D (53.1)	D (53.1)	D (53.0)
Westbound James L. Hart Pkwy	C (28.8)	C (27.8)	C (27.8)	C (27.8)
Northbound S. Huron Street	B (19.4)	C (21.1)	A (4.1)	B (18.4)
Southbound S. Huron Street	C (26.0)	C (29.3)	C (22.1)	C (22.4)
Overall	**C (30.6)**	**C (29.4)**	**B (19.9)**	**C (25.0)**

Signalized Intersection of Eastbound I-94 Off-Ramp and South Huron Street

The results of this study show that the Eastbound I-94 Off-Ramp signal will operate at LOS B as did the original 2019 TIA in the AM. In the PM, the results show LOS C in the PM, different from the original 2019 TIA showing LOS B. This difference is primarily due to the increased traffic at this ramp, but is still an acceptable LOS for this intersection in this area.

Level of Service Analysis Eastbound I-94 Off-Ramp and S. Huron Street

AM Peak Hour			
Approach	**Existing**	**Background**	**Future**
Eastbound I-94 Off-Ramp	C (21.3)	C (21.5)	C (21.5)
Northbound S. Huron Street	B (13.6)	B (13.8)	B (13.8)
Southbound S. Huron Street	C (23.9)	B (18.6)	B (18.6)
Overall	**B (18.8)**	**B (17.3)**	**B (17.3)**

Level of Service Analysis Eastbound I-94 Off-Ramp and S. Huron Street

PM Peak Hour			
Approach	**Existing**	**Background**	**Future**
Eastbound I-94 Off-Ramp	C (26.3)	C (30.4)	C (30.5)
Northbound S. Huron Street	B (16.0)	C (23.3)	C (23.3)
Southbound S. Huron Street	C (28.5)	C (30.0)	B (30.0)
Overall	**C (23.9)**	**C (28.0)**	**C (28.1)**

Signalized Intersection of Westbound I-94 Off-Ramp and South Huron Street

The results of this study show that the Westbound I-94 Off-Ramp signal at South Huron Street will operate at LOS D which is worse than the LOS C in the original 2019 TIA in the AM as the number of vehicles during the morning period is substantially higher. However, this is still an acceptable level of service and would be mitigated with traffic signal timing adjustments. In the PM, the results show LOS C in the PM, as did the original 2019 TIA.

Level of Service Analysis Westbound I-94 Off-Ramp and S. Huron Street

AM Peak Hour			
Approach	**Existing**	**Background**	**Future**
Westbound I-94 Off-Ramp	**E (72.9)**	**F (82.8)**	F (83.3)
Northbound S. Huron Street	C (22.2)	C (22.1)	C (22.2)
Overall	**D (47.6)**	**D (52.3)**	**D (52.4)**

Level of Service Analysis Westbound I-94 Off-Ramp and S. Huron Street

PM Peak Hour			
Approach	**Existing**	**Background**	**Future**
Westbound I-94 Off-Ramp	C (30.0)	C (31.0)	C (31.1)
Northbound S. Huron Street	C (20.6)	B (19.9)	B (19.9)
Overall	**C (24.6)**	**C (24.7)**	**C (24.7)**

Signalized Intersection of Westbound I-94 Off-Ramp and South Hamilton Street

The results of this study show that the Westbound I-94 Off-Ramp signal at South Hamilton Street will operate at LOS A as did the original 2019 TIA study in the AM. In the PM, the results show LOS B in the PM, as did the original 2019 TIA.

Level of Service Analysis Westbound I-94 Off-Ramp and S. Hamilton Street

AM Peak Hour			
Approach	**Existing**	**Background**	**Future**
Westbound I-94 Off-Ramp	B (15.6)	A (3.8)	A (3.8)
Southbound S. Huron Street	A (9.8)	A (9.9)	A (9.9)
Overall	**B (11.9)**	**A (7.7)**	**A (7.7)**

Level of Service Analysis Westbound I-94 Off-Ramp and S. Hamilton Street

PM Peak Hour			
Approach	**Existing**	**Background**	**Future**
Westbound I-94 Off-Ramp	A (0.5)	A (0.5)	A (0.5)
Southbound S. Huron Street	B (13.8)	B (14.2)	B (14.2)
Overall	**B (11.0)**	**B (11.4)**	**B (11.4)**

TRAFFIC SIGNAL WARRANT ANALYSIS

The original 2019 traffic impact assessment showed the intersection of Huron Street and Joe Hall Drive meets Warrant 2 – Four Hour Traffic Volume Warrant for a traffic signal. We confirm that this is still the case, but a signal at this location is not recommended due to the proximity of the intersection to the signal at James L Hart Parkway and the new signal at Brinker Way.

CONCLUSIONS AND RECOMMENDATIONS

This 2024 revision of the 2019 Traffic Impact Assessment for a hotel near Joe Hall Drive and South Huron Street shows similar Levels of Service for the existing, background, and future conditions to the original study. Many movements show improved levels of service and less delay compared to the 2019 TIA. The exceptions are the EB and WB I-94 off-ramp at South Huron Drive. This is primarily due to the increase in volumes on these ramps. Levels of service could be mitigated with adjusted signal timing. The proposed Holiday Inn & Suites does not create significant traffic concerns at any of the study intersections nor advances any existing movements into a failing level of service that wasn't already.

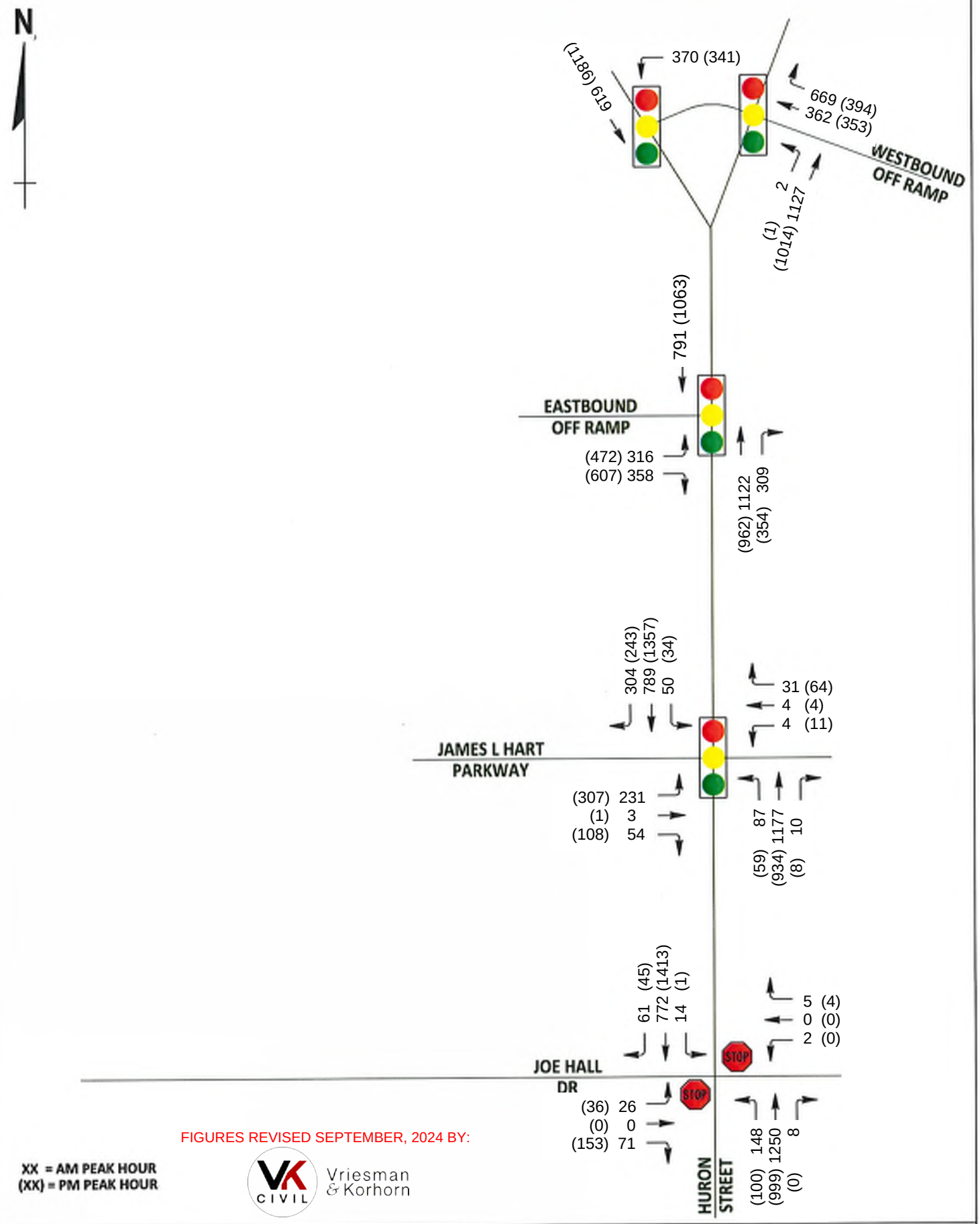
Washtenaw County Road Commission plans to put a traffic light at Brinker Way. No mitigation is recommended at Joe Hall Drive. The new signal should help lower the wait time for vehicles

exiting Joe Hall Drive onto South Huron Street as there will be more gaps in traffic due to the platooning of vehicles. It should be noted that this new traffic light at Brinker Way should by coordinated with other traffic lights along South Huron Street to promote more fluid traffic movements.

No further improvements are recommended at the Joe Hall Drive and South Huron Street intersection. Southbound has a dedicated right turn lane while northbound has a dedicated center left turn lane. Eastbound currently has a dedicated left turn lane and a through/right turn lane. These characteristics along with the fact that this improvement generates little traffic will result in the existing intersection operating much like it currently does.

While traffic exiting Joe Hall Drive in future scenarios – including traffic generated by the hotel - will have long waits for acceptable gaps in traffic to exit onto South Huron Street without a signal, traffic could be routed onto Seaver Way and ultimately the Brinker Way traffic light or Anna J Stepp Road and ultimately the James L Hart Parkway traffic light to reduce their delays.

REPORT FIGURES



FIGURES REVISED SEPTEMBER, 2024 BY:

XX = AM PEAK HOUR
(XX) = PM PEAK HOUR

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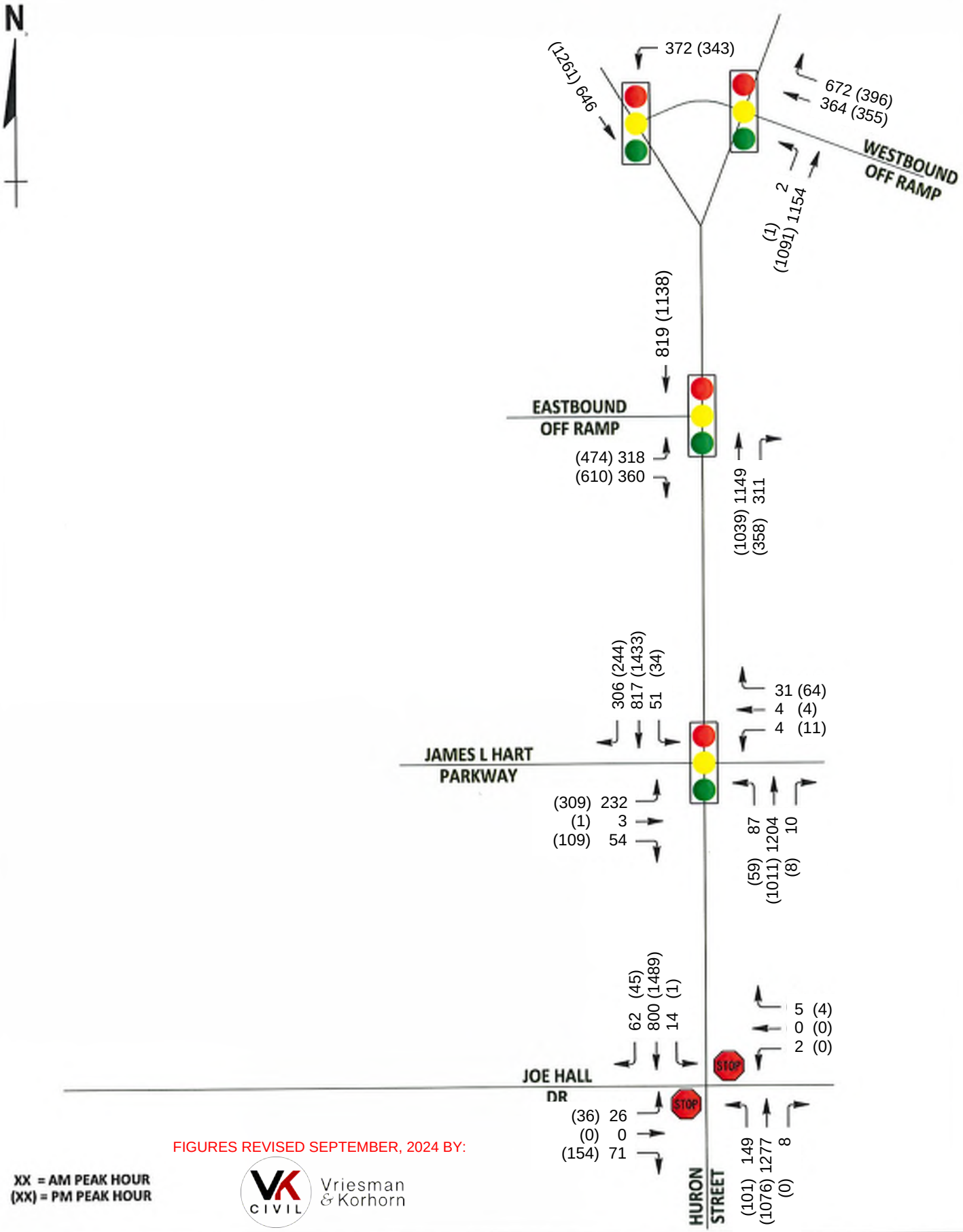
ROWE PROFESSIONAL SERVICES COMPANY

2024 EXISTING AM (PM) PEAK HOUR TRAFFIC VOLUMES

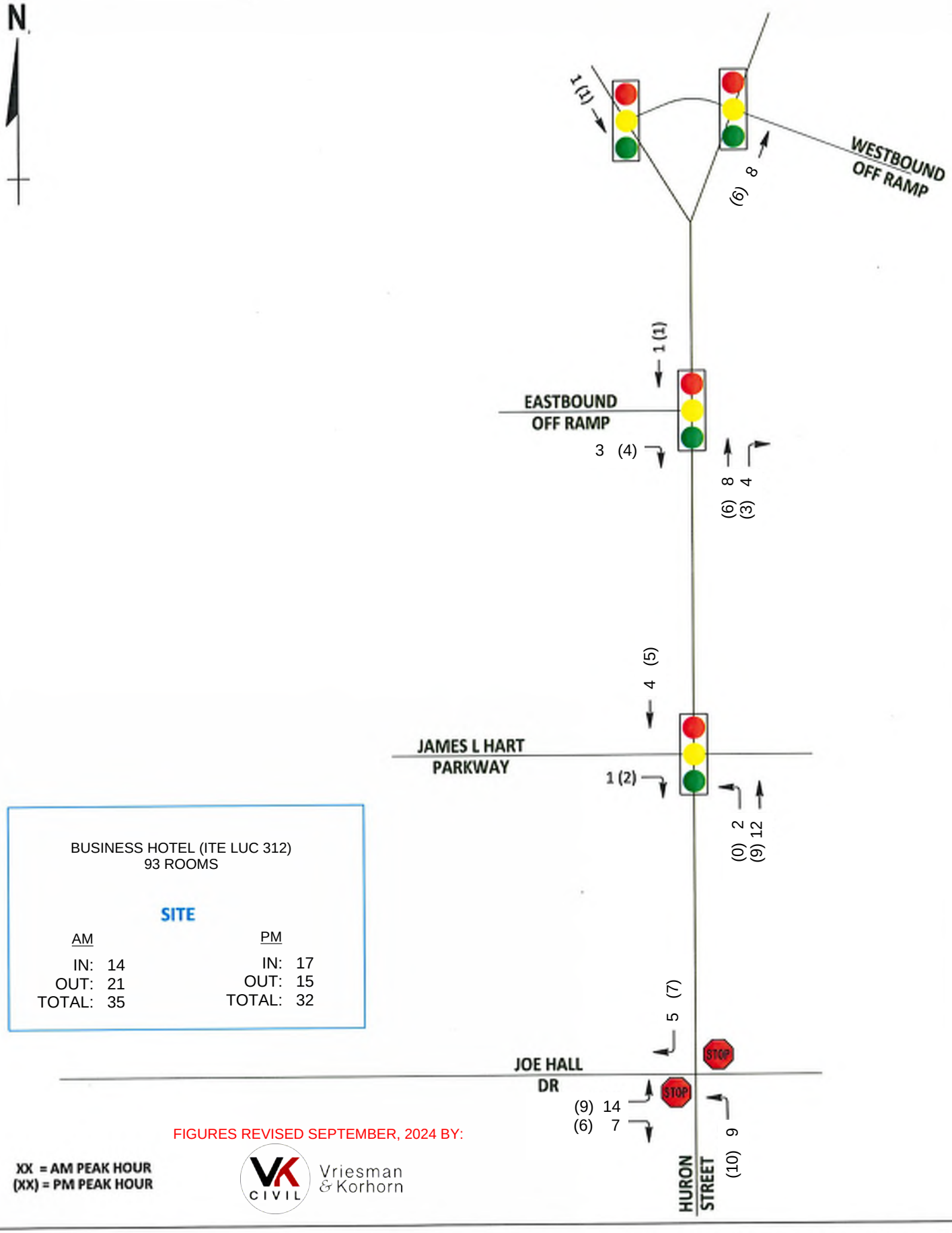
FIGURE 2



2025 BACKGROUND (NO BUILD) AM (PM) PEAK HOUR TRAFFIC VOLUMES

FIGURE 3

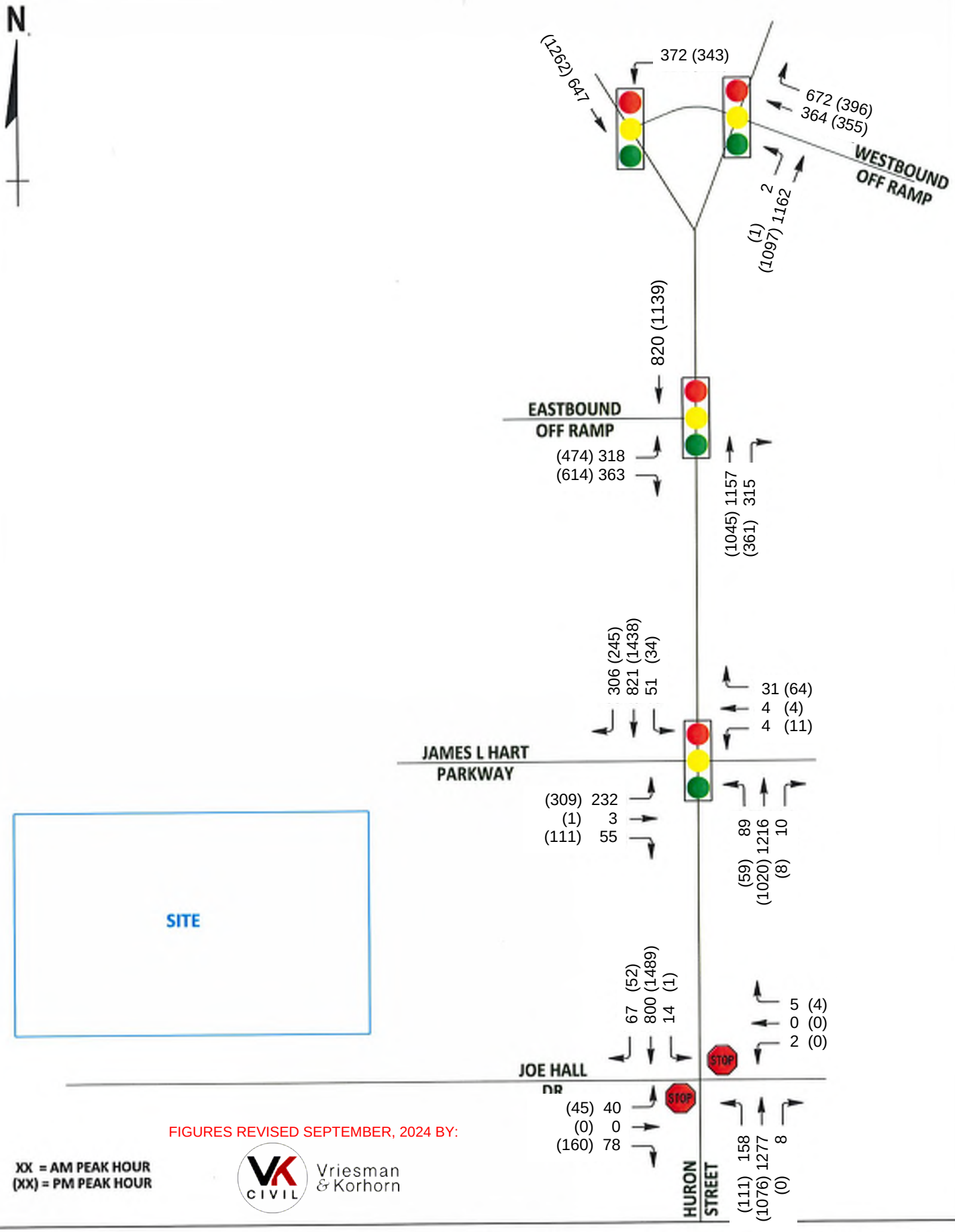
ROWE PROFESSIONAL SERVICES COMPANY



ROWE PROFESSIONAL SERVICES COMPANY

TRIP GENERATION AM (PM) PEAK HOUR TRAFFIC VOLUMES

FIGURE 4



FIGURES REVISED SEPTEMBER, 2024 BY:

Vriesman & Korhorn CIVIL

XX = AM PEAK HOUR
(XX) = PM PEAK HOUR

ROWE PROFESSIONAL SERVICES COMPANY

2025 FUTURE (BUILD) AM (PM) PEAK HOUR TRAFFIC VOLUMES

FIGURE 5

2024 TRAFFIC COUNTS

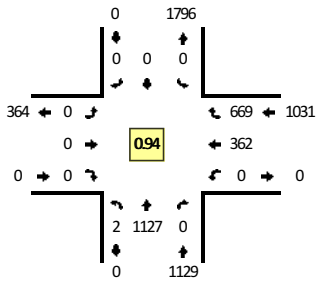
Type of peak hour being reported: Intersection Peak

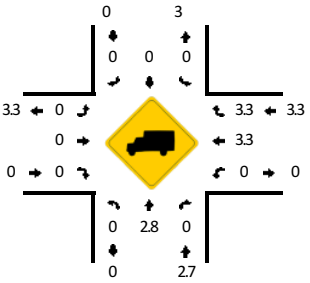
Method for determining peak hour: Total Entering Volume

LOCATION: S Huron St -- I-94 WB Off Ramp
CITY/STATE: Ypsilanti, MI

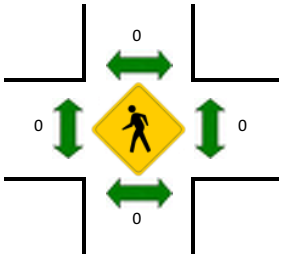
QC JOB #: 16697001
DATE: Wed, Aug 28 2024

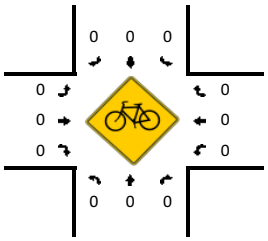
Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 8:30 AM -- 8:45 AM

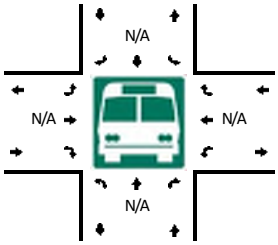


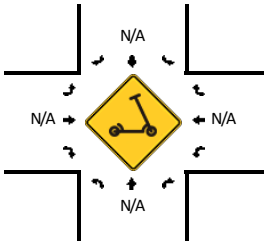


TRUE DATA TO IMPROVE MOBILITY









15-Min Count Period Beginning At	S Huron St (Northbound)				S Huron St (Southbound)				I-94 WB Off Ramp (Eastbound)				I-94 WB Off Ramp (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	138	0	0	0	0	0	0	0	0	0	0	0	45	56	0	239	
7:15 AM	0	145	0	0	0	0	0	0	0	0	0	0	0	53	87	0	285	
7:30 AM	0	192	0	0	0	0	0	0	0	0	0	0	0	98	107	0	397	
7:45 AM	0	284	0	0	0	0	0	0	0	0	0	0	0	88	147	0	519	1440
8:00 AM	0	285	0	0	0	0	0	0	0	0	0	0	0	100	165	0	550	1751
8:15 AM	2	279	0	0	0	0	0	0	0	0	0	0	0	83	155	0	519	1985
8:30 AM	0	279	0	0	0	0	0	0	0	0	0	0	0	91	202	0	572	2160
8:45 AM	0	259	0	0	0	0	0	0	0	0	0	0	0	80	161	0	500	2141

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	1116	0	0	0	0	0	0	0	0	0	0	0	364	808	0	2288
Heavy Trucks	0	32	0		0	0	0		0	0	0		0	16	24		72
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 9/2/2024 12:31 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

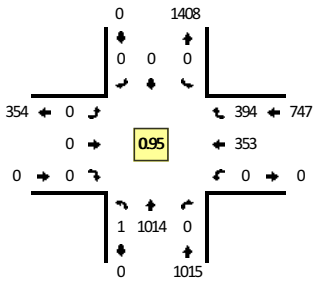
Type of peak hour being reported: Intersection Peak

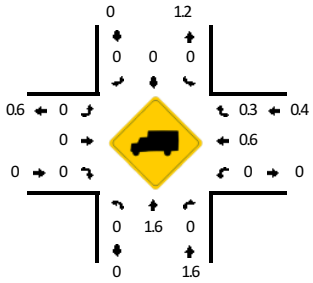
Method for determining peak hour: Total Entering Volume

LOCATION: S Huron St -- I-94 WB Off Ramp
CITY/STATE: Ypsilanti, MI

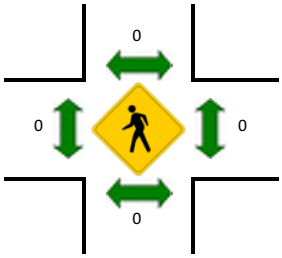
QC JOB #: 16697002
DATE: Wed, Aug 28 2024

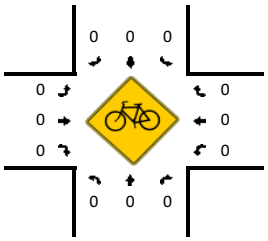
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 4:45 PM -- 5:00 PM

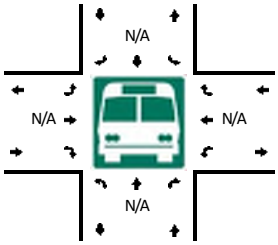


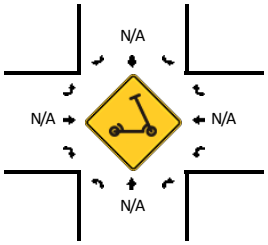


TRUE DATA TO IMPROVE MOBILITY









15-Min Count Period Beginning At	S Huron St (Northbound)				S Huron St (Southbound)				I-94 WB Off Ramp (Eastbound)				I-94 WB Off Ramp (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	247	0	0	0	0	0	0	0	0	0	0	0	75	77	0	399	
4:15 PM	0	269	0	0	0	0	0	0	0	0	0	0	0	74	86	0	429	
4:30 PM	0	237	0	0	0	0	0	0	0	0	0	0	0	80	98	0	415	
4:45 PM	0	257	0	0	0	0	0	0	0	0	0	0	0	97	109	0	463	1706
5:00 PM	0	261	0	0	0	0	0	0	0	0	0	0	0	75	112	0	448	1755
5:15 PM	1	256	0	0	0	0	0	0	0	0	0	0	0	87	87	0	431	1757
5:30 PM	0	240	0	0	0	0	0	0	0	0	0	0	0	94	86	0	420	1762
5:45 PM	0	266	0	0	0	0	0	0	0	0	0	0	0	80	89	0	435	1734

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	1028	0	0	0	0	0	0	0	0	0	0	0	388	436	0	1852
Heavy Trucks	0	28	0		0	0	0		0	0	0		0	4	4		36
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

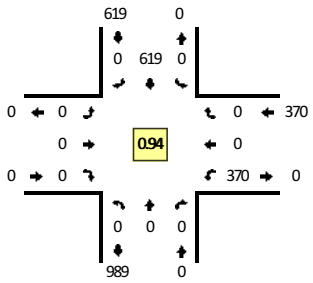
Report generated on 9/2/2024 12:31 PM

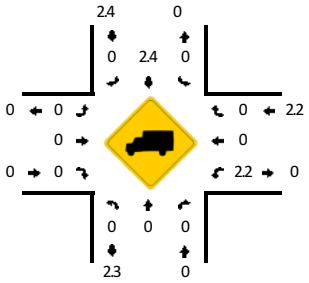
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

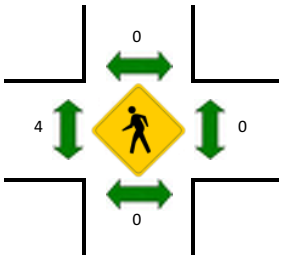
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

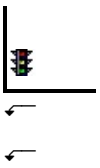
LOCATION: S Hamilton St -- I-94 WB Off-Ramp Connector | **QC JOB #:** 16697003
CITY/STATE: Ypsilanti, MI | **DATE:** Wed, Aug 28 2024

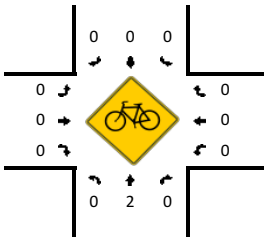
Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

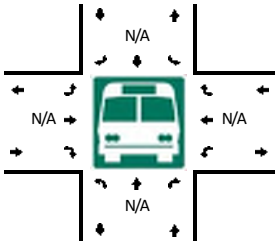


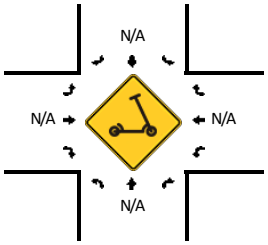












15-Min Count Period Beginning At	S Hamilton St (Northbound)				S Hamilton St (Southbound)				I-94 WB Off-Ramp Connector (Eastbound)				I-94 WB Off-Ramp Connector (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	0	99	0	0	0	0	0	0	45	0	0	0	144	
7:15 AM	0	0	0	0	0	132	0	0	0	0	0	0	53	0	0	0	185	
7:30 AM	0	0	0	0	0	152	0	0	0	0	0	0	97	0	0	0	249	
7:45 AM	0	0	0	0	0	176	0	0	0	0	0	0	88	0	0	0	264	842
8:00 AM	0	0	0	0	0	146	0	0	0	0	0	0	100	0	0	0	246	944
8:15 AM	0	0	0	0	0	145	0	0	0	0	0	0	85	0	0	0	230	989
8:30 AM	0	0	0	0	0	154	0	0	0	0	0	0	92	0	0	0	246	986
8:45 AM	0	0	0	0	0	154	0	0	0	0	0	0	82	0	0	0	236	958

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	704	0	0	0	0	0	0	352	0	0	0	1056
Heavy Trucks	0	0	0		0	20	0		0	0	0		12	0	0		32
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	4	0		0	0	0		0	0	0		0	0	0		4
Scooters																	

Comments:

Report generated on 9/2/2024 12:31 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

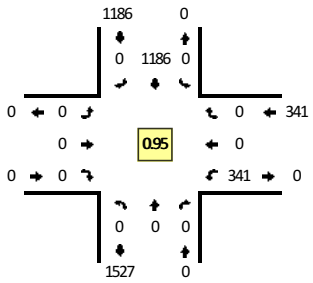
Type of peak hour being reported: Intersection Peak

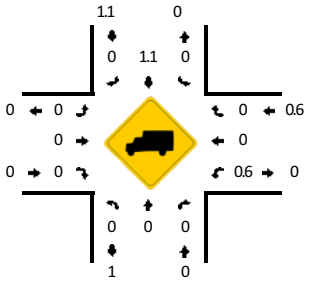
Method for determining peak hour: Total Entering Volume

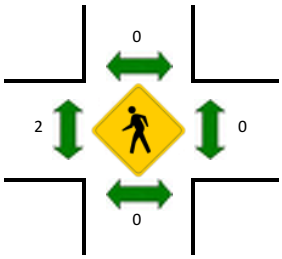
LOCATION: S Hamilton St -- I-94 WB Off-Ramp Connector
CITY/STATE: Ypsilanti, MI

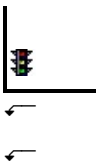
QC JOB #: 16697004
DATE: Wed, Aug 28 2024

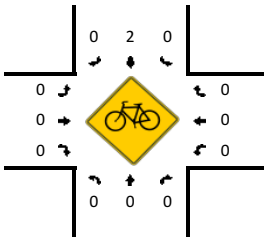
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 4:45 PM -- 5:00 PM

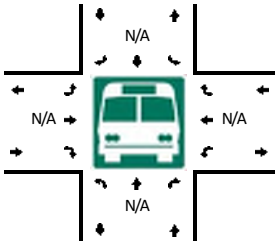


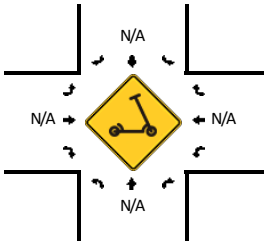












15-Min Count Period Beginning At	S Hamilton St (Northbound)				S Hamilton St (Southbound)				I-94 WB Off-Ramp Connector (Eastbound)				I-94 WB Off-Ramp Connector (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	0	288	0	0	0	0	0	0	75	0	0	0	363	
4:15 PM	0	0	0	0	0	291	0	0	0	0	0	0	74	0	0	0	365	
4:30 PM	0	0	0	0	0	270	0	0	0	0	0	0	80	0	0	0	350	
4:45 PM	0	0	0	0	0	304	0	0	0	0	0	0	98	0	0	0	402	1480
5:00 PM	0	0	0	0	0	309	0	0	0	0	0	0	75	0	0	0	384	1501
5:15 PM	0	0	0	0	0	303	0	0	0	0	0	0	88	0	0	0	391	1527
5:30 PM	0	0	0	0	0	242	0	0	0	0	0	0	91	0	0	0	333	1510
5:45 PM	0	0	0	0	0	238	0	0	0	0	0	0	83	0	0	0	321	1429

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	1216	0	0	0	0	0	0	392	0	0	0	1608
Heavy Trucks	0	0	0		0	16	0		0	0	0		4	0	0		20
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 9/2/2024 12:31 PM

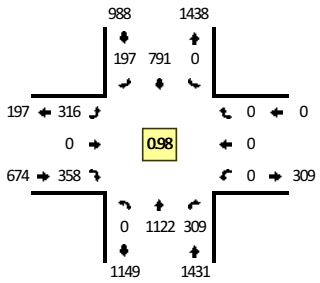
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

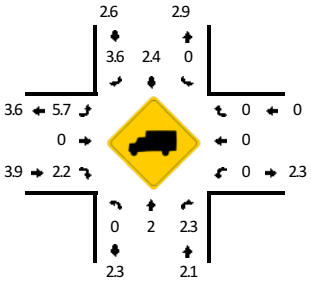
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

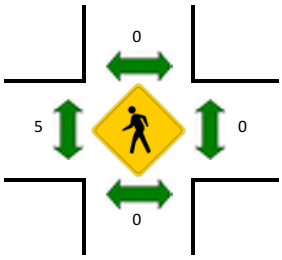
LOCATION: S Huron St -- I-94 EB Ramps | **QC JOB #:** 16697005
CITY/STATE: Ypsilanti, MI | **DATE:** Wed, Aug 28 2024

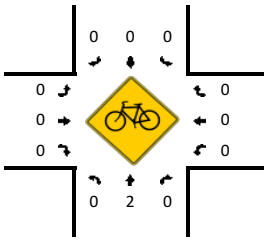
Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 8:00 AM -- 8:15 AM

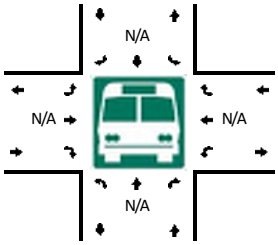
TRUE DATA TO IMPROVE MOBILITY

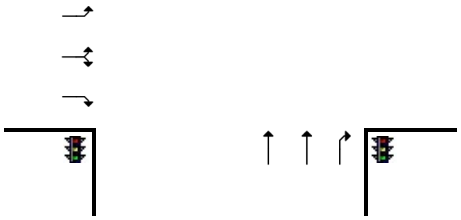


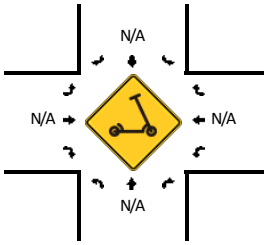












15-Min Count Period Beginning At	S Huron St (Northbound)				S Huron St (Southbound)				I-94 EB Ramps (Eastbound)				I-94 EB Ramps (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	246	61	0	0	106	34	0	38	0	54	0	0	0	0	0	539	
7:15 AM	0	291	73	0	0	133	47	0	41	0	67	0	0	0	0	0	652	
7:30 AM	0	311	86	0	0	203	42	0	58	0	60	0	0	0	0	0	760	
7:45 AM	0	269	71	0	0	208	61	0	89	0	90	0	0	0	0	0	788	2739
8:00 AM	0	282	88	0	0	196	51	0	83	0	92	0	0	0	0	0	792	2992
8:15 AM	0	260	64	0	0	184	43	0	86	0	116	0	0	0	0	0	753	3093
8:30 AM	0	271	73	0	0	194	55	0	79	0	68	0	0	0	0	0	740	3073
8:45 AM	0	220	49	0	0	188	44	0	105	0	104	0	0	0	0	0	710	2995

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	1128	352	0	0	784	204	0	332	0	368	0	0	0	0	0	3168
Heavy Trucks	0	24	12		0	36	8		8	0	12		0	0	0		100
Buses																	
Pedestrians		0				0				4				0			4
Bicycles	0	4	0		0	0	0		0	0	0		0	0	0		4
Scooters																	

Comments:

Report generated on 9/2/2024 12:31 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

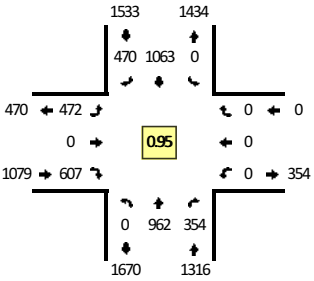
Type of peak hour being reported: Intersection Peak

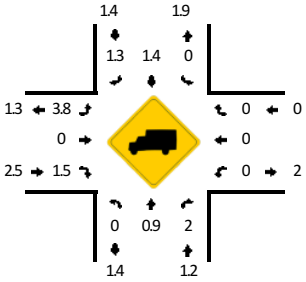
Method for determining peak hour: Total Entering Volume

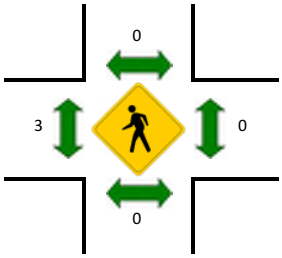
LOCATION: S Huron St -- I-94 EB Ramps
CITY/STATE: Ypsilanti, MI

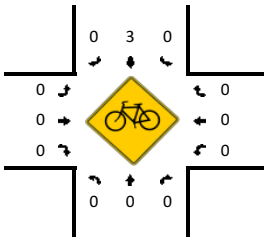
QC JOB #: 16697006
DATE: Wed, Aug 28 2024

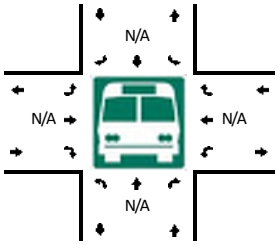
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

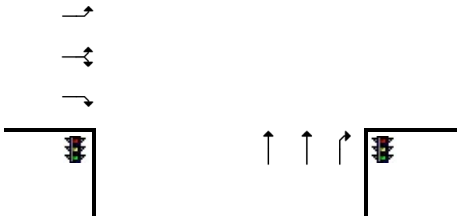


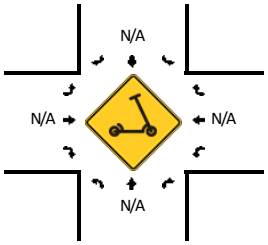












15-Min Count Period Beginning At	S Huron St (Northbound)				S Huron St (Southbound)				I-94 EB Ramps (Eastbound)				I-94 EB Ramps (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	230	97	0	0	262	110	0	117	0	175	0	0	0	0	0	991	
4:15 PM	0	274	74	0	0	234	124	0	105	0	129	0	0	0	0	0	940	
4:30 PM	0	222	89	0	0	248	107	0	121	0	153	0	0	0	0	0	940	
4:45 PM	0	218	91	0	0	276	118	0	126	0	142	0	0	0	0	0	971	3842
5:00 PM	0	276	86	0	0	251	134	0	113	0	172	0	0	0	0	0	1032	3883
5:15 PM	0	246	88	0	0	288	111	0	112	0	140	0	0	0	0	0	985	3928
5:30 PM	0	242	53	0	0	226	104	0	104	0	149	0	0	0	0	0	878	3866
5:45 PM	0	213	83	0	0	240	73	1	122	0	148	0	0	0	0	0	880	3775

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	1104	344	0	0	1004	536	0	452	0	688	0	0	0	0	0	4128
Heavy Trucks	0	12	4		0	8	12		8	0	16		0	0	0		60
Buses																	
Pedestrians		0				0				4				0			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 9/2/2024 12:31 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

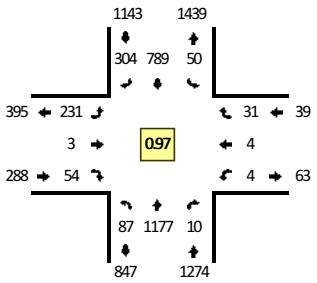
Type of peak hour being reported: Intersection Peak

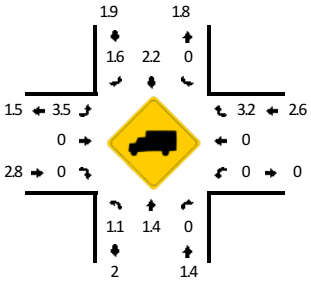
Method for determining peak hour: Total Entering Volume

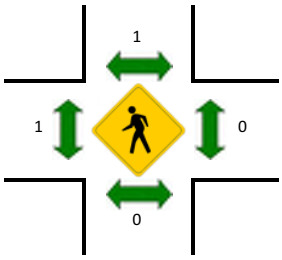
LOCATION: Huron St -- James L Hart Pkwy
CITY/STATE: Ypsilanti Charter Township, MI

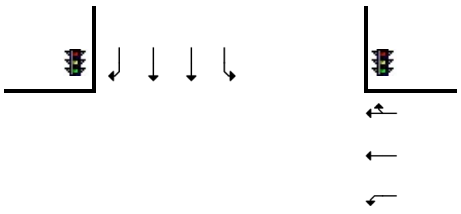
QC JOB #: 16697007
DATE: Wed, Aug 28 2024

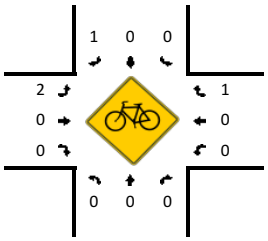
Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:30 AM -- 7:45 AM

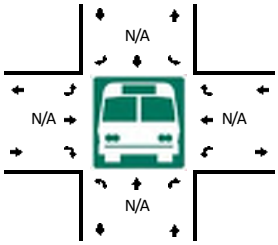


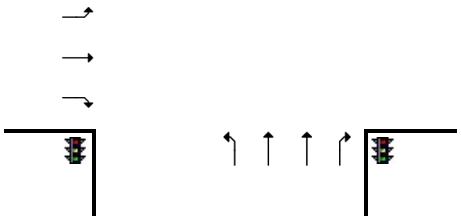


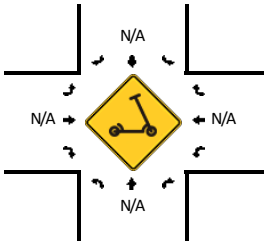












15-Min Count Period Beginning At	Huron St (Northbound)				Huron St (Southbound)				James L Hart Pkwy (Eastbound)				James L Hart Pkwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	21	239	1	0	7	104	52	0	63	0	16	0	1	0	9	0	513	
7:15 AM	18	298	1	0	8	137	50	0	60	0	11	0	3	0	9	0	595	
7:30 AM	17	339	3	0	8	198	63	0	59	1	12	0	2	1	7	0	710	
7:45 AM	22	278	2	0	9	213	76	0	54	1	14	0	0	1	7	0	677	2495
8:00 AM	23	288	2	0	19	193	72	0	63	0	12	0	2	0	9	0	683	2665
8:15 AM	25	272	3	0	14	185	93	0	55	1	16	0	0	2	8	0	674	2744
8:30 AM	19	275	0	0	9	170	82	0	66	3	19	0	1	2	3	0	649	2683
8:45 AM	20	203	2	0	5	207	74	0	46	2	18	0	2	1	6	0	586	2592

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	68	1356	12	0	32	792	252	0	236	4	48	0	8	4	28	0	2840
Heavy Trucks	4	20	0		0	12	4		4	0	0		0	0	0		44
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	4		0	0	0		0	0	0		4
Scooters																	

Comments:

Report generated on 9/2/2024 12:31 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

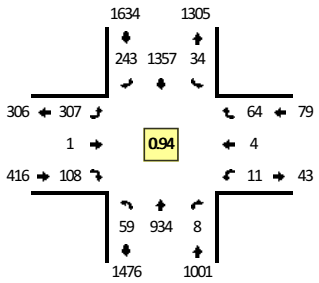
Type of peak hour being reported: Intersection Peak

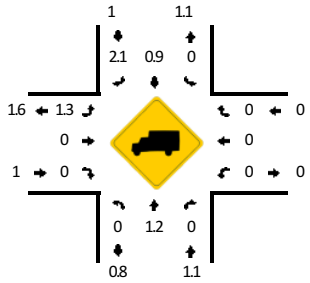
Method for determining peak hour: Total Entering Volume

LOCATION: Huron St -- James L Hart Pkwy
CITY/STATE: Ypsilanti Charter Township, MI

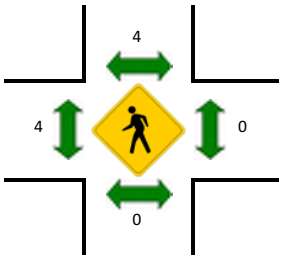
QC JOB #: 16697008
DATE: Wed, Aug 28 2024

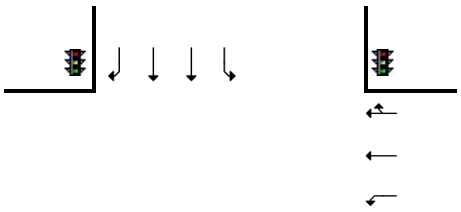
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

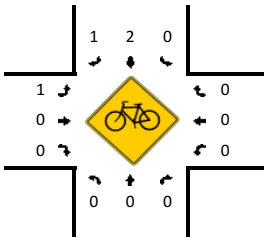


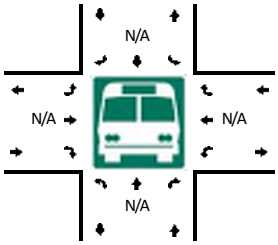


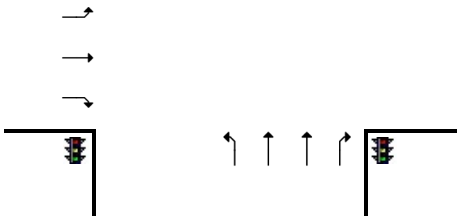
TRUE DATA TO IMPROVE MOBILITY

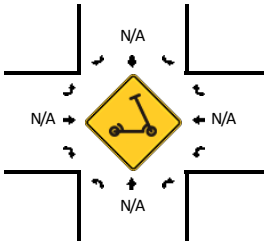












15-Min Count Period Beginning At	Huron St (Northbound)				Huron St (Southbound)				James L Hart Pkwy (Eastbound)				James L Hart Pkwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	9	239	3	0	8	364	59	0	76	1	28	0	1	1	11	0	800	
4:15 PM	14	280	4	0	7	289	64	0	58	4	26	0	0	1	8	0	755	
4:30 PM	19	231	2	0	11	329	45	0	63	1	27	0	6	1	18	0	753	
4:45 PM	10	206	5	0	10	330	66	0	76	0	24	0	1	1	30	0	759	3067
5:00 PM	10	257	1	0	8	356	68	0	92	0	29	0	1	0	10	0	832	3099
5:15 PM	20	240	0	0	5	342	64	0	76	0	28	0	3	2	6	0	786	3130
5:30 PM	20	239	0	0	6	309	62	0	62	0	31	0	2	0	5	0	736	3113
5:45 PM	15	228	1	0	10	337	59	0	73	3	13	0	5	1	6	0	751	3105

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	40	1028	4	0	32	1424	272	0	368	0	116	0	4	0	40	0	3328
Heavy Trucks	0	12	0		0	12	4		4	0	0		0	0	0		32
Buses																	
Pedestrians		0				0				4				0			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 9/2/2024 12:31 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

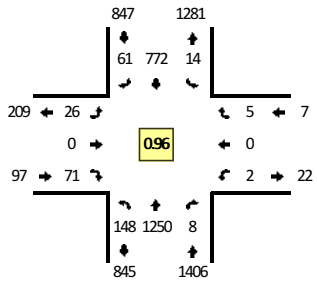
Type of peak hour being reported: Intersection Peak

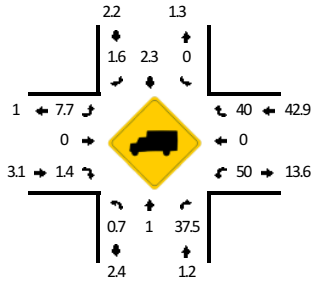
Method for determining peak hour: Total Entering Volume

LOCATION: Huron St -- Joe Hall Dr
CITY/STATE: Ypsilanti Charter Township, MI

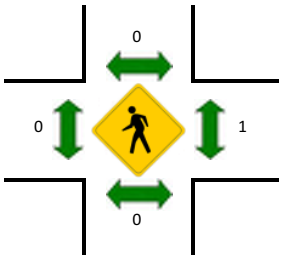
QC JOB #: 16697009
DATE: Wed, Aug 28 2024

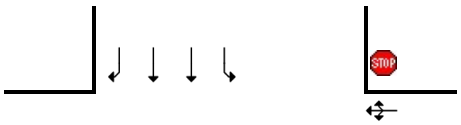
Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:30 AM -- 7:45 AM

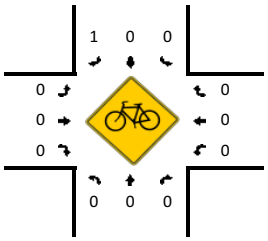


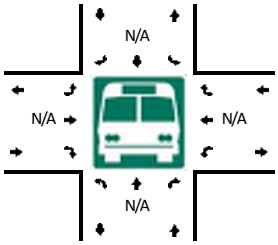


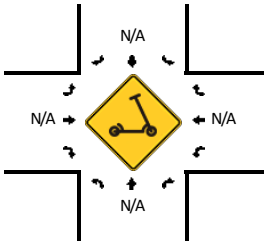
TRUE DATA TO IMPROVE MOBILITY











15-Min Count Period Beginning At	Huron St (Northbound)				Huron St (Southbound)				Joe Hall Dr (Eastbound)				Joe Hall Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	26	261	1	0	2	106	15	0	5	0	8	0	0	0	0	0	424	
7:15 AM	34	316	1	0	1	136	13	0	6	0	9	0	0	0	0	0	516	
7:30 AM	35	341	1	0	2	195	16	0	6	0	13	0	0	0	2	0	611	
7:45 AM	37	298	1	0	3	207	15	0	5	0	18	0	0	0	0	0	584	2135
8:00 AM	39	313	4	0	6	185	17	0	6	0	22	0	1	0	1	0	594	2305
8:15 AM	37	298	2	0	3	185	13	0	9	0	18	0	1	0	2	0	568	2357
8:30 AM	33	273	4	0	3	173	19	0	6	0	15	0	1	0	2	0	529	2275
8:45 AM	37	219	1	0	2	203	17	0	3	0	17	0	0	0	1	0	500	2191

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	140	1364	4	0	8	780	64	0	24	0	52	0	0	0	8	0	2444
Heavy Trucks	0	16	4		0	12	0		0	0	4		0	0	4		40
Buses																	
Pedestrians		0				0				0				4			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 9/2/2024 12:31 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

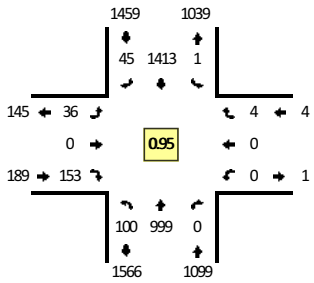
Type of peak hour being reported: Intersection Peak

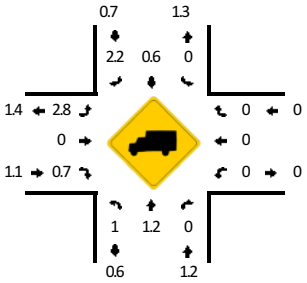
Method for determining peak hour: Total Entering Volume

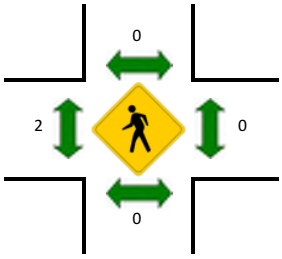
LOCATION: Huron St -- Joe Hall Dr
CITY/STATE: Ypsilanti Charter Township, MI

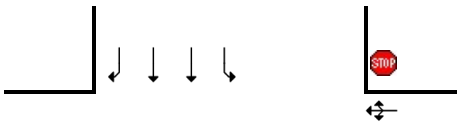
QC JOB #: 16697010
DATE: Wed, Aug 28 2024

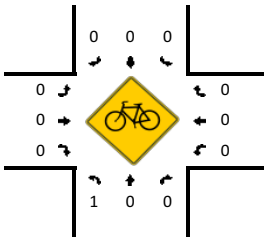
Peak-Hour: 5:00 PM -- 6:00 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

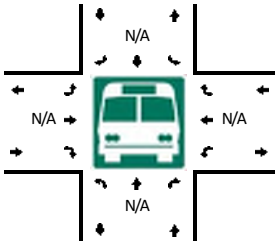


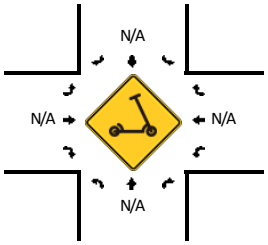












15-Min Count Period Beginning At	Huron St (Northbound)				Huron St (Southbound)				Joe Hall Dr (Eastbound)				Joe Hall Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	20	241	0	0	3	371	8	0	6	0	27	0	4	0	4	0	684	
4:15 PM	33	282	2	0	3	312	10	0	7	0	24	0	0	0	5	0	678	
4:30 PM	23	246	0	0	1	357	4	0	9	0	26	0	2	1	9	0	678	
4:45 PM	20	204	0	0	0	342	10	0	4	0	28	0	1	0	0	0	609	2649
5:00 PM	28	255	0	0	1	383	9	0	10	0	38	0	0	0	2	0	726	2691
5:15 PM	25	260	0	0	0	355	17	0	5	0	39	0	0	0	0	0	701	2714
5:30 PM	21	259	0	0	0	335	10	0	12	0	40	0	0	0	0	0	677	2713
5:45 PM	26	225	0	0	0	340	9	0	9	0	36	0	0	0	2	0	647	2751

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	112	1020	0	0	4	1532	36	0	40	0	152	0	0	0	8	0	2904
Heavy Trucks	0	12	0		0	8	4		0	0	0		0	0	0		24
Buses																	
Pedestrians		0				0				8				0			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 9/2/2024 12:31 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

SYNCHRO 11 OUTPUT FILES

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	26	0	71	2	0	5	148	1250	8	14	772	61
Future Vol, veh/h	26	0	71	2	0	5	148	1250	8	14	772	61
Conflicting Peds, #/hr	1	0	1	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	-	-	-	-	250	-	-	250	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	65	65	65	93	93	93	94	94	94
Heavy Vehicles, %	1	1	1	5	5	5	1	1	1	2	2	2
Mvmt Flow	30	0	82	3	0	8	159	1344	9	15	821	65

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1842	2522	412	2109	2583	678	886	0	0	1353	0	0
Stage 1	851	851	-	1667	1667	-	-	-	-	-	-	-
Stage 2	991	1671	-	442	916	-	-	-	-	-	-	-
Critical Hdwy	7.52	6.52	6.92	7.6	6.6	7	4.12	-	-	4.14	-	-
Critical Hdwy Stg 1	6.52	5.52	-	6.6	5.6	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.52	5.52	-	6.6	5.6	-	-	-	-	-	-	-
Follow-up Hdwy	3.51	4.01	3.31	3.55	4.05	3.35	2.21	-	-	2.22	-	-
Pot Cap-1 Maneuver	47	28	592	28	24	388	766	-	-	504	-	-
Stage 1	323	377	-	97	147	-	-	-	-	-	-	-
Stage 2	266	153	-	556	343	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	38	22	591	20	18	388	766	-	-	504	-	-
Mov Cap-2 Maneuver	38	22	-	20	18	-	-	-	-	-	-	-
Stage 1	256	366	-	77	116	-	-	-	-	-	-	-
Stage 2	206	121	-	465	333	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	73.5	74.9	1.2	0.2
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	766	-	-	38	591	62	504	-	-
HCM Lane V/C Ratio	0.208	-	-	0.786	0.138	0.174	0.03	-	-
HCM Control Delay (s)	10.9	-	-	241	12.1	74.9	12.4	-	-
HCM Lane LOS	B	-	-	F	B	F	B	-	-
HCM 95th %tile Q(veh)	0.8	-	-	2.9	0.5	0.6	0.1	-	-

Intersection	
Int Delay, s/veh	15.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	36	0	153	0	0	4	100	999	0	1	1413	45
Future Vol, veh/h	36	0	153	0	0	4	100	999	0	1	1413	45
Conflicting Peds, #/hr	2	0	2	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	-	-	-	-	250	-	-	250	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	65	65	65	96	96	96	93	93	93
Heavy Vehicles, %	1	1	1	0	0	0	1	1	1	1	1	1
Mvmt Flow	40	0	168	0	0	6	104	1041	0	1	1519	48

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2252	2770	762	2013	2818	523	1567	0	0	1041	0	0
Stage 1	1521	1521	-	1249	1249	-	-	-	-	-	-	-
Stage 2	731	1249	-	764	1569	-	-	-	-	-	-	-
Critical Hdwy	7.52	6.52	6.92	7.5	6.5	6.9	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.52	5.52	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.52	5.52	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.51	4.01	3.31	3.5	4	3.3	2.21	-	-	2.21	-	-
Pot Cap-1 Maneuver	~ 23	19	350	35	18	504	422	-	-	670	-	-
Stage 1	125	181	-	186	247	-	-	-	-	-	-	-
Stage 2	382	245	-	367	173	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 18	14	349	15	14	503	422	-	-	670	-	-
Mov Cap-2 Maneuver	~ 18	14	-	15	14	-	-	-	-	-	-	-
Stage 1	94	181	-	140	186	-	-	-	-	-	-	-
Stage 2	284	185	-	190	173	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	209.3	12.2	1.5	0
HCM LOS	F	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	422	-	-	18	349	503	670	-	-
HCM Lane V/C Ratio	0.247	-	-	2.198	0.482	0.012	0.002	-	-
HCM Control Delay (s)	16.3	-	-	$ 994.5	24.5	12.2	10.4	-	-
HCM Lane LOS	C	-	-	F	C	B	B	-	-
HCM 95th %tile Q(veh)	1	-	-	5.4	2.5	0	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	4.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	26	0	71	2	0	5	149	1277	8	14	800	62
Future Vol, veh/h	26	0	71	2	0	5	149	1277	8	14	800	62
Conflicting Peds, #/hr	1	0	1	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	-	-	-	-	250	-	-	250	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	65	65	65	93	93	93	94	94	94
Heavy Vehicles, %	3	3	3	5	5	5	1	1	1	2	2	2
Mvmt Flow	30	0	82	3	0	8	160	1373	9	15	851	66

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1889	2583	427	2155	2645	692	917	0	0	1382	0	0
Stage 1	881	881	-	1698	1698	-	-	-	-	-	-	-
Stage 2	1008	1702	-	457	947	-	-	-	-	-	-	-
Critical Hdwy	7.56	6.56	6.96	7.6	6.6	7	4.12	-	-	4.14	-	-
Critical Hdwy Stg 1	6.56	5.56	-	6.6	5.6	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.56	5.56	-	6.6	5.6	-	-	-	-	-	-	-
Follow-up Hdwy	3.53	4.03	3.33	3.55	4.05	3.35	2.21	-	-	2.22	-	-
Pot Cap-1 Maneuver	42	25	573	26	22	380	746	-	-	492	-	-
Stage 1	306	360	-	93	142	-	-	-	-	-	-	-
Stage 2	256	144	-	545	331	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	34	19	572	18	17	380	746	-	-	492	-	-
Mov Cap-2 Maneuver	34	19	-	18	17	-	-	-	-	-	-	-
Stage 1	241	349	-	73	112	-	-	-	-	-	-	-
Stage 2	197	113	-	453	321	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	86.8	84	1.2	0.2
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	746	-	-	34	572	56	492	-	-
HCM Lane V/C Ratio	0.215	-	-	0.879	0.143	0.192	0.03	-	-
HCM Control Delay (s)	11.1	-	-	290.1	12.3	84	12.5	-	-
HCM Lane LOS	B	-	-	F	B	F	B	-	-
HCM 95th %tile Q(veh)	0.8	-	-	3.1	0.5	0.6	0.1	-	-

Intersection	
Int Delay, s/veh	21.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	36	0	154	0	0	4	101	1076	0	1	1489	45
Future Vol, veh/h	36	0	154	0	0	4	101	1076	0	1	1489	45
Conflicting Peds, #/hr	2	0	2	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	-	-	-	-	250	-	-	250	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	65	65	65	93	93	93	94	94	94
Heavy Vehicles, %	1	1	1	0	0	0	1	1	1	1	1	1
Mvmt Flow	41	0	177	0	0	6	109	1157	0	1	1584	48

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2385	2961	794	2171	3009	581	1632	0	0	1157	0	0
Stage 1	1586	1586	-	1375	1375	-	-	-	-	-	-	-
Stage 2	799	1375	-	796	1634	-	-	-	-	-	-	-
Critical Hdwy	7.52	6.52	6.92	7.5	6.5	6.9	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.52	5.52	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.52	5.52	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.51	4.01	3.31	3.5	4	3.3	2.21	-	-	2.21	-	-
Pot Cap-1 Maneuver	~ 18	14	333	27	14	462	398	-	-	605	-	-
Stage 1	114	168	-	156	215	-	-	-	-	-	-	-
Stage 2	347	213	-	351	161	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 14	10	332	10	10	461	398	-	-	605	-	-
Mov Cap-2 Maneuver	~ 14	10	-	10	10	-	-	-	-	-	-	-
Stage 1	83	168	-	113	156	-	-	-	-	-	-	-
Stage 2	248	155	-	163	161	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	294.1	12.9	1.5	0
HCM LOS	F	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	398	-	-	14	332	461	605	-	-
HCM Lane V/C Ratio	0.273	-	-	2.956	0.533	0.013	0.002	-	-
HCM Control Delay (s)	17.4	-	-	$ 1434	27.6	12.9	11	-	-
HCM Lane LOS	C	-	-	F	D	B	B	-	-
HCM 95th %tile Q(veh)	1.1	-	-	6	3	0	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	10.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	0	78	2	0	5	158	1277	8	14	800	67
Future Vol, veh/h	40	0	78	2	0	5	158	1277	8	14	800	67
Conflicting Peds, #/hr	1	0	1	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	-	-	-	-	250	-	-	250	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	65	65	65	93	93	93	94	94	94
Heavy Vehicles, %	3	3	3	5	5	5	1	1	1	2	2	2
Mvmt Flow	46	0	90	3	0	8	170	1373	9	15	851	71

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1909	2603	427	2175	2670	692	922	0	0	1382	0	0
Stage 1	881	881	-	1718	1718	-	-	-	-	-	-	-
Stage 2	1028	1722	-	457	952	-	-	-	-	-	-	-
Critical Hdwy	7.56	6.56	6.96	7.6	6.6	7	4.12	-	-	4.14	-	-
Critical Hdwy Stg 1	6.56	5.56	-	6.6	5.6	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.56	5.56	-	6.6	5.6	-	-	-	-	-	-	-
Follow-up Hdwy	3.53	4.03	3.33	3.55	4.05	3.35	2.21	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 41	24	573	25	21	380	743	-	-	492	-	-
Stage 1	306	360	-	90	139	-	-	-	-	-	-	-
Stage 2	249	141	-	545	329	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 32	18	572	17	16	380	743	-	-	492	-	-
Mov Cap-2 Maneuver	~ 32	18	-	17	16	-	-	-	-	-	-	-
Stage 1	236	349	-	69	107	-	-	-	-	-	-	-
Stage 2	188	109	-	445	319	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	178.7	87.6	1.2	0.2
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	743	-	-	32	572	54	492	-	-
HCM Lane V/C Ratio	0.229	-	-	1.437	0.157	0.199	0.03	-	-
HCM Control Delay (s)	11.3	-	-	$ 502.8	12.5	87.6	12.5	-	-
HCM Lane LOS	B	-	-	F	B	F	B	-	-
HCM 95th %tile Q(veh)	0.9	-	-	5.1	0.6	0.7	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	31.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	45	0	160	0	0	4	111	1076	0	1	1489	52
Future Vol, veh/h	45	0	160	0	0	4	111	1076	0	1	1489	52
Conflicting Peds, #/hr	2	0	2	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	-	-	-	-	250	-	-	250	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	65	65	65	93	93	93	94	94	94
Heavy Vehicles, %	1	1	1	0	0	0	1	1	1	1	1	1
Mvmt Flow	52	0	184	0	0	6	119	1157	0	1	1584	55

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2405	2981	794	2191	3036	581	1639	0	0	1157	0	0
Stage 1	1586	1586	-	1395	1395	-	-	-	-	-	-	-
Stage 2	819	1395	-	796	1641	-	-	-	-	-	-	-
Critical Hdwy	7.52	6.52	6.92	7.5	6.5	6.9	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.52	5.52	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.52	5.52	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.51	4.01	3.31	3.5	4	3.3	2.21	-	-	2.21	-	-
Pot Cap-1 Maneuver	~ 18	14	333	26	13	462	396	-	-	605	-	-
Stage 1	114	168	-	151	210	-	-	-	-	-	-	-
Stage 2	338	208	-	351	160	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 14	10	332	9	9	461	396	-	-	605	-	-
Mov Cap-2 Maneuver	~ 14	10	-	9	9	-	-	-	-	-	-	-
Stage 1	80	168	-	106	147	-	-	-	-	-	-	-
Stage 2	233	145	-	156	160	-	-	-	-	-	-	-

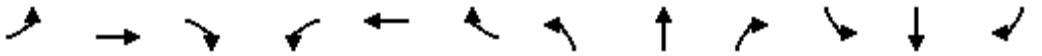
Approach	EB	WB	NB	SB
HCM Control Delay, s$	408.6	12.9	1.7	0
HCM LOS	F	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	396	-	-	14	332	461	605	-	-
HCM Lane V/C Ratio	0.301	-	-	3.695	0.554	0.013	0.002	-	-
HCM Control Delay (s)	18	-	-	$ 1760.1	28.5	12.9	11	-	-
HCM Lane LOS	C	-	-	F	D	B	B	-	-
HCM 95th %tile Q(veh)	1.2	-	-	7.4	3.2	0	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

HCM 6th Signalized Intersection Summary
4: Huron St & James L Hart Pkwy

09/05/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	231	3	54	4	4	31	87	1177	10	50	789	304
Future Volume (veh/h)	231	3	54	4	4	31	87	1177	10	50	789	304
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1885	1885	1885	1870	1870	1870
Adj Flow Rate, veh/h	241	3	56	4	4	35	98	1322	11	52	822	317
Peak Hour Factor	0.96	0.96	0.96	0.89	0.89	0.89	0.89	0.89	0.89	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	1	1	1	2	2	2
Cap, veh/h	312	306	259	308	306	259	455	1742	777	364	1728	770
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.11	0.49	0.49	0.11	0.49	0.49
Sat Flow, veh/h	1358	1856	1570	1331	1856	1572	1795	3582	1598	1781	3554	1584
Grp Volume(v), veh/h	241	3	56	4	4	35	98	1322	11	52	822	317
Grp Sat Flow(s),veh/h/ln	1358	1856	1570	1331	1856	1572	1795	1791	1598	1781	1777	1584
Q Serve(g_s), s	13.1	0.1	2.5	0.2	0.1	1.5	0.0	24.0	0.3	0.0	12.4	10.3
Cycle Q Clear(g_c), s	13.2	0.1	2.5	0.3	0.1	1.5	0.0	24.0	0.3	0.0	12.4	10.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	312	306	259	308	306	259	455	1742	777	364	1728	770
V/C Ratio(X)	0.77	0.01	0.22	0.01	0.01	0.13	0.22	0.76	0.01	0.14	0.48	0.41
Avail Cap(c_a), veh/h	312	306	259	308	306	259	455	1742	777	364	1728	770
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.0	27.9	28.9	28.1	27.9	28.5	15.5	16.7	10.6	22.6	13.7	13.2
Incr Delay (d2), s/veh	16.9	0.1	1.9	0.1	0.1	1.1	1.1	3.2	0.0	0.8	0.9	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	0.1	1.0	0.1	0.1	0.6	1.2	8.5	0.1	0.8	4.2	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.9	28.0	30.8	28.1	28.0	29.6	16.5	19.9	10.7	23.5	14.7	14.8
LnGrp LOS	D	C	C	C	C	C	B	B	B	C	B	B
Approach Vol, veh/h		300			43			1431			1191	
Approach Delay, s/veh		46.9			29.3			19.6			15.1	
Approach LOS		D			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.0	45.0		20.0	15.0	45.0		20.0				
Change Period (Y+Rc), s	6.1	6.1		* 6.8	6.1	6.1		* 6.8				
Max Green Setting (Gmax), s	8.9	38.9		* 13	8.9	38.9		* 13				
Max Q Clear Time (g_c+I1), s	0.0	0.0		15.2	0.0	0.0		2.3				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0				

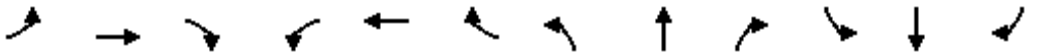
Intersection Summary	
HCM 6th Ctrl Delay	20.7
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
4: Huron St & James L Hart Pkwy

09/05/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	307	1	108	11	4	64	59	934	8	34	1357	243
Future Volume (veh/h)	307	1	108	11	4	64	59	934	8	34	1357	243
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	357	1	126	17	6	98	63	1004	9	36	1428	256
Peak Hour Factor	0.86	0.86	0.86	0.65	0.65	0.65	0.93	0.93	0.93	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	1	1	1
Cap, veh/h	350	382	322	348	385	326	314	1607	717	421	1607	715
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.11	0.45	0.45	0.11	0.45	0.45
Sat Flow, veh/h	1300	1885	1588	1277	1900	1610	1795	3582	1598	1795	3582	1593
Grp Volume(v), veh/h	357	1	126	17	6	98	63	1004	9	36	1428	256
Grp Sat Flow(s),veh/h/ln	1300	1885	1588	1277	1900	1610	1795	1791	1598	1795	1791	1593
Q Serve(g_s), s	16.0	0.0	5.5	0.9	0.2	4.1	0.0	17.2	0.2	0.0	29.2	8.4
Cycle Q Clear(g_c), s	16.2	0.0	5.5	0.9	0.2	4.1	0.0	17.2	0.2	0.0	29.2	8.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	350	382	322	348	385	326	314	1607	717	421	1607	715
V/C Ratio(X)	1.02	0.00	0.39	0.05	0.02	0.30	0.20	0.62	0.01	0.09	0.89	0.36
Avail Cap(c_a), veh/h	350	382	322	348	385	326	314	1607	717	421	1607	715
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.1	25.5	27.6	25.8	25.5	27.1	30.3	16.9	12.2	18.3	20.2	14.5
Incr Delay (d2), s/veh	53.2	0.0	3.6	0.3	0.1	2.4	1.4	1.8	0.0	0.4	7.7	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.9	0.0	2.3	0.3	0.1	1.8	1.1	6.2	0.1	0.5	11.5	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	87.3	25.5	31.2	26.1	25.6	29.4	31.7	18.7	12.3	18.7	27.9	15.9
LnGrp LOS	F	C	C	C	C	C	C	B	B	B	C	B
Approach Vol, veh/h		484			121			1076			1720	
Approach Delay, s/veh		72.6			28.8			19.4			26.0	
Approach LOS		E			C			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.0	42.0		23.0	15.0	42.0		23.0				
Change Period (Y+Rc), s	6.1	6.1		* 6.8	6.1	6.1		* 6.8				
Max Green Setting (Gmax), s	8.9	35.9		* 16	8.9	35.9		* 16				
Max Q Clear Time (g_c+I1), s	0.0	0.0		18.2	0.0	0.0		2.9				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	30.6
HCM 6th LOS	C

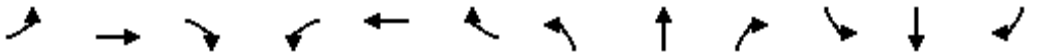
Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
4: Huron St & James L Hart Pkwy

09/06/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	232	3	54	4	4	31	87	1204	10	51	817	306
Future Volume (veh/h)	232	3	54	4	4	31	87	1204	10	51	817	306
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1885	1885	1885	1870	1870	1870
Adj Flow Rate, veh/h	242	3	56	4	4	35	98	1353	11	53	851	319
Peak Hour Factor	0.96	0.96	0.96	0.89	0.89	0.89	0.89	0.89	0.89	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	1	1	1	2	2	2
Cap, veh/h	312	306	259	308	306	259	447	1742	777	358	1728	771
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.11	0.49	0.49	0.11	0.49	0.49
Sat Flow, veh/h	1358	1856	1570	1331	1856	1572	1795	3582	1598	1781	3554	1585
Grp Volume(v), veh/h	242	3	56	4	4	35	98	1353	11	53	851	319
Grp Sat Flow(s),veh/h/ln	1358	1856	1570	1331	1856	1572	1795	1791	1598	1781	1777	1585
Q Serve(g_s), s	13.1	0.1	2.5	0.2	0.1	1.5	0.0	24.9	0.3	0.0	12.9	10.4
Cycle Q Clear(g_c), s	13.2	0.1	2.5	0.3	0.1	1.5	0.0	24.9	0.3	0.0	12.9	10.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	312	306	259	308	306	259	447	1742	777	358	1728	771
V/C Ratio(X)	0.78	0.01	0.22	0.01	0.01	0.13	0.22	0.78	0.01	0.15	0.49	0.41
Avail Cap(c_a), veh/h	312	306	259	308	306	259	447	1742	777	358	1728	771
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.0	27.9	28.9	28.1	27.9	28.5	16.0	17.0	10.6	23.5	13.9	13.2
Incr Delay (d2), s/veh	17.2	0.1	1.9	0.1	0.1	1.1	1.1	3.5	0.0	0.9	1.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	0.1	1.0	0.1	0.1	0.6	1.2	8.9	0.1	0.8	4.4	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.2	28.0	30.8	28.1	28.0	29.6	17.1	20.4	10.7	24.4	14.9	14.9
LnGrp LOS	D	C	C	C	C	C	B	C	B	C	B	B
Approach Vol, veh/h		301			43			1462			1223	
Approach Delay, s/veh		47.2			29.3			20.1			15.3	
Approach LOS		D			C			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.0	45.0		20.0	15.0	45.0		20.0				
Change Period (Y+Rc), s	6.1	6.1		* 6.8	6.1	6.1		* 6.8				
Max Green Setting (Gmax), s	8.9	38.9		* 13	8.9	38.9		* 13				
Max Q Clear Time (g_c+I1), s	0.0	0.0		15.2	0.0	0.0		2.3				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0				

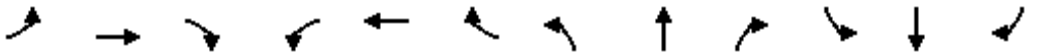
Intersection Summary		
HCM 6th Ctrl Delay		21.0
HCM 6th LOS		C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
4: Huron St & James L Hart Pkwy

09/06/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	232	3	54	4	4	31	87	1204	10	51	817	306
Future Volume (veh/h)	232	3	54	4	4	31	87	1204	10	51	817	306
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1885	1885	1885	1870	1870	1870
Adj Flow Rate, veh/h	242	3	56	4	4	35	98	1353	11	53	851	319
Peak Hour Factor	0.96	0.96	0.96	0.89	0.89	0.89	0.89	0.89	0.89	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	1	1	1	2	2	2
Cap, veh/h	407	394	333	402	394	334	335	2044	912	248	2028	904
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.00	0.57	0.57	0.00	0.57	0.57
Sat Flow, veh/h	1358	1856	1570	1332	1856	1572	1795	3582	1598	1781	3554	1585
Grp Volume(v), veh/h	242	3	56	4	4	35	98	1353	11	53	851	319
Grp Sat Flow(s),veh/h/ln	1358	1856	1570	1332	1856	1572	1795	1791	1598	1781	1777	1585
Q Serve(g_s), s	10.2	0.1	1.7	0.1	0.1	1.1	0.0	15.5	0.2	0.0	8.0	6.4
Cycle Q Clear(g_c), s	10.3	0.1	1.7	0.2	0.1	1.1	0.0	15.5	0.2	0.0	8.0	6.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	407	394	333	402	394	334	335	2044	912	248	2028	904
V/C Ratio(X)	0.59	0.01	0.17	0.01	0.01	0.10	0.29	0.66	0.01	0.21	0.42	0.35
Avail Cap(c_a), veh/h	603	662	560	595	662	561	510	2044	912	422	2028	904
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.5	18.5	19.1	18.5	18.5	18.9	11.8	8.8	5.5	16.3	7.2	6.9
Incr Delay (d2), s/veh	1.4	0.0	0.2	0.0	0.0	0.1	0.5	1.7	0.0	0.4	0.6	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	0.6	0.0	0.0	0.4	0.7	3.8	0.0	0.5	1.9	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.9	18.5	19.4	18.6	18.5	19.0	12.3	10.5	5.5	16.7	7.8	7.9
LnGrp LOS	C	B	B	B	B	B	B	B	A	B	A	A
Approach Vol, veh/h		301			43			1462			1223	
Approach Delay, s/veh		23.0			18.9			10.6			8.2	
Approach LOS		C			B			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	40.0		19.4	0.0	40.0		19.4				
Change Period (Y+Rc), s	6.1	6.1		* 6.8	6.1	6.1		* 6.8				
Max Green Setting (Gmax), s	5.9	33.9		* 21	5.9	33.9		* 21				
Max Q Clear Time (g_c+I1), s	0.0	0.0		12.3	0.0	0.0		2.2				
Green Ext Time (p_c), s	0.0	0.0		0.4	0.0	0.0		0.0				

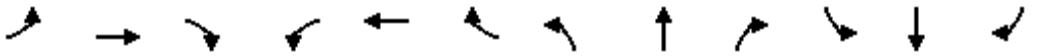
Intersection Summary	
HCM 6th Ctrl Delay	11.0
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
4: Huron St & James L Hart Pkwy

09/05/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	309	1	109	11	4	64	59	1011	8	34	1433	244
Future Volume (veh/h)	309	1	109	11	4	64	59	1011	8	34	1433	244
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	0.99		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	322	1	114	12	4	72	66	1136	9	35	1493	254
Peak Hour Factor	0.96	0.96	0.96	0.89	0.89	0.89	0.89	0.89	0.89	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	1	1	1
Cap, veh/h	358	382	322	351	385	326	305	1607	717	385	1607	715
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.11	0.45	0.45	0.11	0.45	0.45
Sat Flow, veh/h	1334	1885	1588	1291	1900	1610	1795	3582	1598	1795	3582	1593
Grp Volume(v), veh/h	322	1	114	12	4	72	66	1136	9	35	1493	254
Grp Sat Flow(s),veh/h/ln	1334	1885	1588	1291	1900	1610	1795	1791	1598	1795	1791	1593
Q Serve(g_s), s	16.1	0.0	4.9	0.6	0.1	3.0	0.0	20.5	0.2	0.0	31.5	8.4
Cycle Q Clear(g_c), s	16.2	0.0	4.9	0.6	0.1	3.0	0.0	20.5	0.2	0.0	31.5	8.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	358	382	322	351	385	326	305	1607	717	385	1607	715
V/C Ratio(X)	0.90	0.00	0.35	0.03	0.01	0.22	0.22	0.71	0.01	0.09	0.93	0.36
Avail Cap(c_a), veh/h	358	382	322	351	385	326	305	1607	717	385	1607	715
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.3	25.5	27.4	25.7	25.5	26.6	31.1	17.8	12.2	20.9	20.8	14.5
Incr Delay (d2), s/veh	27.9	0.0	3.0	0.2	0.0	1.6	1.6	2.6	0.0	0.5	10.9	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	0.0	2.1	0.2	0.1	1.3	1.2	7.4	0.1	0.5	13.0	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.2	25.5	30.4	25.9	25.5	28.2	32.7	20.4	12.3	21.3	31.7	15.8
LnGrp LOS	E	C	C	C	C	C	C	C	B	C	C	B
Approach Vol, veh/h		437			88			1211			1782	
Approach Delay, s/veh		53.1			27.8			21.1			29.3	
Approach LOS		D			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.0	42.0		23.0	15.0	42.0		23.0				
Change Period (Y+Rc), s	6.1	6.1		* 6.8	6.1	6.1		* 6.8				
Max Green Setting (Gmax), s	8.9	35.9		* 16	8.9	35.9		* 16				
Max Q Clear Time (g_c+I1), s	0.0	0.0		18.2	0.0	0.0		2.6				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	29.4
HCM 6th LOS	C

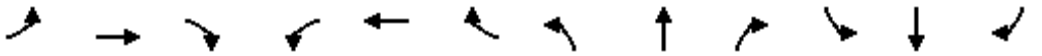
Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
4: Huron St & James L Hart Pkwy

09/06/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	309	1	109	11	4	64	59	1011	8	34	1433	244
Future Volume (veh/h)	309	1	109	11	4	64	59	1011	8	34	1433	244
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	0.99		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	322	1	114	12	4	72	66	1136	9	35	1493	254
Peak Hour Factor	0.96	0.96	0.96	0.89	0.89	0.89	0.89	0.89	0.89	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	1	1	1
Cap, veh/h	358	382	322	351	385	326	255	1742	777	451	1742	775
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.15	0.97	0.97	0.07	0.49	0.49
Sat Flow, veh/h	1334	1885	1588	1291	1900	1610	1795	3582	1598	1795	3582	1594
Grp Volume(v), veh/h	322	1	114	12	4	72	66	1136	9	35	1493	254
Grp Sat Flow(s),veh/h/ln	1334	1885	1588	1291	1900	1610	1795	1791	1598	1795	1791	1594
Q Serve(g_s), s	16.1	0.0	4.9	0.6	0.1	3.0	0.0	1.9	0.0	0.0	29.4	7.8
Cycle Q Clear(g_c), s	16.2	0.0	4.9	0.6	0.1	3.0	0.0	1.9	0.0	0.0	29.4	7.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	358	382	322	351	385	326	255	1742	777	451	1742	775
V/C Ratio(X)	0.90	0.00	0.35	0.03	0.01	0.22	0.26	0.65	0.01	0.08	0.86	0.33
Avail Cap(c_a), veh/h	358	382	322	351	385	326	255	1742	777	451	1742	775
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.3	25.5	27.4	25.7	25.5	26.6	29.2	0.6	0.6	9.3	18.1	12.6
Incr Delay (d2), s/veh	27.9	0.0	3.0	0.2	0.0	1.6	2.4	1.9	0.0	0.3	5.7	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	0.0	2.1	0.2	0.1	1.3	1.2	0.7	0.0	0.3	10.8	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.2	25.5	30.4	25.9	25.5	28.2	31.6	2.5	0.6	9.6	23.8	13.7
LnGrp LOS	E	C	C	C	C	C	C	A	A	A	C	B
Approach Vol, veh/h		437			88			1211			1782	
Approach Delay, s/veh		53.1			27.8			4.1			22.1	
Approach LOS		D			C			A			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	45.0		23.0	12.0	45.0		23.0				
Change Period (Y+Rc), s	6.1	6.1		* 6.8	6.1	6.1		* 6.8				
Max Green Setting (Gmax), s	5.9	38.9		* 16	5.9	38.9		* 16				
Max Q Clear Time (g_c+I1), s	0.0	0.0		18.2	0.0	0.0		2.6				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	19.9
HCM 6th LOS	B

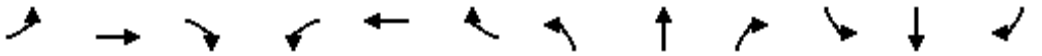
Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
4: Huron St & James L Hart Pkwy

09/06/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	232	3	55	4	4	31	89	1216	10	51	821	306
Future Volume (veh/h)	232	3	55	4	4	31	89	1216	10	51	821	306
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1885	1885	1885	1870	1870	1870
Adj Flow Rate, veh/h	242	3	57	4	4	35	100	1366	11	53	855	319
Peak Hour Factor	0.96	0.96	0.96	0.89	0.89	0.89	0.89	0.89	0.89	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	1	1	1	2	2	2
Cap, veh/h	407	394	333	402	394	334	334	2044	912	245	2028	904
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.00	0.57	0.57	0.00	0.57	0.57
Sat Flow, veh/h	1358	1856	1570	1330	1856	1572	1795	3582	1598	1781	3554	1585
Grp Volume(v), veh/h	242	3	57	4	4	35	100	1366	11	53	855	319
Grp Sat Flow(s),veh/h/ln	1358	1856	1570	1330	1856	1572	1795	1791	1598	1781	1777	1585
Q Serve(g_s), s	10.2	0.1	1.8	0.1	0.1	1.1	0.0	15.7	0.2	0.0	8.1	6.4
Cycle Q Clear(g_c), s	10.3	0.1	1.8	0.2	0.1	1.1	0.0	15.7	0.2	0.0	8.1	6.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	407	394	333	402	394	334	334	2044	912	245	2028	904
V/C Ratio(X)	0.59	0.01	0.17	0.01	0.01	0.10	0.30	0.67	0.01	0.22	0.42	0.35
Avail Cap(c_a), veh/h	603	662	560	594	662	561	509	2044	912	419	2028	904
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.5	18.5	19.1	18.5	18.5	18.9	11.9	8.9	5.5	16.5	7.2	6.9
Incr Delay (d2), s/veh	1.4	0.0	0.2	0.0	0.0	0.1	0.5	1.8	0.0	0.4	0.6	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	0.6	0.0	0.0	0.4	0.7	3.9	0.0	0.5	1.9	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.9	18.5	19.4	18.6	18.5	19.0	12.4	10.6	5.5	16.9	7.9	7.9
LnGrp LOS	C	B	B	B	B	B	B	B	A	B	A	A
Approach Vol, veh/h		302			43			1477			1227	
Approach Delay, s/veh		23.0			18.9			10.7			8.3	
Approach LOS		C			B			B			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	40.0		19.4	0.0	40.0		19.4				
Change Period (Y+Rc), s	6.1	6.1		* 6.8	6.1	6.1		* 6.8				
Max Green Setting (Gmax), s	5.9	33.9		* 21	5.9	33.9		* 21				
Max Q Clear Time (g_c+I1), s	0.0	0.0		12.3	0.0	0.0		2.2				
Green Ext Time (p_c), s	0.0	0.0		0.4	0.0	0.0		0.0				

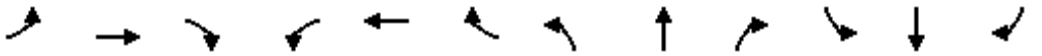
Intersection Summary	
HCM 6th Ctrl Delay	11.1
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
4: Huron St & James L Hart Pkwy

09/06/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	309	1	111	11	4	64	59	1020	8	34	1438	245
Future Volume (veh/h)	309	1	111	11	4	64	59	1020	8	34	1438	245
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	0.99		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1900	1900	1900	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	322	1	116	12	4	72	66	1146	9	35	1498	255
Peak Hour Factor	0.96	0.96	0.96	0.89	0.89	0.89	0.89	0.89	0.89	0.96	0.96	0.96
Percent Heavy Veh, %	1	1	1	0	0	0	1	1	1	1	1	1
Cap, veh/h	358	382	322	350	385	326	255	1742	777	342	1742	775
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.07	0.49	0.49	0.07	0.49	0.49
Sat Flow, veh/h	1334	1885	1588	1289	1900	1610	1795	3582	1598	1795	3582	1594
Grp Volume(v), veh/h	322	1	116	12	4	72	66	1146	9	35	1498	255
Grp Sat Flow(s),veh/h/ln	1334	1885	1588	1289	1900	1610	1795	1791	1598	1795	1791	1594
Q Serve(g_s), s	16.1	0.0	5.0	0.6	0.1	3.0	0.0	19.3	0.2	0.0	29.5	7.8
Cycle Q Clear(g_c), s	16.2	0.0	5.0	0.6	0.1	3.0	0.0	19.3	0.2	0.0	29.5	7.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	358	382	322	350	385	326	255	1742	777	342	1742	775
V/C Ratio(X)	0.90	0.00	0.36	0.03	0.01	0.22	0.26	0.66	0.01	0.10	0.86	0.33
Avail Cap(c_a), veh/h	358	382	322	350	385	326	255	1742	777	342	1742	775
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.3	25.5	27.4	25.7	25.5	26.6	32.0	15.5	10.6	20.0	18.1	12.6
Incr Delay (d2), s/veh	27.9	0.0	3.1	0.2	0.0	1.6	2.5	2.0	0.0	0.6	5.8	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	0.0	2.1	0.2	0.1	1.3	1.3	6.7	0.1	0.5	10.9	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.2	25.5	30.6	25.9	25.5	28.2	34.5	17.5	10.6	20.6	24.0	13.7
LnGrp LOS	E	C	C	C	C	C	C	B	B	C	C	B
Approach Vol, veh/h		439			88			1221			1788	
Approach Delay, s/veh		53.0			27.8			18.4			22.4	
Approach LOS		D			C			B			C	

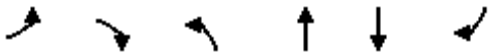
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	45.0		23.0	12.0	45.0		23.0				
Change Period (Y+Rc), s	6.1	6.1		* 6.8	6.1	6.1		* 6.8				
Max Green Setting (Gmax), s	5.9	38.9		* 16	5.9	38.9		* 16				
Max Q Clear Time (g_c+I1), s	0.0	0.0		18.2	0.0	0.0		2.6				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	25.0
HCM 6th LOS	C

Notes

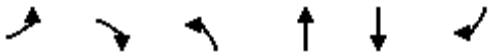
User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



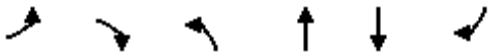
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	316	358	0	1122	791	0
Future Volume (vph)	316	358	0	1122	791	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.3	6.3	
Lane Util. Factor	0.97	0.91		0.95	0.95	
Frpb, ped/bikes	0.99	0.98		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	
Frt	0.95	0.85		1.00	1.00	
Flt Protected	0.97	1.00		1.00	1.00	
Satd. Flow (prot)	3235	1387		3539	3505	
Flt Permitted	0.97	1.00		1.00	1.00	
Satd. Flow (perm)	3235	1387		3539	3505	
Peak-hour factor, PHF	0.83	0.83	0.90	0.90	0.92	0.92
Adj. Flow (vph)	381	431	0	1247	860	0
RTOR Reduction (vph)	68	72	0	0	0	0
Lane Group Flow (vph)	485	188	0	1247	860	0
Confl. Peds. (#/hr)	5	5				
Heavy Vehicles (%)	4%	4%	2%	2%	3%	3%
Turn Type	Prot	Perm		NA	NA	
Protected Phases	2			1	1	
Permitted Phases		2				
Actuated Green, G (s)	28.0	28.0		39.7	39.7	
Effective Green, g (s)	28.0	28.0		39.7	39.7	
Actuated g/C Ratio	0.35	0.35		0.50	0.50	
Clearance Time (s)	6.0	6.0		6.3	6.3	
Lane Grp Cap (vph)	1132	485		1756	1739	
v/s Ratio Prot	c0.15			c0.35	0.25	
v/s Ratio Perm		0.14				
v/c Ratio	0.43	0.39		0.71	0.49	
Uniform Delay, d1	19.9	19.5		15.7	13.5	
Progression Factor	1.00	1.00		0.77	1.71	
Incremental Delay, d2	1.2	2.3		1.5	1.0	
Delay (s)	21.1	21.9		13.6	23.9	
Level of Service	C	C		B	C	
Approach Delay (s)	21.3			13.6	23.9	
Approach LOS	C			B	C	

Intersection Summary			
HCM 2000 Control Delay	18.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.3
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



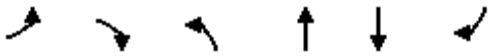
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	472	607	0	962	1063	0
Future Volume (vph)	472	607	0	962	1063	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.3	6.3	
Lane Util. Factor	0.97	0.91		0.95	0.95	
Frpb, ped/bikes	0.99	0.98		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	
Frt	0.95	0.85		1.00	1.00	
Flt Protected	0.97	1.00		1.00	1.00	
Satd. Flow (prot)	3249	1404		3574	3574	
Flt Permitted	0.97	1.00		1.00	1.00	
Satd. Flow (perm)	3249	1404		3574	3574	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.91	0.91
Adj. Flow (vph)	497	639	0	1013	1168	0
RTOR Reduction (vph)	30	30	0	0	0	0
Lane Group Flow (vph)	748	328	0	1013	1168	0
Confl. Peds. (#/hr)	3	3				
Heavy Vehicles (%)	3%	3%	1%	1%	1%	1%
Turn Type	Prot	Perm		NA	NA	
Protected Phases	2			1	1	
Permitted Phases		2				
Actuated Green, G (s)	28.0	28.0		39.7	39.7	
Effective Green, g (s)	28.0	28.0		39.7	39.7	
Actuated g/C Ratio	0.35	0.35		0.50	0.50	
Clearance Time (s)	6.0	6.0		6.3	6.3	
Lane Grp Cap (vph)	1137	491		1773	1773	
v/s Ratio Prot	0.23			0.28	c0.33	
v/s Ratio Perm		c0.23				
v/c Ratio	0.66	0.67		0.57	0.66	
Uniform Delay, d1	22.0	22.1		14.2	15.1	
Progression Factor	1.00	1.00		1.07	1.78	
Incremental Delay, d2	3.0	7.1		0.9	1.7	
Delay (s)	24.9	29.1		16.0	28.5	
Level of Service	C	C		B	C	
Approach Delay (s)	26.3			16.0	28.5	
Approach LOS	C			B	C	

Intersection Summary			
HCM 2000 Control Delay	23.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.3
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



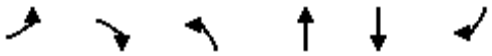
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	318	360	0	1149	819	0
Future Volume (vph)	318	360	0	1149	819	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.3	6.3	
Lane Util. Factor	0.97	0.91		0.95	0.95	
Frpb, ped/bikes	0.99	0.98		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	
Frt	0.95	0.85		1.00	1.00	
Flt Protected	0.97	1.00		1.00	1.00	
Satd. Flow (prot)	3234	1387		3539	3505	
Flt Permitted	0.97	1.00		1.00	1.00	
Satd. Flow (perm)	3234	1387		3539	3505	
Peak-hour factor, PHF	0.83	0.83	0.90	0.90	0.92	0.92
Adj. Flow (vph)	383	434	0	1277	890	0
RTOR Reduction (vph)	66	66	0	0	0	0
Lane Group Flow (vph)	491	194	0	1277	890	0
Confl. Peds. (#/hr)	5	5				
Heavy Vehicles (%)	4%	4%	2%	2%	3%	3%
Turn Type	Prot	Perm		NA	NA	
Protected Phases	2			1	1	
Permitted Phases		2				
Actuated Green, G (s)	28.0	28.0		39.7	39.7	
Effective Green, g (s)	28.0	28.0		39.7	39.7	
Actuated g/C Ratio	0.35	0.35		0.50	0.50	
Clearance Time (s)	6.0	6.0		6.3	6.3	
Lane Grp Cap (vph)	1131	485		1756	1739	
v/s Ratio Prot	c0.15			c0.36	0.25	
v/s Ratio Perm		0.14				
v/c Ratio	0.43	0.40		0.73	0.51	
Uniform Delay, d1	19.9	19.7		15.9	13.6	
Progression Factor	1.00	1.00		0.77	1.29	
Incremental Delay, d2	1.2	2.5		1.6	1.1	
Delay (s)	21.1	22.1		13.8	18.6	
Level of Service	C	C		B	B	
Approach Delay (s)	21.5			13.8	18.6	
Approach LOS	C			B	B	

Intersection Summary			
HCM 2000 Control Delay	17.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.3
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



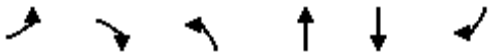
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	474	610	0	1039	1138	0
Future Volume (vph)	474	610	0	1039	1138	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.3	6.3	
Lane Util. Factor	0.97	0.91		0.95	0.95	
Frpb, ped/bikes	0.99	0.98		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	
Frt	0.95	0.85		1.00	1.00	
Flt Protected	0.97	1.00		1.00	1.00	
Satd. Flow (prot)	3249	1404		3574	3574	
Flt Permitted	0.97	1.00		1.00	1.00	
Satd. Flow (perm)	3249	1404		3574	3574	
Peak-hour factor, PHF	0.83	0.83	0.90	0.90	0.92	0.92
Adj. Flow (vph)	571	735	0	1154	1237	0
RTOR Reduction (vph)	25	25	0	0	0	0
Lane Group Flow (vph)	869	387	0	1154	1237	0
Confl. Peds. (#/hr)	3	3				
Heavy Vehicles (%)	3%	3%	1%	1%	1%	1%
Turn Type	Prot	Perm		NA	NA	
Protected Phases	2			1	1	
Permitted Phases		2				
Actuated Green, G (s)	28.0	28.0		39.7	39.7	
Effective Green, g (s)	28.0	28.0		39.7	39.7	
Actuated g/C Ratio	0.35	0.35		0.50	0.50	
Clearance Time (s)	6.0	6.0		6.3	6.3	
Lane Grp Cap (vph)	1137	491		1773	1773	
v/s Ratio Prot	0.27			0.32	c0.35	
v/s Ratio Perm		c0.28				
v/c Ratio	0.76	0.79		0.65	0.70	
Uniform Delay, d1	23.1	23.3		15.0	15.5	
Progression Factor	1.00	1.00		1.47	1.80	
Incremental Delay, d2	4.9	12.1		1.2	2.0	
Delay (s)	28.0	35.5		23.3	30.0	
Level of Service	C	D		C	C	
Approach Delay (s)	30.4			23.3	30.0	
Approach LOS	C			C	C	

Intersection Summary			
HCM 2000 Control Delay	28.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.3
Intersection Capacity Utilization	67.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



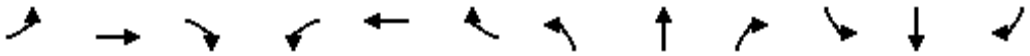
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	318	363	0	1157	820	0
Future Volume (vph)	318	363	0	1157	820	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.3	6.3	
Lane Util. Factor	0.97	0.91		0.95	0.95	
Frpb, ped/bikes	0.99	0.98		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	
Frt	0.95	0.85		1.00	1.00	
Flt Protected	0.97	1.00		1.00	1.00	
Satd. Flow (prot)	3232	1387		3539	3505	
Flt Permitted	0.97	1.00		1.00	1.00	
Satd. Flow (perm)	3232	1387		3539	3505	
Peak-hour factor, PHF	0.83	0.83	0.90	0.90	0.92	0.92
Adj. Flow (vph)	383	437	0	1286	891	0
RTOR Reduction (vph)	66	66	0	0	0	0
Lane Group Flow (vph)	496	192	0	1286	891	0
Confl. Peds. (#/hr)	5	5				
Heavy Vehicles (%)	4%	4%	2%	2%	3%	3%
Turn Type	Prot	Perm		NA	NA	
Protected Phases	2			1	1	
Permitted Phases		2				
Actuated Green, G (s)	28.0	28.0		39.7	39.7	
Effective Green, g (s)	28.0	28.0		39.7	39.7	
Actuated g/C Ratio	0.35	0.35		0.50	0.50	
Clearance Time (s)	6.0	6.0		6.3	6.3	
Lane Grp Cap (vph)	1131	485		1756	1739	
v/s Ratio Prot	c0.15			c0.36	0.25	
v/s Ratio Perm		0.14				
v/c Ratio	0.44	0.40		0.73	0.51	
Uniform Delay, d1	20.0	19.6		15.9	13.6	
Progression Factor	1.00	1.00		0.76	1.29	
Incremental Delay, d2	1.2	2.4		1.6	1.1	
Delay (s)	21.2	22.0		13.8	18.6	
Level of Service	C	C		B	B	
Approach Delay (s)	21.5			13.8	18.6	
Approach LOS	C			B	B	

Intersection Summary			
HCM 2000 Control Delay	17.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.3
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	474	614	0	1045	1139	0
Future Volume (vph)	474	614	0	1045	1139	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.3	6.3	
Lane Util. Factor	0.97	0.91		0.95	0.95	
Frpb, ped/bikes	0.99	0.98		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	
Frt	0.95	0.85		1.00	1.00	
Flt Protected	0.97	1.00		1.00	1.00	
Satd. Flow (prot)	3248	1404		3574	3574	
Flt Permitted	0.97	1.00		1.00	1.00	
Satd. Flow (perm)	3248	1404		3574	3574	
Peak-hour factor, PHF	0.83	0.83	0.90	0.90	0.92	0.92
Adj. Flow (vph)	571	740	0	1161	1238	0
RTOR Reduction (vph)	25	25	0	0	0	0
Lane Group Flow (vph)	872	389	0	1161	1238	0
Confl. Peds. (#/hr)	3	3				
Heavy Vehicles (%)	3%	3%	1%	1%	1%	1%
Turn Type	Prot	Perm		NA	NA	
Protected Phases	2			1	1	
Permitted Phases		2				
Actuated Green, G (s)	28.0	28.0		39.7	39.7	
Effective Green, g (s)	28.0	28.0		39.7	39.7	
Actuated g/C Ratio	0.35	0.35		0.50	0.50	
Clearance Time (s)	6.0	6.0		6.3	6.3	
Lane Grp Cap (vph)	1136	491		1773	1773	
v/s Ratio Prot	0.27			0.32	c0.35	
v/s Ratio Perm		c0.28				
v/c Ratio	0.77	0.79		0.65	0.70	
Uniform Delay, d1	23.1	23.4		15.0	15.5	
Progression Factor	1.00	1.00		1.47	1.80	
Incremental Delay, d2	5.0	12.4		1.2	2.0	
Delay (s)	28.1	35.8		23.3	30.0	
Level of Service	C	D		C	C	
Approach Delay (s)	30.5			23.3	30.0	
Approach LOS	C			C	C	

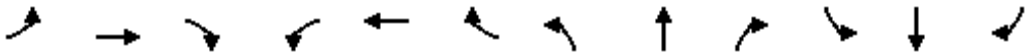
Intersection Summary			
HCM 2000 Control Delay	28.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.3
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	362	669	2	1127	0	0	0	0
Future Volume (vph)	0	0	0	0	362	669	2	1127	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					12.7	12.7		5.3				
Lane Util. Factor					0.91	0.91		0.95				
Frt					0.93	0.85		1.00				
Flt Protected					1.00	1.00		1.00				
Satd. Flow (prot)					3177	1455		3539				
Flt Permitted					1.00	1.00		1.00				
Satd. Flow (perm)					3177	1455		3539				
Peak-hour factor, PHF	0.92	0.92	0.92	0.88	0.88	0.88	0.97	0.97	0.97	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	411	760	2	1162	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	49	49	0	60	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	742	331	0	1104	0	0	0	0
Heavy Vehicles (%)	0%	0%	2%	2%	1%	1%	2%	2%	2%	0%	2%	0%
Turn Type					NA	Perm	Perm	NA				
Protected Phases					2			1				
Permitted Phases						2	1					
Actuated Green, G (s)					18.3	18.3		43.7				
Effective Green, g (s)					18.3	18.3		43.7				
Actuated g/C Ratio					0.23	0.23		0.55				
Clearance Time (s)					12.7	12.7		5.3				
Lane Grp Cap (vph)					726	332		1933				
v/s Ratio Prot					c0.23							
v/s Ratio Perm						0.23		0.31				
v/c Ratio					1.02	1.00		0.57				
Uniform Delay, d1					30.9	30.8		12.0				
Progression Factor					1.00	1.00		1.78				
Incremental Delay, d2					39.0	48.4		0.9				
Delay (s)					69.8	79.2		22.2				
Level of Service					E	E		C				
Approach Delay (s)		0.0			72.9			22.2			0.0	
Approach LOS		A			E			C			A	

Intersection Summary			
HCM 2000 Control Delay	47.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		

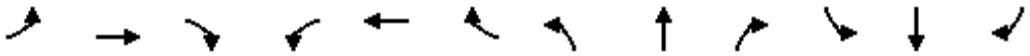
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	353	394	1	1014	0	0	0	0
Future Volume (vph)	0	0	0	0	353	394	1	1014	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					12.7	12.7		5.3				
Lane Util. Factor					0.91	0.91		0.95				
Frt					0.95	0.85		1.00				
Flt Protected					1.00	1.00		1.00				
Satd. Flow (prot)					3262	1455		3539				
Flt Permitted					1.00	1.00		1.00				
Satd. Flow (perm)					3262	1455		3539				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.88	0.88	0.92	0.90	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	401	448	1	1127	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	41	41	0	65	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	544	223	0	1063	0	0	0	0
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	0%	0%	0%
Turn Type					NA	Perm		NA				
Protected Phases					2			1				
Permitted Phases						2						
Actuated Green, G (s)					21.3	21.3		40.7				
Effective Green, g (s)					21.3	21.3		40.7				
Actuated g/C Ratio					0.27	0.27		0.51				
Clearance Time (s)					12.7	12.7		5.3				
Lane Grp Cap (vph)					868	387		1800				
v/s Ratio Prot					c0.17							
v/s Ratio Perm						0.15		0.30				
v/c Ratio					0.63	0.58		0.59				
Uniform Delay, d1					25.8	25.4		13.8				
Progression Factor					1.00	1.00		1.41				
Incremental Delay, d2					3.4	6.1		1.2				
Delay (s)					29.3	31.6		20.6				
Level of Service					C	C		C				
Approach Delay (s)		0.0			30.0			20.6			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	24.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		

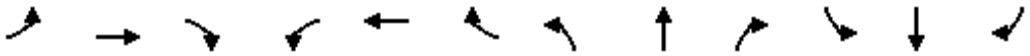
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	364	672	2	1154	0	0	0	0
Future Volume (vph)	0	0	0	0	364	672	2	1154	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					12.7	12.7		5.3				
Lane Util. Factor					0.91	0.91		0.95				
Frt					0.93	0.85		1.00				
Flt Protected					1.00	1.00		1.00				
Satd. Flow (prot)					3116	1427		3505				
Flt Permitted					1.00	1.00		1.00				
Satd. Flow (perm)					3116	1427		3505				
Peak-hour factor, PHF	0.92	0.92	0.92	0.88	0.88	0.88	0.97	0.97	0.97	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	414	764	2	1190	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	46	46	0	60	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	750	336	0	1132	0	0	0	0
Heavy Vehicles (%)	0%	0%	2%	3%	3%	3%	3%	3%	3%	0%	2%	0%
Turn Type					NA	Perm		NA				
Protected Phases					2			1				
Permitted Phases						2						
Actuated Green, G (s)					18.3	18.3		43.7				
Effective Green, g (s)					18.3	18.3		43.7				
Actuated g/C Ratio					0.23	0.23		0.55				
Clearance Time (s)					12.7	12.7		5.3				
Lane Grp Cap (vph)					712	326		1914				
v/s Ratio Prot					c0.24							
v/s Ratio Perm						0.24		0.32				
v/c Ratio					1.05	1.03		0.59				
Uniform Delay, d1					30.9	30.9		12.2				
Progression Factor					1.00	1.00		1.73				
Incremental Delay, d2					48.9	58.4		1.0				
Delay (s)					79.7	89.3		22.1				
Level of Service					E	F		C				
Approach Delay (s)		0.0			82.8			22.1			0.0	
Approach LOS		A			F			C			A	

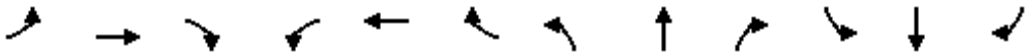
Intersection Summary			
HCM 2000 Control Delay	52.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	74.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	355	396	1	1091	0	0	0	0
Future Volume (vph)	0	0	0	0	355	396	1	1091	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					12.7	12.7		5.3				
Lane Util. Factor					0.91	0.91		0.95				
Frt					0.95	0.85		1.00				
Flt Protected					1.00	1.00		1.00				
Satd. Flow (prot)					3262	1310		3539				
Flt Permitted					1.00	1.00		1.00				
Satd. Flow (perm)					3262	1310		3539				
Peak-hour factor, PHF	0.92	0.92	0.92	0.88	0.88	0.88	0.97	0.97	0.97	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	403	450	1	1125	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	41	41	0	65	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	547	224	0	1061	0	0	0	0
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	2%	2%	2%
Parking (#/hr)						0						
Turn Type					NA	Perm		NA				
Protected Phases					2			1				
Permitted Phases						2						
Actuated Green, G (s)					21.3	21.3		40.7				
Effective Green, g (s)					21.3	21.3		40.7				
Actuated g/C Ratio					0.27	0.27		0.51				
Clearance Time (s)					12.7	12.7		5.3				
Lane Grp Cap (vph)					868	348		1800				
v/s Ratio Prot					0.17							
v/s Ratio Perm						c0.17		0.30				
v/c Ratio					0.63	0.64		0.59				
Uniform Delay, d1					25.9	26.0		13.8				
Progression Factor					1.00	1.00		1.37				
Incremental Delay, d2					3.5	8.8		1.0				
Delay (s)					29.3	34.8		19.9				
Level of Service					C	C		B				
Approach Delay (s)		0.0			31.0			19.9			0.0	
Approach LOS		A			C			B			A	

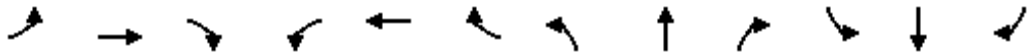
Intersection Summary			
HCM 2000 Control Delay	24.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	364	672	2	1162	0	0	0	0
Future Volume (vph)	0	0	0	0	364	672	2	1162	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					12.7	12.7		5.3				
Lane Util. Factor					0.91	0.91		0.95				
Frt					0.93	0.85		1.00				
Flt Protected					1.00	1.00		1.00				
Satd. Flow (prot)					3116	1427		3505				
Flt Permitted					1.00	1.00		1.00				
Satd. Flow (perm)					3116	1427		3505				
Peak-hour factor, PHF	0.92	0.92	0.92	0.88	0.88	0.88	0.97	0.97	0.97	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	414	764	2	1198	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	45	45	0	60	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	751	337	0	1140	0	0	0	0
Heavy Vehicles (%)	0%	0%	2%	3%	3%	3%	3%	3%	3%	0%	2%	0%
Turn Type					NA	Perm		NA				
Protected Phases					2			1				
Permitted Phases						2						
Actuated Green, G (s)					18.3	18.3		43.7				
Effective Green, g (s)					18.3	18.3		43.7				
Actuated g/C Ratio					0.23	0.23		0.55				
Clearance Time (s)					12.7	12.7		5.3				
Lane Grp Cap (vph)					712	326		1914				
v/s Ratio Prot					c0.24							
v/s Ratio Perm						0.24		0.33				
v/c Ratio					1.06	1.03		0.60				
Uniform Delay, d1					30.9	30.9		12.2				
Progression Factor					1.00	1.00		1.73				
Incremental Delay, d2					49.2	59.1		1.0				
Delay (s)					80.1	89.9		22.2				
Level of Service					F	F		C				
Approach Delay (s)		0.0			83.3			22.2			0.0	
Approach LOS		A			F			C			A	

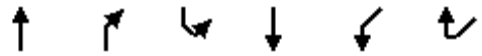
Intersection Summary			
HCM 2000 Control Delay	52.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	355	396	1	1097	0	0	0	0
Future Volume (vph)	0	0	0	0	355	396	1	1097	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					12.7	12.7		5.3				
Lane Util. Factor					0.91	0.91		0.95				
Frt					0.95	0.85		1.00				
Flt Protected					1.00	1.00		1.00				
Satd. Flow (prot)					3262	1310		3539				
Flt Permitted					1.00	1.00		1.00				
Satd. Flow (perm)					3262	1310		3539				
Peak-hour factor, PHF	0.92	0.92	0.92	0.88	0.88	0.88	0.97	0.97	0.97	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	403	450	1	1131	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	40	40	0	65	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	548	225	0	1067	0	0	0	0
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	2%	2%	2%
Parking (#/hr)						0						
Turn Type					NA	Perm		NA				
Protected Phases					2			1				
Permitted Phases						2						
Actuated Green, G (s)					21.3	21.3		40.7				
Effective Green, g (s)					21.3	21.3		40.7				
Actuated g/C Ratio					0.27	0.27		0.51				
Clearance Time (s)					12.7	12.7		5.3				
Lane Grp Cap (vph)					868	348		1800				
v/s Ratio Prot					0.17							
v/s Ratio Perm						c0.17		0.30				
v/c Ratio					0.63	0.65		0.59				
Uniform Delay, d1					25.9	26.0		13.8				
Progression Factor					1.00	1.00		1.37				
Incremental Delay, d2					3.5	8.9		1.0				
Delay (s)					29.4	34.9		19.9				
Level of Service					C	C		B				
Approach Delay (s)		0.0			31.1			19.9			0.0	
Approach LOS		A			C			B			A	

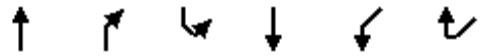
Intersection Summary			
HCM 2000 Control Delay	24.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	619	370	0
Future Volume (vph)	0	0	0	619	370	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)				5.3	5.7	
Lane Util. Factor				0.91	0.97	
Frt				1.00	1.00	
Flt Protected				1.00	0.95	
Satd. Flow (prot)				5085	3433	
Flt Permitted				1.00	0.95	
Satd. Flow (perm)				5085	3433	
Peak-hour factor, PHF	0.92	0.92	0.88	0.88	0.93	0.93
Adj. Flow (vph)	0	0	0	703	398	0
RTOR Reduction (vph)	0	0	0	0	269	0
Lane Group Flow (vph)	0	0	0	703	129	0
Heavy Vehicles (%)	0%	0%	2%	2%	2%	2%
Turn Type				NA	Prot	
Protected Phases				1	2	
Permitted Phases						
Actuated Green, G (s)				43.7	25.3	
Effective Green, g (s)				43.7	25.3	
Actuated g/C Ratio				0.55	0.32	
Clearance Time (s)				5.3	5.7	
Lane Grp Cap (vph)				2777	1085	
v/s Ratio Prot				c0.14	c0.04	
v/s Ratio Perm						
v/c Ratio				0.25	0.12	
Uniform Delay, d1				9.6	19.4	
Progression Factor				1.00	0.80	
Incremental Delay, d2				0.2	0.0	
Delay (s)				9.8	15.6	
Level of Service				A	B	
Approach Delay (s)	0.0			9.8	15.6	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.20		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		

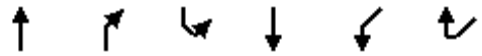
c Critical Lane Group



Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	1186	341	0
Future Volume (vph)	0	0	0	1186	341	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)				5.3	5.7	
Lane Util. Factor				0.91	0.97	
Frt				1.00	1.00	
Flt Protected				1.00	0.95	
Satd. Flow (prot)				5136	3467	
Flt Permitted				1.00	0.95	
Satd. Flow (perm)				5136	3467	
Peak-hour factor, PHF	0.92	0.92	0.88	0.88	0.93	0.93
Adj. Flow (vph)	0	0	0	1348	367	0
RTOR Reduction (vph)	0	0	0	0	38	0
Lane Group Flow (vph)	0	0	0	1348	329	0
Heavy Vehicles (%)	2%	2%	1%	1%	1%	1%
Turn Type				NA	Prot	
Protected Phases				1	2	
Permitted Phases						
Actuated Green, G (s)				40.7	28.3	
Effective Green, g (s)				40.7	28.3	
Actuated g/C Ratio				0.51	0.35	
Clearance Time (s)				5.3	5.7	
Lane Grp Cap (vph)				2612	1226	
v/s Ratio Prot				c0.26	c0.09	
v/s Ratio Perm						
v/c Ratio				0.52	0.27	
Uniform Delay, d1				13.1	18.5	
Progression Factor				1.00	0.00	
Incremental Delay, d2				0.7	0.4	
Delay (s)				13.8	0.5	
Level of Service				B	A	
Approach Delay (s)	0.0			13.8	0.5	
Approach LOS	A			B	A	

Intersection Summary			
HCM 2000 Control Delay	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		

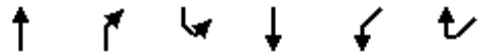
c Critical Lane Group



Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	646	372	0
Future Volume (vph)	0	0	0	646	372	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)				5.3	5.7	
Lane Util. Factor				0.91	0.97	
Frt				1.00	1.00	
Flt Protected				1.00	0.95	
Satd. Flow (prot)				5085	3433	
Flt Permitted				1.00	0.95	
Satd. Flow (perm)				5085	3433	
Peak-hour factor, PHF	0.92	0.92	0.88	0.88	0.93	0.93
Adj. Flow (vph)	0	0	0	734	400	0
RTOR Reduction (vph)	0	0	0	0	249	0
Lane Group Flow (vph)	0	0	0	734	151	0
Heavy Vehicles (%)	0%	0%	2%	2%	2%	2%
Turn Type				NA	Prot	
Protected Phases				1	2	
Permitted Phases						
Actuated Green, G (s)				43.7	25.3	
Effective Green, g (s)				43.7	25.3	
Actuated g/C Ratio				0.55	0.32	
Clearance Time (s)				5.3	5.7	
Lane Grp Cap (vph)				2777	1085	
v/s Ratio Prot				c0.14	c0.04	
v/s Ratio Perm						
v/c Ratio				0.26	0.14	
Uniform Delay, d1				9.6	19.6	
Progression Factor				1.00	0.19	
Incremental Delay, d2				0.2	0.0	
Delay (s)				9.9	3.8	
Level of Service				A	A	
Approach Delay (s)	0.0			9.9	3.8	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.22		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	74.7%	ICU Level of Service	D
Analysis Period (min)	15		

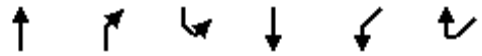
c Critical Lane Group



Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	1261	343	0
Future Volume (vph)	0	0	0	1261	343	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)				5.3	5.7	
Lane Util. Factor				0.91	0.97	
Frt				1.00	1.00	
Flt Protected				1.00	0.95	
Satd. Flow (prot)				5136	3467	
Flt Permitted				1.00	0.95	
Satd. Flow (perm)				5136	3467	
Peak-hour factor, PHF	0.92	0.92	0.88	0.88	0.93	0.93
Adj. Flow (vph)	0	0	0	1433	369	0
RTOR Reduction (vph)	0	0	0	0	30	0
Lane Group Flow (vph)	0	0	0	1433	339	0
Heavy Vehicles (%)	2%	2%	1%	1%	1%	1%
Turn Type				NA	Prot	
Protected Phases				1	2	
Permitted Phases						
Actuated Green, G (s)				40.7	28.3	
Effective Green, g (s)				40.7	28.3	
Actuated g/C Ratio				0.51	0.35	
Clearance Time (s)				5.3	5.7	
Lane Grp Cap (vph)				2612	1226	
v/s Ratio Prot				c0.28	c0.10	
v/s Ratio Perm						
v/c Ratio				0.55	0.28	
Uniform Delay, d1				13.4	18.5	
Progression Factor				1.00	0.00	
Incremental Delay, d2				0.8	0.4	
Delay (s)				14.2	0.5	
Level of Service				B	A	
Approach Delay (s)	0.0			14.2	0.5	
Approach LOS	A			B	A	

Intersection Summary			
HCM 2000 Control Delay	11.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		

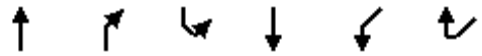
c Critical Lane Group



Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	647	372	0
Future Volume (vph)	0	0	0	647	372	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)				5.3	5.7	
Lane Util. Factor				0.91	0.97	
Frt				1.00	1.00	
Flt Protected				1.00	0.95	
Satd. Flow (prot)				5085	3433	
Flt Permitted				1.00	0.95	
Satd. Flow (perm)				5085	3433	
Peak-hour factor, PHF	0.92	0.92	0.88	0.88	0.93	0.93
Adj. Flow (vph)	0	0	0	735	400	0
RTOR Reduction (vph)	0	0	0	0	248	0
Lane Group Flow (vph)	0	0	0	735	152	0
Heavy Vehicles (%)	0%	0%	2%	2%	2%	2%
Turn Type				NA	Prot	
Protected Phases				1	2	
Permitted Phases						
Actuated Green, G (s)				43.7	25.3	
Effective Green, g (s)				43.7	25.3	
Actuated g/C Ratio				0.55	0.32	
Clearance Time (s)				5.3	5.7	
Lane Grp Cap (vph)				2777	1085	
v/s Ratio Prot				c0.14	c0.04	
v/s Ratio Perm						
v/c Ratio				0.26	0.14	
Uniform Delay, d1				9.6	19.6	
Progression Factor				1.00	0.19	
Incremental Delay, d2				0.2	0.0	
Delay (s)				9.9	3.8	
Level of Service				A	A	
Approach Delay (s)	0.0			9.9	3.8	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.22		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	1262	343	0
Future Volume (vph)	0	0	0	1262	343	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)				5.3	5.7	
Lane Util. Factor				0.91	0.97	
Frt				1.00	1.00	
Flt Protected				1.00	0.95	
Satd. Flow (prot)				5136	3467	
Flt Permitted				1.00	0.95	
Satd. Flow (perm)				5136	3467	
Peak-hour factor, PHF	0.92	0.92	0.88	0.88	0.93	0.93
Adj. Flow (vph)	0	0	0	1434	369	0
RTOR Reduction (vph)	0	0	0	0	30	0
Lane Group Flow (vph)	0	0	0	1434	339	0
Heavy Vehicles (%)	2%	2%	1%	1%	1%	1%
Turn Type				NA	Prot	
Protected Phases				1	2	
Permitted Phases						
Actuated Green, G (s)				40.7	28.3	
Effective Green, g (s)				40.7	28.3	
Actuated g/C Ratio				0.51	0.35	
Clearance Time (s)				5.3	5.7	
Lane Grp Cap (vph)				2612	1226	
v/s Ratio Prot				c0.28	c0.10	
v/s Ratio Perm						
v/c Ratio				0.55	0.28	
Uniform Delay, d1				13.4	18.5	
Progression Factor				1.00	0.00	
Incremental Delay, d2				0.8	0.4	
Delay (s)				14.2	0.5	
Level of Service				B	A	
Approach Delay (s)	0.0			14.2	0.5	
Approach LOS	A			B	A	

Intersection Summary			
HCM 2000 Control Delay	11.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

ORIGINAL 2019 TRAFFIC IMPACT ASSESSMENT

ROWE PROFESSIONAL SERVICES COMPANY

Large Firm Resources. Personal Attention.

Memorandum

To: Mr. Jimmy Asmar

From: Michael J. Labadie, PE
Jill M. Bauer, PE, PTOE

Date: June 17, 2019

RE: Traffic Impact Assessment for Proposed Holiday Inn Express & Suites

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ROWE Professional Services Company has completed a traffic impact assessment related to the proposed Holiday Inn Express & Suites to be located on the north side of Joe Hall Drive off South Huron Street, in Ypsilanti Charter Township, MI. The current site plan (included in the materials attached to this report) indicates a 107-room hotel with a build-out year of approximately 2021. This traffic impact assessment has been completed in accordance with the requirements specified by the Washtenaw County Road Commission (WCRC).

Traffic Counts

Turning movement traffic counts were collected, via Traffic Data Collection (TDC), during the weekday AM (7 a.m. to 9 a.m.) and PM (4 p.m. to 6 p.m.) peak periods on April 24, 2019 at the intersections of:

- Huron Street and Joe Hall Drive
- Huron Street and James L. Hart Parkway
- Huron Street and eastbound I-94 exit ramp
- Huron Street and westbound I-94 exit ramp
- Hamilton Street and westbound I-94 exit ramp

From this data, the peak traffic occurred during the hours shown in Table 1. The existing peak hour turning movement traffic counts are shown in Figure 2 attached to this memorandum.

Table 1
Peak Hour Times

Peak Hour	Intersection(s)	Time
AM	Huron Street & Joe Hall Drive	7:15 AM – 8:15 AM
	Huron Street & James L. Hart Parkway	7:15 AM – 8:15 AM
	Huron Street & eastbound exit ramp	7:15 AM – 8:15 AM
	Huron Street & westbound exit ramp	7:30 AM – 8:30 AM
	Hamilton Street & Madison Boulevard	7:00 AM – 8:00 AM
PM	Huron Street & Joe Hall Drive	4:30 PM – 5:30 PM
	Huron Street & James L. Hart Parkway	4:30 PM – 5:30 PM
	Huron Street & eastbound exit ramp	4:30 PM – 5:30 PM
	Huron Street & westbound exit ramp	4:00 PM – 5:00 PM
	Hamilton Street & Madison Boulevard	4:30 PM – 5:30 PM

Background Traffic Scenario

Based on information provided by your office, the development is anticipated to be completed in 2021. A background growth rate of 0.5 percent per year was determined to be appropriate and was utilized in forecasting normal yearly increases in traffic, which is unrelated to your proposed development. In addition, one background development was identified and included in the background traffic condition based on information from Midwestern Consulting. This growth was used to calculate the background (without the proposed development) vehicle delays, levels of service (LOS), and vehicle queues at the study intersection.

The background traffic volumes are shown in Figure 3 attached to this memorandum.

Trip Generation

Using the information and methodologies specified in the latest version of *Trip Generation (10th Edition)* published by the Institute of Transportation Engineers (ITE), ROWE forecast the weekday AM and PM peak hour trips associated with the proposed commercial development. The results of the trip generation forecasts for the completion of the development (107 rooms) are provided below in Table 2.

Table 2
Trip Generation for Proposed Commercial Development

Land Use	Land Use Code	# of Rooms	AM Peak Hour			PM Peak Hour			Weekday
			In	Out	Total	In	Out	Total	Total
Business Hotel	312	107	18	24	42	19	15	34	430

Trip Distribution

The existing traffic volumes were used to develop a trip distribution model for the AM and PM peak hours for traffic generated by the proposed development. The existing traffic patterns indicate the following probable distribution for the traffic from the proposed development:

AM Peak Hour
35% from and 65% to the north
65% from and 35% to the south

PM Peak Hour
41% from and 59% to the north
59% from and 41% to the south

The trip distribution for the site is shown in Figure 4 attached to this memo.

The existing traffic volumes were combined with the background and the site generated traffic volumes to obtain the total future traffic volumes, which are shown in Figure 5 attached to this memorandum.

Level of Service Analysis

An LOS analyses for existing, background (no build), and total future (build) conditions for the AM and PM peak hours was performed for the intersections of:

- Huron Street and Joe Hall Drive
- Huron Street and James L. Hart Parkway
- Huron Street and eastbound I-94 exit ramp
- Huron Street and westbound I-94 exit ramp
- Hamilton Street and westbound I-94 exit ramp

According to the most recent (6th) edition of the Highway Capacity Manual, LOS is a qualitative measure describing operational conditions of a traffic stream or intersection. Level of service ranges from A to F, with LOS A being the best and LOS D generally being considered acceptable. Table 3 presents the criteria

for defining the various levels of service for unsignalized intersections and Table 4 presents the criteria for signalized intersections.

Table 3
Level of Service Criteria (Unsignalized Intersection)

Level of Service	Average Stopped Delay/Vehicle (seconds)
A	≤10
B	>10 and ≤15
C	>15 and ≤25
D	>25 and ≤35
E	>35 and ≤50
F	>50

Note: LOS D is considered acceptable in urban/suburban areas.

Table 4
Level of Service Criteria (Signalized Intersection)

Level of Service	Average Stopped Delay/Vehicle (seconds)
A	≤10
B	>10 and ≤20
C	>20 and ≤35
D	>35 and ≤55
E	>55 and ≤80
F	>80

Note: LOS D is considered acceptable in urban/suburban areas.

The results of the LOS analyses for the intersections listed above are summarized in Tables 5-14.

Unsignalized Intersection of Joe Hall Drive and South Huron Street

The results of the level of service analysis for the unsignalized intersection of Joe Hall Drive and South Huron Street indicate that, under existing conditions, the northbound and southbound approaches to the intersection operate at an LOS A during the AM and PM peak hours. The eastbound and westbound approaches operate and at an LOS F during the AM and PM peak hours.

With the addition of background traffic, the northbound and southbound approaches to the intersection would continue to operate at an LOS A during the AM and PM peak hours. The eastbound and westbound approaches would continue to operate at an LOS F during the AM and PM peak hours.

The LOS F experienced by the eastbound and westbound approaches is the result of traffic not being able to find a gap with the high volume of traffic on both the northbound and southbound approaches. A traffic signal warrant evaluation was completed, and it was found that this intersection meets Warrant 2 – Four Hour Vehicular Volume. The background traffic was modeled with this proposed signal. The northbound and southbound approaches would operate at an LOS B or better during the AM and PM peak hours. The eastbound and westbound approaches would operate at an LOS D or better during the AM and PM peak hours.

The addition of site generated traffic, the northbound and southbound approaches would operate at an LOS C or better during the AM and PM peak hours. The eastbound and westbound approaches would continue to operate at an LOS D or better during the AM and PM peak hours.

The operational results for the intersection of Joe Hall Drive and South Huron Street are presented in Tables 5 and 6.

Table 5
Level of Service Analysis S. Huron Street and Joe Hall Drive

AM Peak Hour				
Approach	**Existing**	**Background**	**Background w/ Mitigation**	**Future**
Eastbound Joe Hall Drive	**F (120.9)**	**F (128.4)**	D (44.9)	D (48.2)
Westbound Joe Hall Drive	**F (480.4)**	**F (589.2)**	D (38.3)	D (38.3)
Northbound S. Huron Street	A (1.4)	A (1.4)	A (8.9)	A (9.5)
Southbound S. Huron Street	A (0.2)	A (0.2)	A (0.5)	A (0.5)
Overall	**A (6.0)**	**A (6.8)**	**A (7.5)**	**A (8.3)**

(XX.X) Average seconds of delay per vehicle.

Table 6
Level of Service Analysis S. Huron Street and Joe Hall Drive

PM Peak Hour				
Approach	**Existing**	**Background**	**Background w/ Mitigation**	**Future**
Eastbound Joe Hall Drive	**F (408.9)**	**F (512.0)**	D (47.3)	D (48.6)
Westbound Joe Hall Drive	**F (287.4)**	**F (367.6)**	C (30.0)	C (29.4)
Northbound S. Huron Street	A (2.5)	A (2.5)	A (7.4)	A (8.1)
Southbound S. Huron Street	A (0.0)	A (0.0)	B (15.9)	C (24.0)
Overall	**D (29.2)**	**E (36.7)**	**B (15.0)**	**C (20.1)**

(XX.X) Average seconds of delay per vehicle.

Signalized Intersection of James L. Hart Parkway and South Huron Street

The results of the level of service analysis for the signalized intersection of James L. Hart Parkway and South Huron Street indicate that, under existing conditions, the northbound approach to the intersection operates at an LOS B during the AM peak hour and an LOS C during the PM peak hour. The southbound approach operates at an LOS B during the AM peak hour and an LOS F during the PM peak hour. The eastbound approach operates at an LOS E during the AM peak hour and an LOS D during the PM peak hour. The westbound approach operates at an LOS C during the AM and PM peak hours.

With the addition of background traffic, the northbound approach to the intersection would continue to operate at an LOS B during the AM peak hour and an LOS C during the PM peak hour. The southbound approach would continue to operate at an LOS B during the AM peak hour and an LOS F during the PM peak hour. The eastbound approach would operate at an LOS F during the AM peak hour and an LOS E during the PM peak hour. The westbound approach would operate at an LOS C during the AM and PM peak hours.

To address the unacceptable levels of service experienced for the eastbound and southbound approaches, the traffic signal timing was optimized. The traffic signal at the intersection of James L. Hart Parkway and South Huron Street has a cycle length to match the signal at the eastbound I-94 off ramp and South Huron Street intersection; therefore, the cycle length was maintained but the phasing was adjusted.

This optimization resulted in all approaches operating at an LOS D or better during the AM peak hour. During the PM peak hour, the northbound approach would operate at an LOS A, the southbound approach would operate at an LOS D, the eastbound approach would operate at an LOS E, and the westbound approach would operate at an LOS C. Overall, the intersection would improve from an LOS E to an LOS D and experience a decrease in delay of nearly 30 seconds.

With the addition of site generated traffic, the northbound approach to the intersection would operate at an LOS D during the AM peak hour and an LOS B during the PM peak hour. The southbound approach would operate at an LOS C during the AM peak hour and an LOS E during the PM peak hour. The eastbound approach would continue to operate at an LOS C during the AM peak hour and an LOS E during the PM peak hour. The westbound approach would continue to operate at an LOS C during the AM and PM peak hours.

To further improve approach LOS during the PM peak hour, the cycle length would need to be lengthened. This change in cycle length would need to be coordinated with the signals at the I-94 ramps.

The operational results for the intersection of James L. Hart Parkway and South Huron Street are presented in Tables 7 and 8.

Table 7
Level of Service Analysis S. Huron Street and James L. Hart Parkway

AM Peak Hour				
Approach	**Existing**	**Background**	**Background w/Opt**	**Future**
Eastbound James L. Hart Parkway	**E (78.5)**	**F (92.3)**	C (33.1)	C (33.1)
Westbound James L. Hart Pkwy	C (28.9)	C (28.9)	C (22.3)	C (22.3)
Northbound S. Huron Street	C (24.3)	C (24.9)	D (40.0)	D (41.3)
Southbound S. Huron Street	B (15.9)	B (16.1)	C (20.6)	C (20.7)
Overall	**C (27.3)**	**C (29.5)**	**C (31.3)**	**C (32.0)**

(XX.X) Average seconds of delay per vehicle.

Table 8
Level of Service Analysis S. Huron Street and James L. Hart Parkway

PM Peak Hour				
Approach	**Existing**	**Background**	**Background w/ Opt**	**Future**
Eastbound James L. Hart Parkway	D (49.7)	**E (55.6)**	**E (55.6)**	**E (55.4)**
Westbound James L. Hart Parkway	C (26.4)	C (26.4)	C (26.4)	C (26.4)
Northbound S. Huron Street	C (20.7)	C (20.9)	A (3.6)	B (12.3)
Southbound S. Huron Street	**F (93.1)**	**F (97.0)**	D (54.9)	**E (56.1)**
Overall	**E (65.1)**	**E (68.0)**	**D (39.0)**	**D (42.2)**

(XX.X) Average seconds of delay per vehicle.

Signalized Intersection of Eastbound I-94 Off-Ramp and South Huron Street

The results of the level of service analysis for the signalized intersection of eastbound I-94 off-ramp and South Huron Street indicate that, under existing conditions, all approaches to the intersection operate at an LOS C or better during the AM and PM peak hours.

With the addition of background and site generated traffic, all approaches to the intersection would continue to operate at an LOS C or better during the AM and PM peak hours.

The operational results for the intersection of eastbound I-94 off-ramp and South Huron Street are presented in Tables 9 and 10.

Table 9
Level of Service Analysis Eastbound I-94 Off-Ramp and South Huron Street

AM Peak Hour			
Approach	**Existing**	**Background**	**Future**
Eastbound I-94 off-ramp	C (20.9)	C (21.0)	C (21.1)
Northbound S. Huron Street	B (11.7)	B (12.0)	A (7.0)
Southbound S. Huron Street	B (19.6)	B (19.8)	B (19.8)
Overall	**B (16.5)**	**B (16.7)**	**B (14.6)**

(XX.X) Average seconds of delay per vehicle.

Table 10
Level of Service Analysis Eastbound I-94 Off-Ramp and South Huron Street

PM Peak Hour			
Approach	**Existing**	**Background**	**Future**
Eastbound I-94 off-ramp	C (26.0)	C (26.3)	C (26.4)
Northbound S. Huron Street	A (6.7)	B (10.4)	A (8.7)
Southbound S. Huron Street	B (13.1)	C (20.1)	C (20.1)
Overall	**B (15.2)**	**B (19.2)**	**B (18.7)**

(XX.X) Average seconds of delay per vehicle.

Signalized Intersection of Westbound I-94 Off-Ramp and South Huron Street

The results of the level of service analysis for the signalized intersection of westbound I-94 off-ramp and South Huron Street indicate that, under existing conditions, all approaches to the intersection operate at an LOS D or better during the AM and PM peak hours.

With the addition of background and site generated traffic, all approaches to the intersection would continue to operate at an LOS D or better during the AM and PM peak hours.

The operational results for the intersection of westbound I-94 off-ramp and South Huron Street are presented in Tables 11 and 12.

Table 11
Level of Service Analysis Westbound I-94 Off-Ramp and South Huron Street

AM Peak Hour			
Approach	**Existing**	**Background**	**Future**
Westbound I-94 off-ramp	D (36.1)	D (36.8)	D (36.8)
Northbound S. Huron Street	A (7.6)	A (7.7)	A (7.6[1])
Overall	**C (20.1)**	**C (20.4)**	**C (20.3[1])**

(XX.X) Average seconds of delay per vehicle.
[1]0.1s change due to rounding by Synchro.

Table 12
Level of Service Analysis Westbound I-94 Off-Ramp and South Huron Street

PM Peak Hour			
Approach	**Existing**	**Background**	**Future**
Westbound I-94 off-ramp	C (31.3)	C (31.7)	C (31.7)
Northbound S. Huron Street	B (16.5)	C (22.8)	C (23.2)
Overall	**C (23.1)**	**C (26.7)**	**C (27.0)**

(XX.X) Average seconds of delay per vehicle.

Signalized Intersection of Westbound I-94 Off-Ramp and South Hamilton Street

The results of the level of service analysis for the signalized intersection of westbound I-94 off-ramp and South Hamilton Street indicate that, under existing conditions, all approaches to the intersection operate at an LOS A during the AM peak hour and an LOS B or better during the PM peak hour.

With the addition of background and site generated traffic, all approaches to the intersection would continue to operate at an LOS A during the AM peak hour and an LOS B or better during the PM peak hour.

The operational results for the intersection of westbound I-94 off-ramp and South Hamilton Street are presented in Tables 13 and 14.

Table 13
Level of Service Analysis Westbound I-94 Off-Ramp and South Hamilton Street

AM Peak Hour			
Approach	**Existing**	**Background**	**Future**
Westbound I-94 off-ramp	A (0.5)	A (0.6)	A (0.6)
Southbound S. Hamilton Street	A (9.8)	A (9.8)	A (9.8)
Overall	**A (5.6)**	**A (5.7)**	**A (5.7)**

(XX.X) Average seconds of delay per vehicle.

Table 14
Level of Service Analysis Westbound I-94 Off-Ramp and South Hamilton Street

PM Peak Hour			
Approach	**Existing**	**Background**	**Future**
Westbound I-94 off-ramp	A (1.2)	A (1.2)	A (1.2)
Southbound S. Hamilton Street	B (14.6)	B (14.7)	B (14.7)
Overall	**B (11.2)**	**B (11.3)**	**B (11.3)**

(XX.X) Average seconds of delay per vehicle.

Conclusions and Recommendations for the Traffic Impact Assessment

The proposed project is a 107-room hotel with a build-out year of approximately 2021. The proposed development will have access the north side of Joe Hall Drive off South Huron Street. The proposed development is forecast to generate 42 trips during the AM peak hour (18 inbound and 24 outbound from the site) and 34 trips during the PM peak hour (19 inbound and 15 outbound from the site).

An operational analysis was performed for existing and total future conditions for the intersections of:

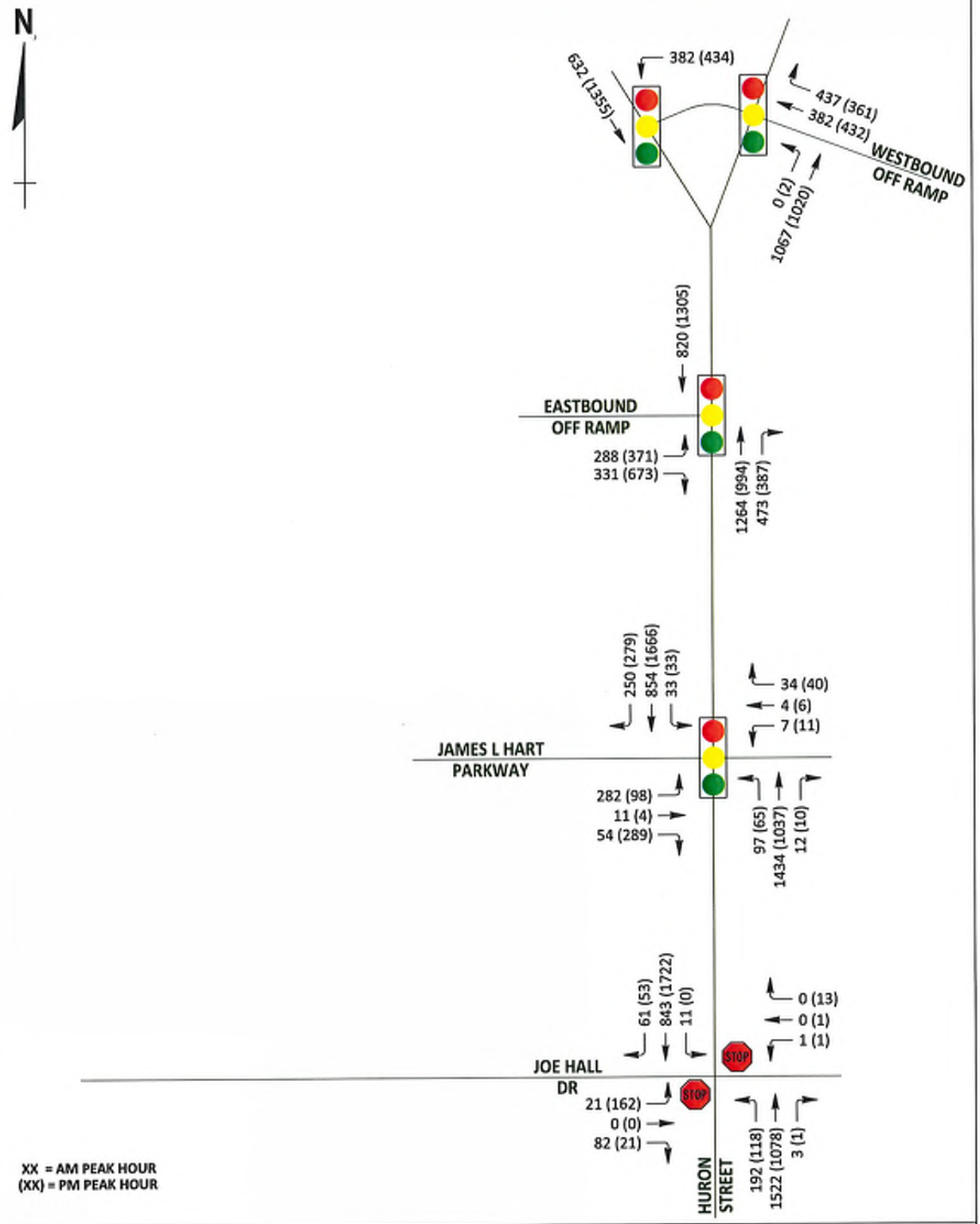
- Huron Street and Joe Hall Drive
- Huron Street and James L. Hart Parkway
- Huron Street and eastbound I-94 exit ramp
- Huron Street and westbound I-94 exit ramp
- Hamilton Street and westbound I-94 exit ramp

The operational analysis indicated that the intersections of Huron Street and eastbound I-94 exit ramp, Huron Street and westbound I-94 exit ramp, and Hamilton Street and westbound I-94 exit ramp would continue to experience acceptable levels of service with the addition of the proposed hotel.

The intersections of Huron Street and Joe Hall Drive and Huron Street and James L. Hart Parkway currently experience unacceptable levels of service during the AM and PM peak hours. The intersection of Huron Street and Joe Hall Drive meets Warrant 2 – Four Hour Traffic Volume Warrant. Installation of an actuated traffic signal will allow all approaches to the intersection to operate at an acceptable level of service during the AM and PM peak hours. Optimization of the signal phasing at Huron Street and James L. Parkway will improve the overall intersection operation.

Attachments

REPORT FIGURES

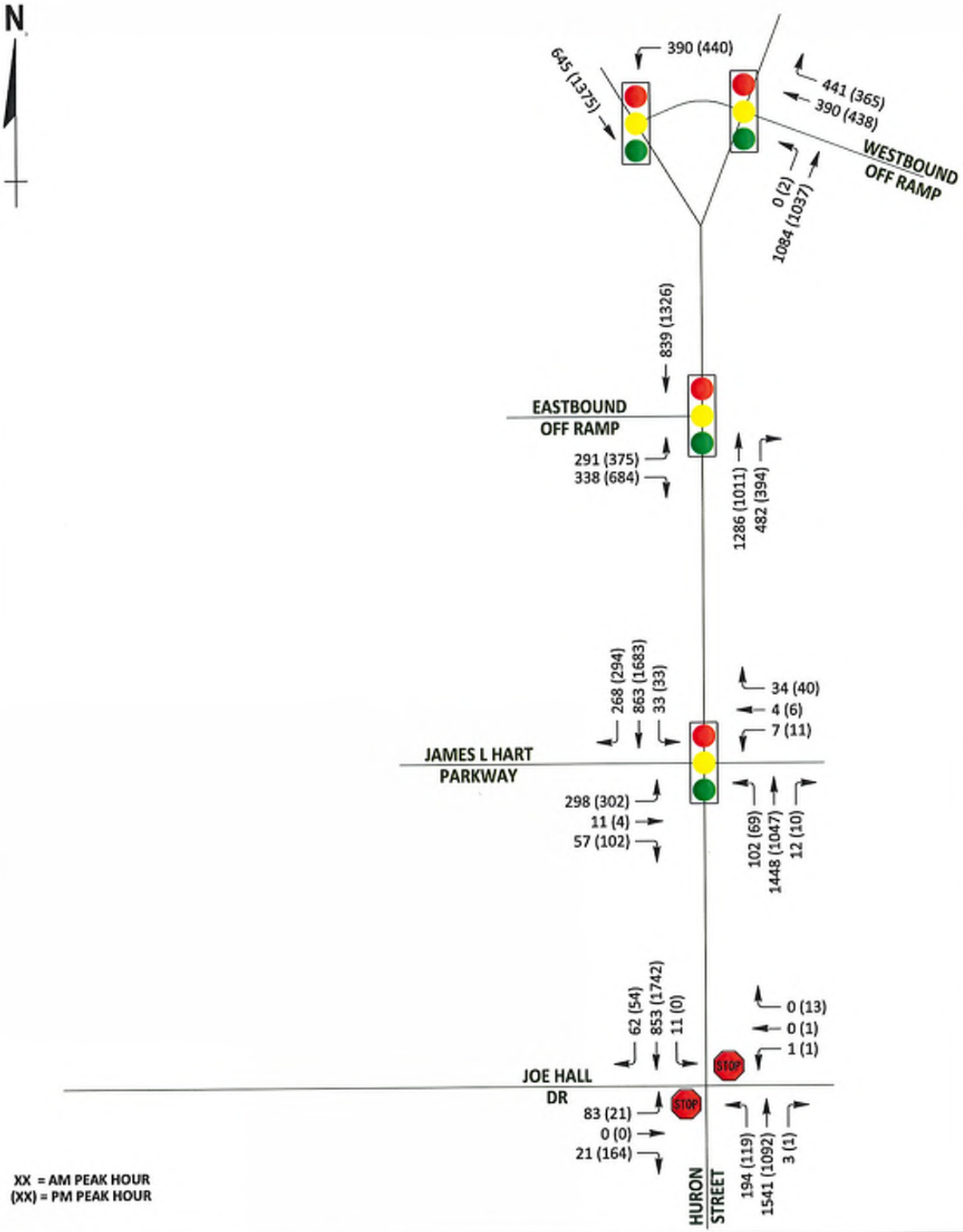


XX = AM PEAK HOUR
(XX) = PM PEAK HOUR

ROWE PROFESSIONAL SERVICES COMPANY

2019 EXISTING AM (PM) PEAK HOUR TRAFFIC VOLUMES

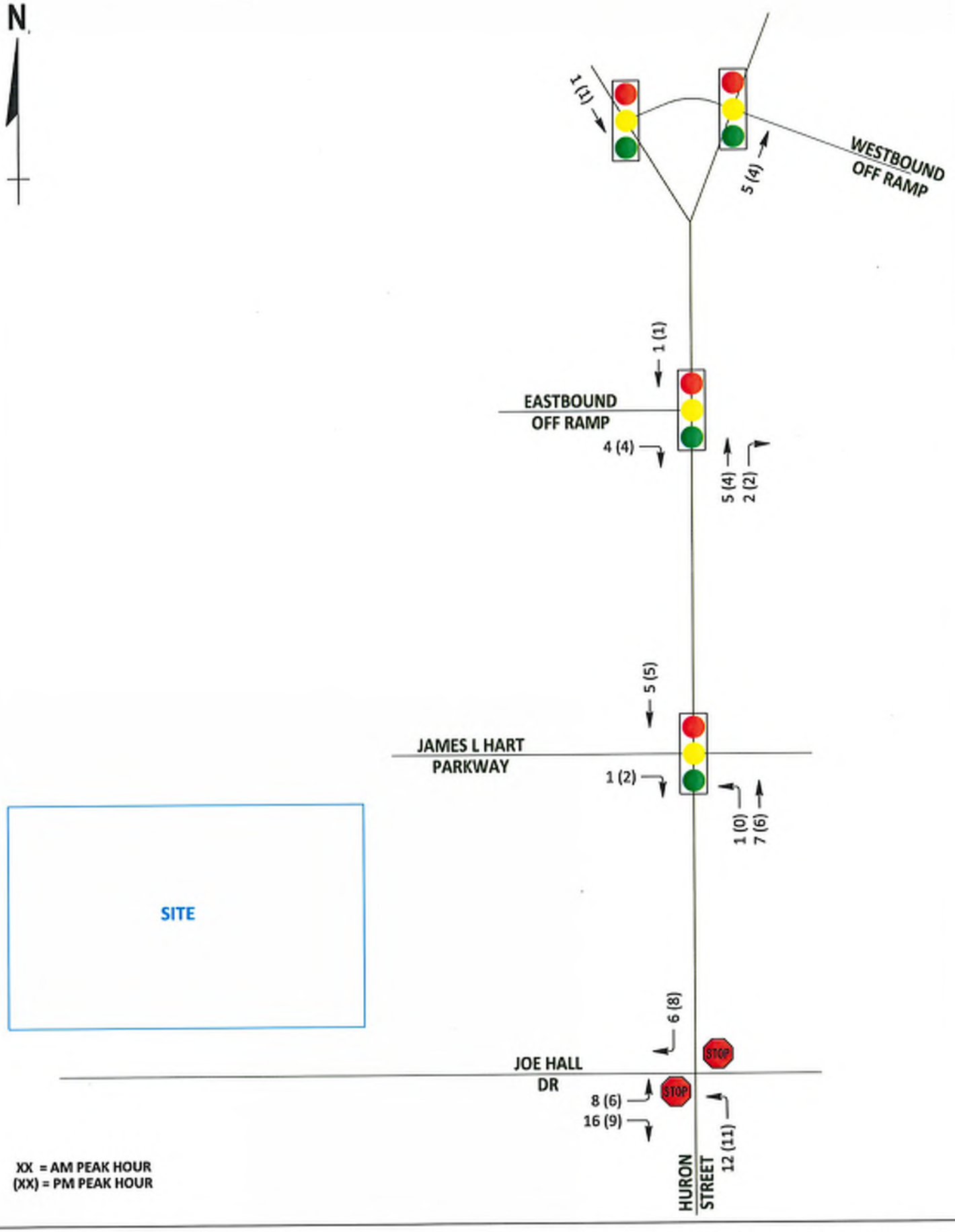
FIGURE 2



ROWE PROFESSIONAL SERVICES COMPANY

2021 BACKGROUND (NO BUILD) AM (PM) PEAK HOUR TRAFFIC VOLUMES

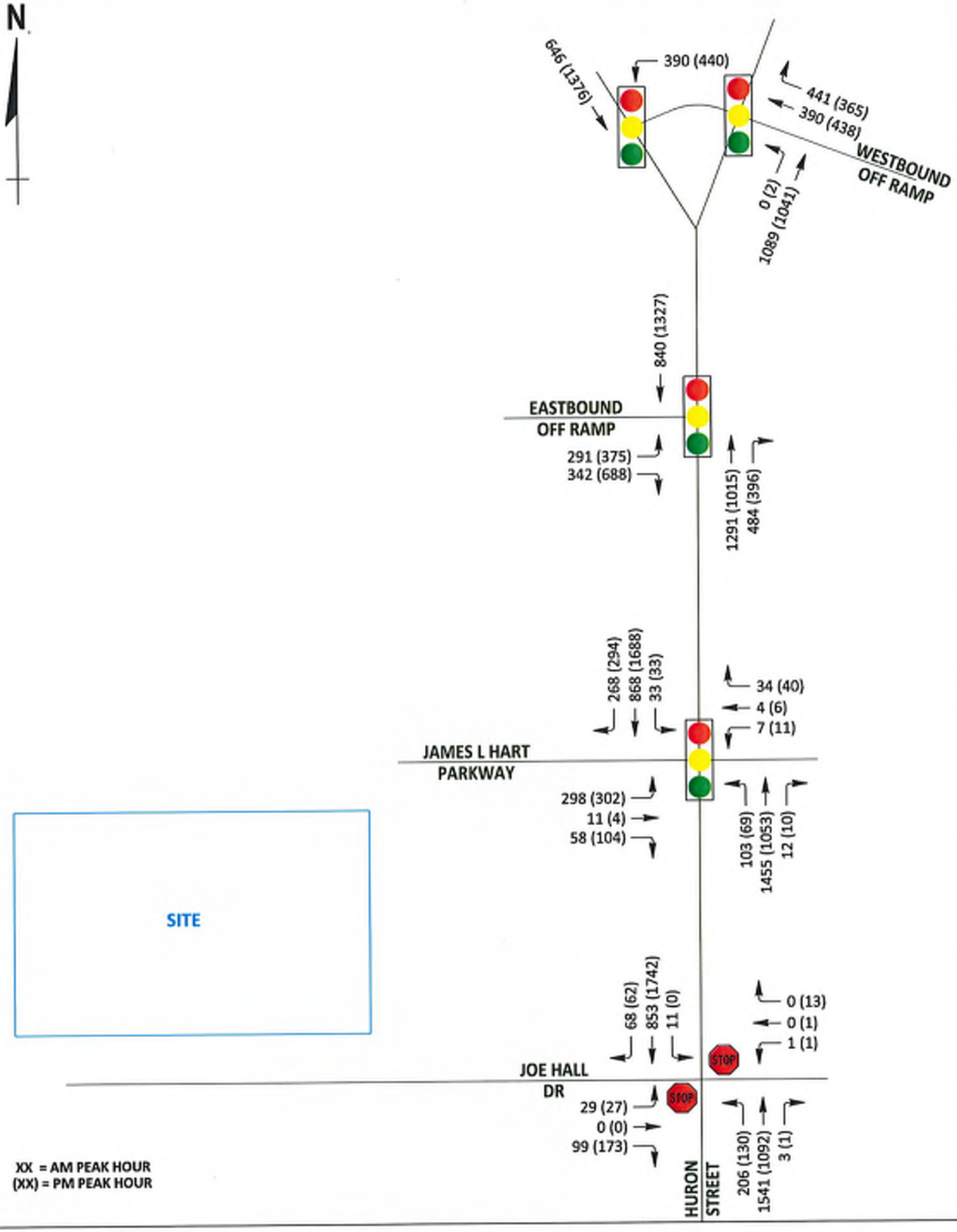
FIGURE 3



TRIP GENERATION AM (PM) PEAK HOUR TRAFFIC VOLUMES

FIGURE 4

ROWE PROFESSIONAL SERVICES COMPANY



2021 FUTURE (BUILD) AM (PM) PEAK HOUR TRAFFIC VOLUMES

FIGURE 5

ROWE PROFESSIONAL SERVICES COMPANY

TRAFFIC COUNTS

Traffic Data Collection, LLC

www:tdccounts.com

Phone: 586.786-5407

Traffic Study Performed For:

ROWE Professional Services Company

Project: Ypsilanti Traffic Impact Study
Study:4 Hr. Video Turning Movement Count
Weather:Sunny/Cldy PM Dry Deg 50s
Count By Miovision Video VCU 34G SE

File Name : TMC_1 Hamilton & WB I-94 Off Ramp
Site Code : TMC_1
Start Date : 4/24/2019
Page No : 1

4 Hour video traffic study was conducted during typical weekdays, from 7:00 AM - 9:00 AM (Thursday) morning & 4:00 PM - 6:00 PM (Wednesday) afternoon peak hours, while school was in session.

Groups Printed- Pass Cars - Single Units - Heavy Trucks

	SB S. Hamilton St. Southbound					WB I-94 Off Ramp/Madison Blvd. Westbound					SB S. Hamilton St. Northbound					WB I-94 On Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	91	139	0	0	230	0	0	63	0	63	0	0	0	0	0	0	0	0	0	0	293
07:15 AM	98	156	0	0	254	0	0	92	0	92	0	0	0	0	0	0	0	0	0	0	346
07:30 AM	77	164	0	0	241	0	0	81	0	81	0	0	0	0	0	0	0	0	0	0	322
07:45 AM	43	173	0	0	216	0	0	136	0	136	0	0	0	0	0	0	0	0	0	0	352
Total	309	632	0	0	941	0	0	372	0	372	0	0	0	0	0	0	0	0	0	0	1313
08:00 AM	48	145	0	0	193	0	0	86	0	86	0	0	0	0	0	0	0	0	0	0	279
08:15 AM	75	154	0	0	229	0	0	82	0	82	0	0	0	0	0	0	0	0	0	0	311
08:30 AM	78	163	0	0	241	0	0	79	0	79	0	0	0	0	0	0	0	0	0	0	320
08:45 AM	65	136	0	0	201	0	0	89	0	89	0	0	0	0	0	0	0	0	0	0	290
Total	266	598	0	0	864	0	0	336	0	336	0	0	0	0	0	0	0	0	0	0	1200
*** BREAK ***																					
04:00 PM	118	318	2	0	438	0	0	100	0	100	0	0	0	0	0	0	0	0	0	0	538
04:15 PM	120	312	0	0	432	0	0	100	0	100	0	0	0	0	0	0	0	0	0	0	532
04:30 PM	124	333	6	0	463	0	0	100	0	100	0	0	0	0	0	0	0	0	0	0	563
04:45 PM	105	332	2	0	439	0	0	119	0	119	0	0	0	0	0	0	0	0	0	0	558
Total	467	1295	10	0	1772	0	0	419	0	419	0	0	0	0	0	0	0	0	0	0	2191
05:00 PM	121	346	2	0	469	0	0	87	0	87	0	0	0	0	0	0	0	0	0	0	556
05:15 PM	95	344	2	0	441	0	0	128	0	128	0	0	0	0	0	0	0	0	0	0	569
05:30 PM	86	235	2	0	323	0	0	116	0	116	0	0	0	0	0	0	0	0	0	0	439
05:45 PM	87	262	2	0	351	0	0	122	0	122	0	0	0	0	0	0	0	0	0	0	473
Total	389	1187	8	0	1584	0	0	453	0	453	0	0	0	0	0	0	0	0	0	0	2037
Grand Total	1431	3712	18	0	5161	0	0	1580	0	1580	0	0	0	0	0	0	0	0	0	0	6741
Apprch %	27.7	71.9	0.3	0		0	0	100	0		0	0	0	0		0	0	0	0		
Total %	21.2	55.1	0.3	0	76.6	0	0	23.4	0	23.4	0	0	0	0	0	0	0	0	0	0	
Pass Cars	1410	3656	18	0	5084	0	0	1546	0	1546	0	0	0	0	0	0	0	0	0	0	6630
% Pass Cars	98.5	98.5	100	0	98.5	0	0	97.8	0	97.8	0	0	0	0	0	0	0	0	0	0	98.4
Single Units	11	42	0	0	53	0	0	20	0	20	0	0	0	0	0	0	0	0	0	0	73
% Single Units	0.8	1.1	0	0	1	0	0	1.3	0	1.3	0	0	0	0	0	0	0	0	0	0	1.1
Heavy Trucks	10	14	0	0	24	0	0	14	0	14	0	0	0	0	0	0	0	0	0	0	38
% Heavy Trucks	0.7	0.4	0	0	0.5	0	0	0.9	0	0.9	0	0	0	0	0	0	0	0	0	0	0.6

TDC Traffic Comments: Signalized intersection, no ped. signals. Video VCU camera was located within SE intersection quadrant. Note: NB left turns are for EB Madison Blvd. crossover, north of intersection. Traffic study was conducted for Ypsilanti Traffic Impact Study for ROWE Professional Services Company.

Traffic Data Collection, LLC

www:tdccounts.com

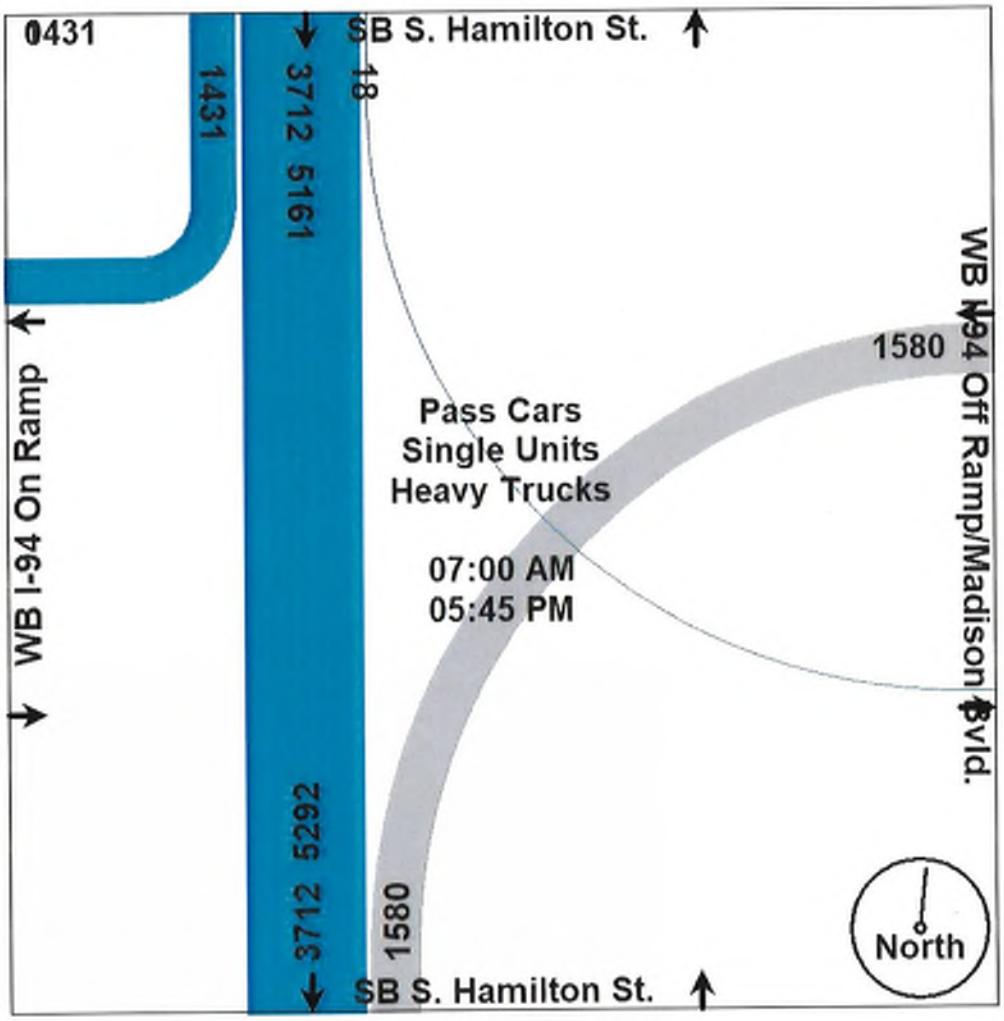
Phone: 586.786-5407

Traffic Study Performed For:

ROWE Professional Services Company

Project: Ypsilanti Traffic Impact Study
Study:4 Hr. Video Turning Movement Count
Weather:Sunny/Cldy PM Dry Deg 50s
Count By Miovision Video VCU 34G SE

File Name : TMC_1 Hamilton & WB I-94 Off Ramp
Site Code : TMC_1
Start Date : 4/24/2019
Page No : 2



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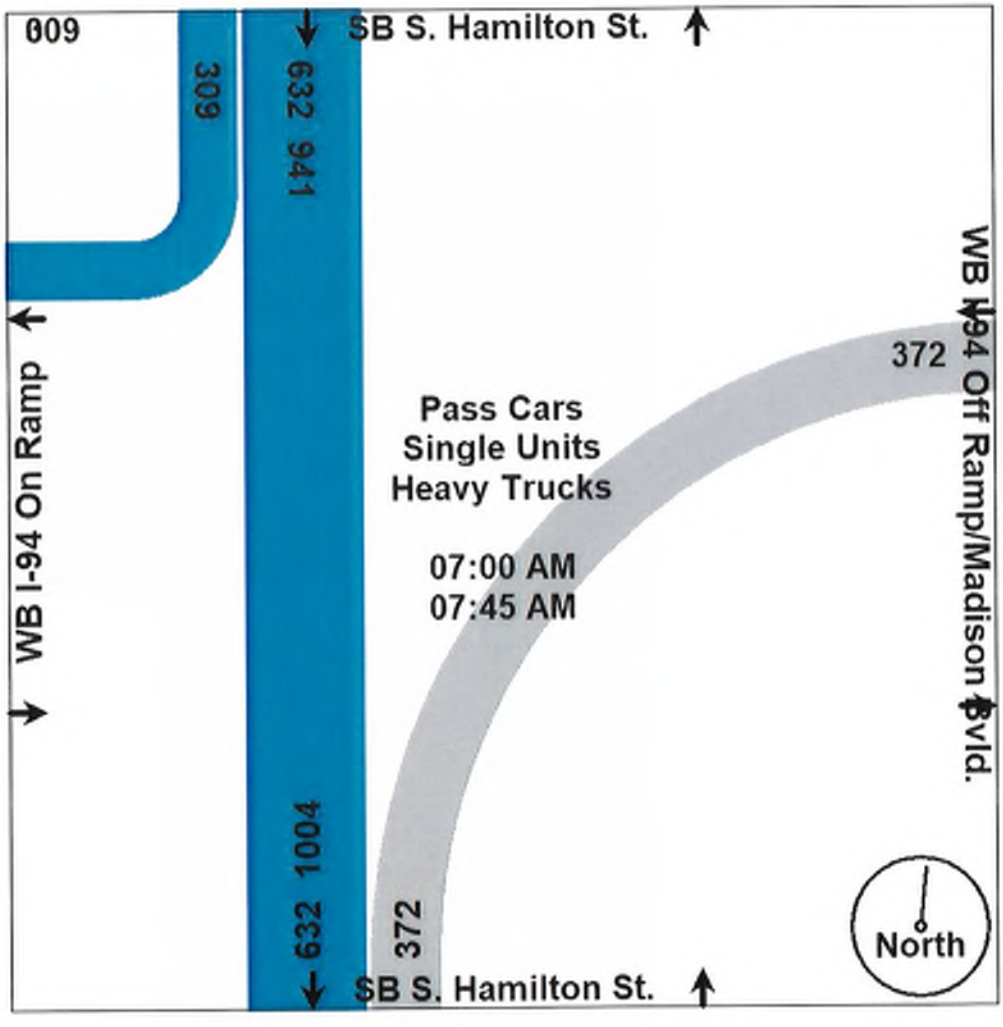
File Name : TMC_1 Hamilton & WB I-94 Off Ramp
Site Code : TMC_1
Start Date : 4/24/2019
Page No : 3

	SB S. Hamilton St. Southbound				WB I-94 Off Ramp/Madison Blvd. Westbound				SB S. Hamilton St. Northbound				WB I-94 On Ramp Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	91	139	0	230	0	0	63	63	0	0	0	0	0	0	0	0	293
07:15 AM	98	156	0	254	0	0	92	92	0	0	0	0	0	0	0	0	346
07:30 AM	77	164	0	241	0	0	81	81	0	0	0	0	0	0	0	0	322
07:45 AM	43	173	0	216	0	0	136	136	0	0	0	0	0	0	0	0	352
Total Volume	309	632	0	941	0	0	372	372	0	0	0	0	0	0	0	0	1313
% App. Total	32.8	67.2	0		0	0	100		0	0	0		0	0	0		
PHF	.788	.913	.000	.926	.000	.000	.684	.684	.000	.000	.000	.000	.000	.000	.000	.000	.933
Pass Cars	301	619	0	920	0	0	360	360	0	0	0	0	0	0	0	0	1280
% Pass Cars	97.4	97.9	0	97.8	0	0	96.8	96.8	0	0	0	0	0	0	0	0	97.5
Single Units	4	7	0	11	0	0	7	7	0	0	0	0	0	0	0	0	18
% Single Units	1.3	1.1	0	1.2	0	0	1.9	1.9	0	0	0	0	0	0	0	0	1.4
Heavy Trucks	4	6	0	10	0	0	5	5	0	0	0	0	0	0	0	0	15
% Heavy Trucks	1.3	0.9	0	1.1	0	0	1.3	1.3	0	0	0	0	0	0	0	0	1.1



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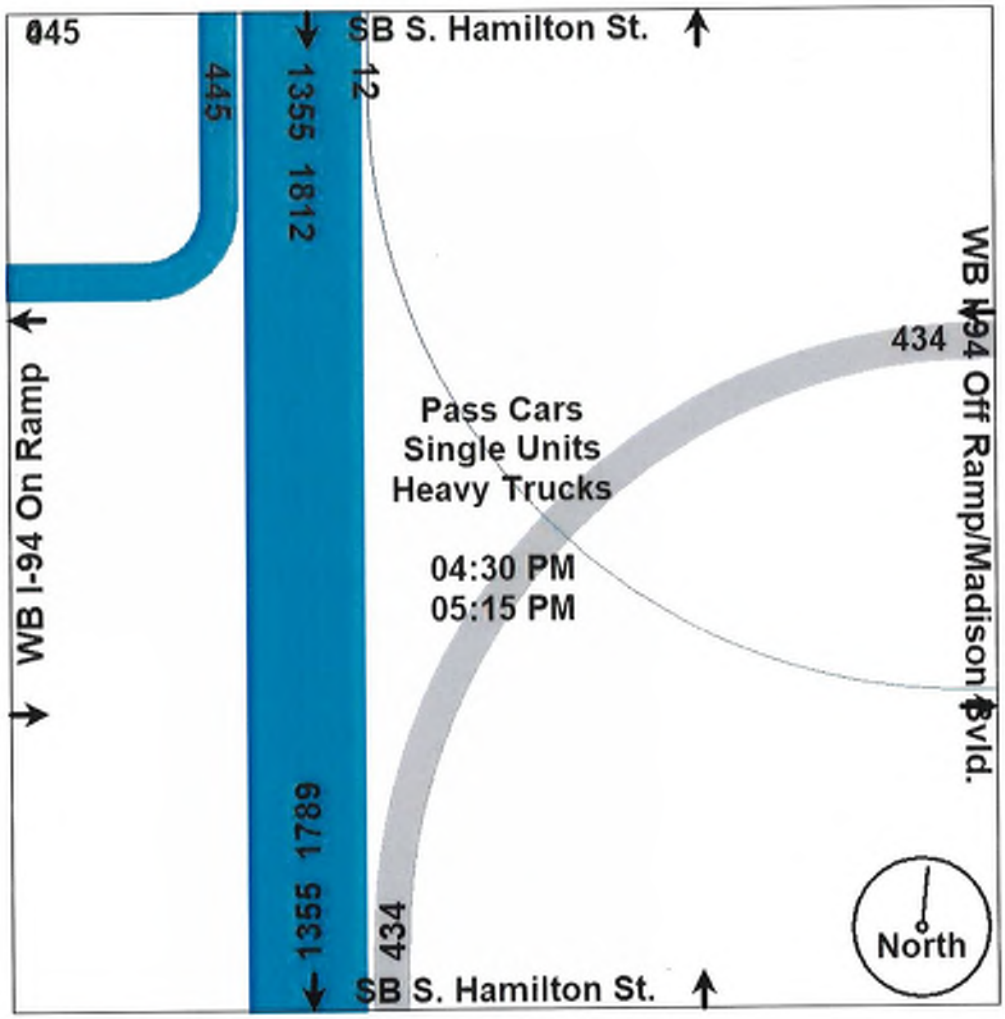
Traffic Study Performed For:

ROWE Professional Services Company

Project: Ypsilanti Traffic Impact Study
Study:4 Hr. Video Turning Movement Count
Weather:Sunny/Cldy PM Dry Deg 50s
Count By Miovision Video VCU 34G SE

File Name : TMC_1 Hamilton & WB I-94 Off Ramp
Site Code : TMC_1
Start Date : 4/24/2019
Page No : 4

	SB S. Hamilton St. Southbound				WB I-94 Off Ramp/Madison Bvld. Westbound				SB S. Hamilton St. Northbound				WB I-94 On Ramp Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**124**	333	**6**	463	0	0	100	100	0	0	0	0	0	0	0	0	563
04:45 PM	105	332	2	439	0	0	119	119	0	0	0	0	0	0	0	0	558
05:00 PM	121	**346**	2	**469**	0	0	87	87	0	0	0	0	0	0	0	0	556
05:15 PM	95	344	2	441	0	0	**128**	**128**	0	0	0	0	0	0	0	0	**569**
Total Volume	445	1355	12	1812	0	0	434	434	0	0	0	0	0	0	0	0	2246
% App. Total	24.6	74.8	0.7		0	0	100		0	0	0		0	0	0		
PHF	.897	.979	.500	.966	.000	.000	.848	.848	.000	.000	.000	.000	.000	.000	.000	.000	.987
Pass Cars	441	1335	12	1788	0	0	428	428	0	0	0	0	0	0	0	0	2216
% Pass Cars	99.1	98.5	100	98.7	0	0	98.6	98.6	0	0	0	0	0	0	0	0	98.7
Single Units	2	15	0	17	0	0	3	3	0	0	0	0	0	0	0	0	20
% Single Units	0.4	1.1	0	0.9	0	0	0.7	0.7	0	0	0	0	0	0	0	0	0.9
Heavy Trucks	2	5	0	7	0	0	3	3	0	0	0	0	0	0	0	0	10
% Heavy Trucks	0.4	0.4	0	0.4	0	0	0.7	0.7	0	0	0	0	0	0	0	0	0.4



Traffic Data Collection, LLC

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Phone: 586.786-5407

Traffic Study Performed For:

ROWE Professional Services Company

Project: Ypsilanti Traffic Impact Study
Study:4 Hr. Video Turning Movement Count
Weather:Sunny/Cldy PM Dry Deg 50s
Count By Miovision Video VCU 34G SE

File Name : TMC_1 Hamilton & WB I-94 Off Ramp
Site Code : TMC_1
Start Date : 4/24/2019
Page No : 5

Aerial Photo

Traffic Data Collection, LLC

www:tdccounts.com

Phone: 586.786-5407

Traffic Study Performed For:

ROWE Professional Services Company

Project: Ypsilanti Traffic Impact Study
Study:4 Hr. Video Turning Movement Count
Weather:Sunny/Cldy PM Dry Deg 50s
Count By Miovision Video VCU 34N SE

File Name : TMC_2 Huron & WB I-94 Off Ramp
Site Code : TMC_2
Start Date : 4/24/2019
Page No : 1

4 Hour video traffic study was conducted during typical weekdays, from 7:00 AM - 9:00 AM (Thursday) morning & 4:00 PM - 6:00 PM (Wednesday) afternoon peak hours, while school was in session.

Groups Printed- Pass Cars - Single Units - Heavy Trucks

	NB S. Huron St. Southbound					WB I-94 Off Ramp Westbound					NB S. Huron St. Northbound					WB I-94 Off Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	92	62	0	0	154	0	182	0	0	182	0	0	0	0	0	336
07:15 AM	0	0	0	0	0	86	92	0	0	178	0	218	0	0	218	0	0	0	0	0	396
07:30 AM	0	0	0	0	0	113	89	0	0	202	0	252	0	0	252	0	0	0	0	0	454
07:45 AM	0	0	0	0	0	107	128	0	0	235	0	282	0	0	282	0	0	0	0	0	517
Total	0	0	0	0	0	398	371	0	0	769	0	934	0	0	934	0	0	0	0	0	1703
08:00 AM	0	0	0	0	0	101	83	0	0	184	0	280	0	0	280	0	0	0	0	0	464
08:15 AM	0	0	0	0	0	116	82	0	0	198	0	253	0	0	253	0	0	0	0	0	451
08:30 AM	0	0	0	0	0	104	87	0	0	191	0	250	0	0	250	0	0	0	0	0	441
08:45 AM	0	0	0	0	0	90	82	0	0	172	0	279	1	0	280	0	0	0	0	0	452
Total	0	0	0	0	0	411	334	0	0	745	0	1062	1	0	1063	0	0	0	0	0	1808
*** BREAK ***																					
04:00 PM	0	0	0	0	0	81	97	0	0	178	0	282	1	0	283	0	0	0	0	0	461
04:15 PM	0	0	0	0	0	80	100	0	0	180	0	233	1	0	234	0	0	0	0	0	414
04:30 PM	0	0	0	0	0	109	99	0	0	208	0	252	0	0	252	0	0	0	0	0	460
04:45 PM	0	0	0	0	0	91	116	0	0	207	0	253	0	0	253	0	0	0	0	0	460
Total	0	0	0	0	0	361	412	0	0	773	0	1020	2	0	1022	0	0	0	0	0	1795
05:00 PM	0	0	0	0	0	85	86	0	0	171	0	218	0	0	218	0	0	0	0	0	389
05:15 PM	0	0	0	0	0	77	128	0	0	205	0	249	2	0	251	0	0	0	0	0	456
05:30 PM	0	0	0	0	0	94	124	0	0	218	0	249	0	0	249	0	0	0	0	0	467
05:45 PM	0	0	0	0	0	128	119	0	0	247	0	226	2	0	228	0	0	0	0	0	475
Total	0	0	0	0	0	384	457	0	0	841	0	942	4	0	946	0	0	0	0	0	1787
Grand Total	0	0	0	0	0	1554	1574	0	0	3128	0	3958	7	0	3965	0	0	0	0	0	7093
Apprch %	0	0	0	0		49.7	50.3	0	0		0	99.8	0.2	0		0	0	0	0		
Total %	0	0	0	0	0	21.9	22.2	0	0	44.1	0	55.8	0.1	0	55.9	0	0	0	0	0	
Pass Cars	0	0	0	0	0	1532	1540	0	0	3072	0	3880	7	0	3887	0	0	0	0	0	6959
% Pass Cars	0	0	0	0	0	98.6	97.8	0	0	98.2	0	98	100	0	98	0	0	0	0	0	98.1
Single Units	0	0	0	0	0	16	18	0	0	34	0	51	0	0	51	0	0	0	0	0	85
% Single Units	0	0	0	0	0	1	1.1	0	0	1.1	0	1.3	0	0	1.3	0	0	0	0	0	1.2
Heavy Trucks	0	0	0	0	0	6	16	0	0	22	0	27	0	0	27	0	0	0	0	0	49
% Heavy Trucks	0	0	0	0	0	0.4	1	0	0	0.7	0	0.7	0	0	0.7	0	0	0	0	0	0.7

TDC Traffic Comments: Signalized intersection, no ped. signals. Video VCU camera was located within SE intersection quadrant. Traffic study was conducted for Ypsilanti Traffic Impact Study for ROWE Professional Services Company.

Traffic Data Collection, LLC

www:tdccounts.com

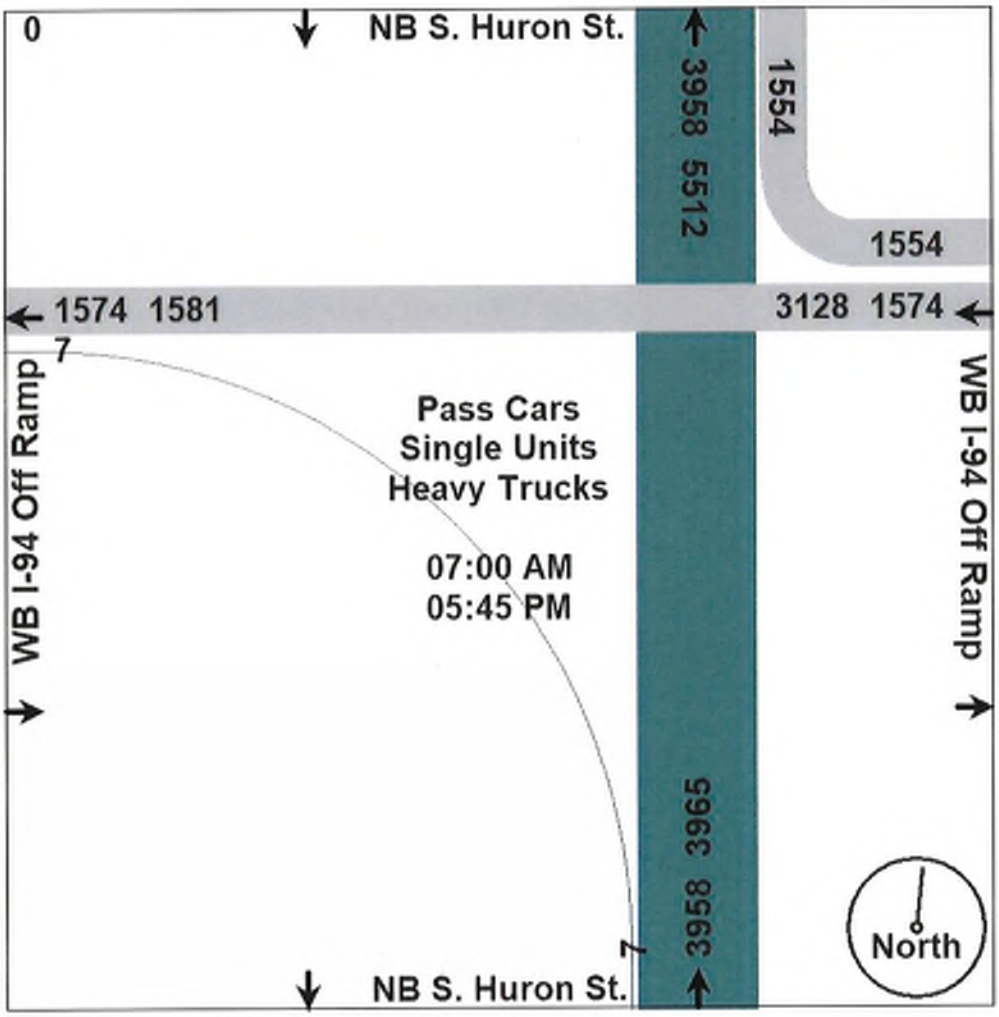
Phone: 586.786-5407

Traffic Study Performed For:

ROWE Professional Services Company

Project: Ypsilanti Traffic Impact Study
Study:4 Hr. Video Turning Movement Count
Weather:Sunny/Cldy PM Dry Deg 50s
Count By Miovision Video VCU 34N SE

File Name : TMC_2 Huron & WB I-94 Off Ramp
Site Code : TMC_2
Start Date : 4/24/2019
Page No : 2



Traffic Data Collection, LLC

www:tdccounts.com

Phone: 586.786-5407

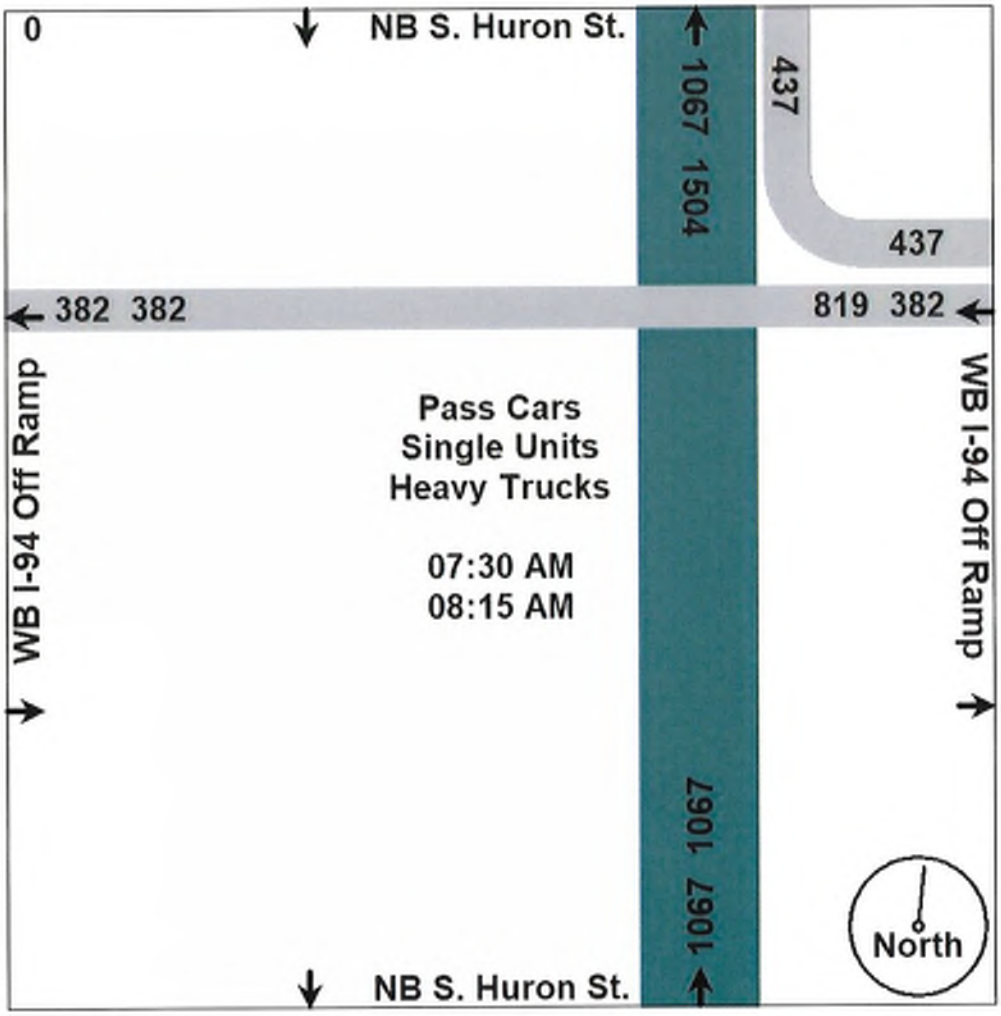
Traffic Study Performed For:

ROWE Professional Services Company

Project: Ypsilanti Traffic Impact Study
Study:4 Hr. Video Turning Movement Count
Weather:Sunny/Cldy PM Dry Deg 50s
Count By Miovision Video VCU 34N SE

File Name : TMC_2 Huron & WB I-94 Off Ramp
Site Code : TMC_2
Start Date : 4/24/2019
Page No : 3

	NB S. Huron St. Southbound				WB I-94 Off Ramp Westbound				NB S. Huron St. Northbound				WB I-94 Off Ramp Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	113	89	0	202	0	252	0	252	0	0	0	0	454
07:45 AM	0	0	0	0	107	**128**	0	**235**	0	**282**	0	**282**	0	0	0	0	**517**
08:00 AM	0	0	0	0	101	83	0	184	0	280	0	280	0	0	0	0	464
08:15 AM	0	0	0	0	**116**	82	0	198	0	253	0	253	0	0	0	0	451
Total Volume	0	0	0	0	437	382	0	819	0	1067	0	1067	0	0	0	0	1886
% App. Total	0	0	0		53.4	46.6	0		0	100	0		0	0	0		
PHF	.000	.000	.000	.000	.942	.746	.000	.871	.000	.946	.000	.946	.000	.000	.000	.000	.912
Pass Cars	0	0	0	0	429	373	0	802	0	1038	0	1038	0	0	0	0	1840
% Pass Cars	0	0	0	0	98.2	97.6	0	97.9	0	97.3	0	97.3	0	0	0	0	97.6
Single Units	0	0	0	0	6	6	0	12	0	15	0	15	0	0	0	0	27
% Single Units	0	0	0	0	1.4	1.6	0	1.5	0	1.4	0	1.4	0	0	0	0	1.4
Heavy Trucks	0	0	0	0	2	3	0	5	0	14	0	14	0	0	0	0	19
% Heavy Trucks	0	0	0	0	0.5	0.8	0	0.6	0	1.3	0	1.3	0	0	0	0	1.0



Traffic Data Collection, LLC

www:tdccounts.com

Phone: 586.786-5407

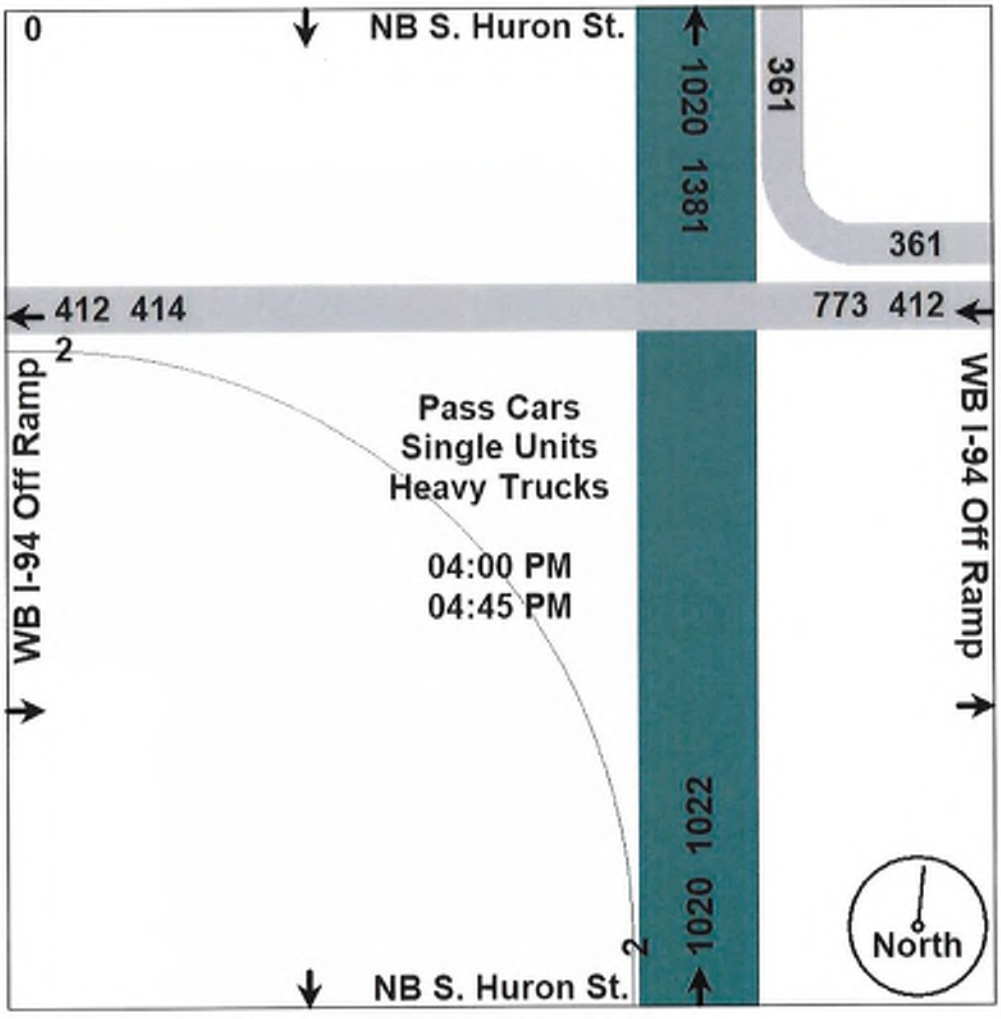
Traffic Study Performed For:

ROWE Professional Services Company

Project: Ypsilanti Traffic Impact Study
Study:4 Hr. Video Turning Movement Count
Weather:Sunny/Cldy PM Dry Deg 50s
Count By Miovision Video VCU 34N SE

File Name : TMC_2 Huron & WB I-94 Off Ramp
Site Code : TMC_2
Start Date : 4/24/2019
Page No : 4

	NB S. Huron St. Southbound				WB I-94 Off Ramp Westbound				NB S. Huron St. Northbound				WB I-94 Off Ramp Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	81	97	0	178	0	**282**	**1**	**283**	0	0	0	0	**461**
04:15 PM	0	0	0	0	80	100	0	180	0	233	1	234	0	0	0	0	414
04:30 PM	0	0	0	0	**109**	99	0	**208**	0	252	0	252	0	0	0	0	460
04:45 PM	0	0	0	0	91	**116**	0	207	0	253	0	253	0	0	0	0	460
Total Volume	0	0	0	0	361	412	0	773	0	1020	2	1022	0	0	0	0	1795
% App. Total	0	0	0		46.7	53.3	0		0	99.8	0.2		0	0	0		
PHF	.000	.000	.000	.000	.828	.888	.000	.929	.000	.904	.500	.903	.000	.000	.000	.000	.973
Pass Cars	0	0	0	0	357	404	0	761	0	1007	2	1009	0	0	0	0	1770
% Pass Cars	0	0	0	0	98.9	98.1	0	98.4	0	98.7	100	98.7	0	0	0	0	98.6
Single Units	0	0	0	0	3	4	0	7	0	10	0	10	0	0	0	0	17
% Single Units	0	0	0	0	0.8	1.0	0	0.9	0	1.0	0	1.0	0	0	0	0	0.9
Heavy Trucks	0	0	0	0	1	4	0	5	0	3	0	3	0	0	0	0	8
% Heavy Trucks	0	0	0	0	0.3	1.0	0	0.6	0	0.3	0	0.3	0	0	0	0	0.4



Traffic Data Collection, LLC

www:tdccounts.com

Phone: 586.786-5407

Traffic Study Performed For:

ROWE Professional Services Company

Project: Ypsilanti Traffic Impact Study
Study:4 Hr. Video Turning Movement Count
Weather:Sunny/Cldy PM Dry Deg 50s
Count By Miovision Video VCU 34N SE

File Name : TMC_2 Huron & WB I-94 Off Ramp
Site Code : TMC_2
Start Date : 4/24/2019
Page No : 5

Aerial Photo

Traffic Data Collection, LLC

www:tdccounts.com

Phone: 586.786-5407

Traffic Study Performed For:

ROWE Professional Services Company

Project: Ypsilanti Traffic Impact Study
Study:4 Hr. Video Turning Movement Count
Weather:Sunny/Cldy PM Dry Deg 50s
Count By Miovision Video VCU 3FX NW

File Name : TMC_3 Huron & EB I-94 Ramps
Site Code : TMC_3
Start Date : 4/24/2019
Page No : 1

4 Hour video traffic study was conducted during typical weekdays, from 7:00 AM - 9:00 AM (Thursday) morning & 4:00 PM - 6:00 PM (Wednesday) afternoon peak hours, while school was in session.

Groups Printed- Pass Cars - Single Units - Heavy Trucks

	S. Huron St. Southbound					EB I-94 On Ramp Westbound					S. Huron St. Northbound					EB I-94 Off Ramp Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	0	148	0	0	148	0	0	0	0	0	104	309	0	0	413	39	0	47	0	86	647
07:15 AM	0	190	0	0	190	0	0	0	0	0	100	320	0	0	420	70	0	59	0	129	739
07:30 AM	0	212	0	0	212	0	0	0	0	0	135	332	0	0	467	77	0	67	0	144	823
07:45 AM	0	252	0	0	252	0	0	0	0	0	125	305	0	0	430	99	0	87	0	186	868
Total	0	802	0	0	802	0	0	0	0	0	464	1266	0	0	1730	285	0	260	0	545	3077
08:00 AM	0	166	0	0	166	0	0	0	0	0	113	307	0	0	420	85	0	75	0	160	746
08:15 AM	0	172	0	0	172	0	0	0	0	0	85	274	0	0	359	94	0	86	0	180	711
08:30 AM	0	183	0	0	183	0	0	0	0	0	88	305	0	0	393	72	0	89	0	161	737
08:45 AM	0	173	0	0	173	0	0	0	0	0	76	284	0	0	360	55	0	102	0	157	690
Total	0	694	0	0	694	0	0	0	0	0	362	1170	0	0	1532	306	0	352	0	658	2884
*** BREAK ***																					
04:00 PM	0	321	0	0	321	0	0	0	0	0	128	256	0	0	384	153	0	113	0	266	971
04:15 PM	0	298	0	0	298	0	0	0	0	0	94	226	0	0	320	153	0	98	0	251	869
04:30 PM	0	287	0	0	287	0	0	0	0	0	96	237	0	0	333	178	0	108	0	286	906
04:45 PM	0	354	0	0	354	0	0	0	0	0	85	248	0	0	333	167	0	94	0	261	948
Total	0	1260	0	0	1260	0	0	0	0	0	403	967	0	0	1370	651	0	413	0	1064	3694
05:00 PM	0	304	0	0	304	0	0	0	0	0	103	258	0	0	361	155	0	63	0	218	883
05:15 PM	0	360	0	0	360	0	0	0	0	0	103	251	0	0	354	173	0	106	0	279	993
05:30 PM	0	271	0	0	271	0	0	0	0	0	91	235	0	0	326	190	0	104	0	294	891
05:45 PM	0	292	0	0	292	0	0	0	0	0	65	224	0	0	289	177	0	103	0	280	861
Total	0	1227	0	0	1227	0	0	0	0	0	362	968	0	0	1330	695	0	376	0	1071	3628
Grand Total	0	3983	0	0	3983	0	0	0	0	0	1591	4371	0	0	5962	1937	0	1401	0	3338	13283
Apprch %	0	100	0	0		0	0	0	0		26.7	73.3	0	0		58	0	42	0		
Total %	0	30	0	0	30	0	0	0	0	0	12	32.9	0	0	44.9	14.6	0	10.5	0	25.1	
Pass Cars	0	3916	0	0	3916	0	0	0	0	0	1563	4303	0	0	5866	1905	0	1361	0	3266	13048
% Pass Cars	0	98.3	0	0	98.3	0	0	0	0	0	98.2	98.4	0	0	98.4	98.3	0	97.1	0	97.8	98.2
Single Units	0	40	0	0	40	0	0	0	0	0	18	56	0	0	74	12	0	21	0	33	147
% Single Units	0	1	0	0	1	0	0	0	0	0	1.1	1.3	0	0	1.2	0.6	0	1.5	0	1	1.1
Heavy Trucks	0	27	0	0	27	0	0	0	0	0	10	12	0	0	22	20	0	19	0	39	88
% Heavy Trucks	0	0.7	0	0	0.7	0	0	0	0	0	0.6	0.3	0	0	0.4	1	0	1.4	0	1.2	0.7

TDC Traffic Comments: Signalized intersection no ped. signals. Video VCU camera was located within NW intersection quadrant. Traffic study was conducted for Ypsilanti Traffic Impact Study for ROWE Professional Services Company.

Traffic Data Collection, LLC

www:tdccounts.com

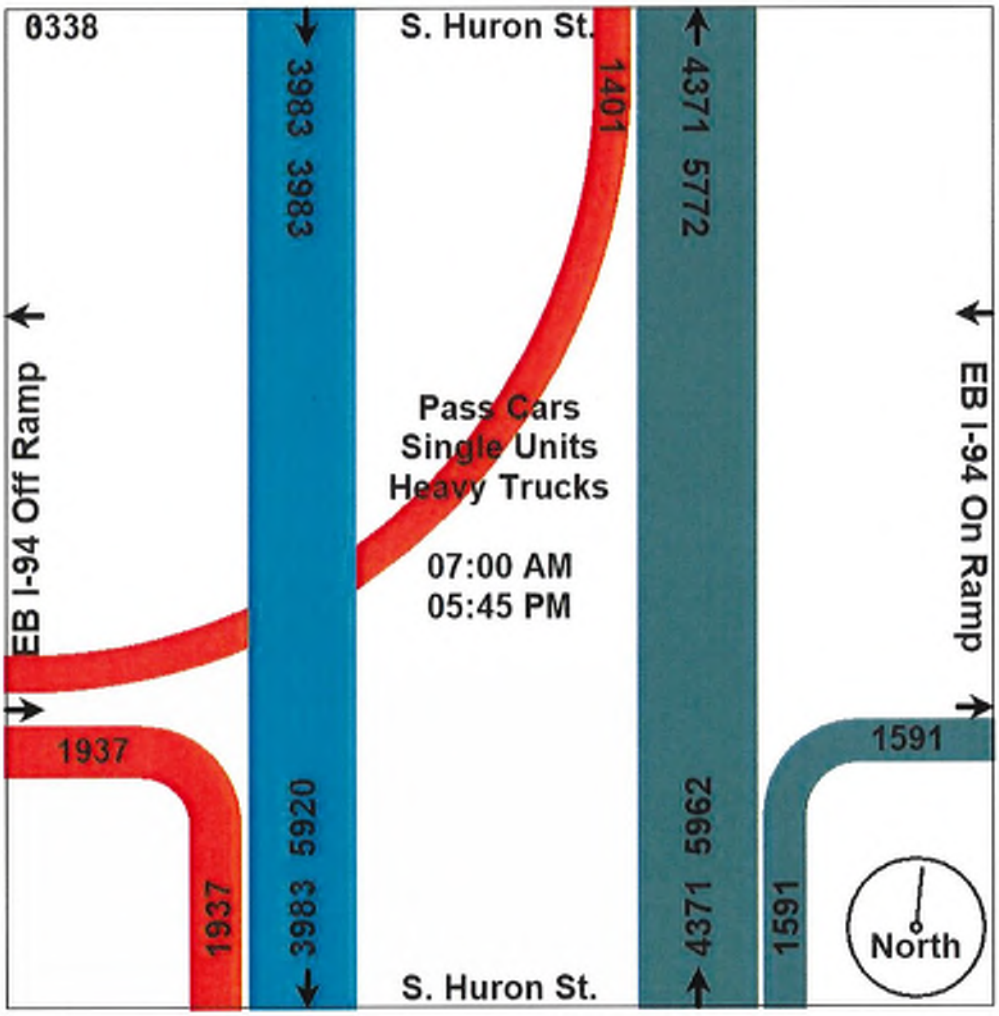
Phone: 586.786-5407

Traffic Study Performed For:

ROWE Professional Services Company

Project: Ypsilanti Traffic Impact Study
Study:4 Hr. Video Turning Movement Count
Weather:Sunny/Cldy PM Dry Deg 50s
Count By Miovision Video VCU 3FX NW

File Name : TMC_3 Huron & EB I-94 Ramps
Site Code : TMC_3
Start Date : 4/24/2019
Page No : 2



Traffic Data Collection, LLC

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Phone: 586.786-5407

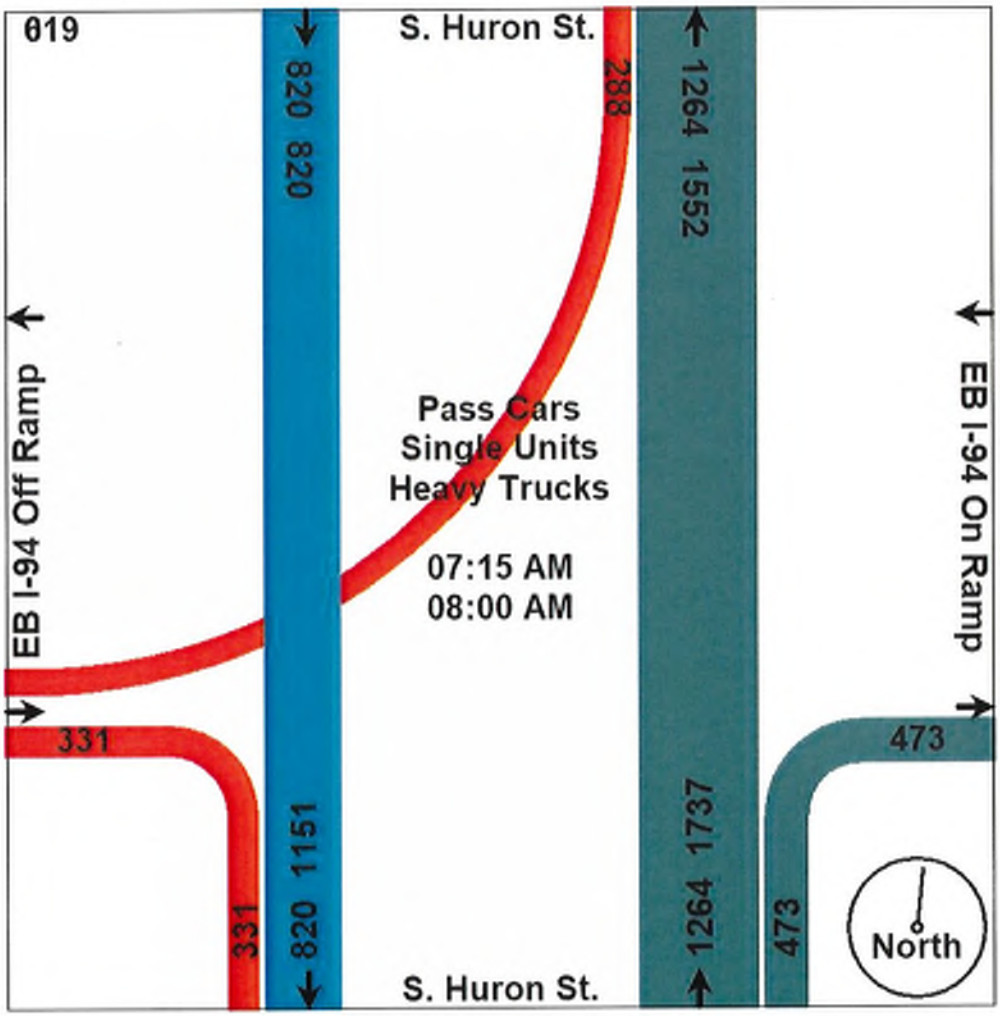
Traffic Study Performed For:

ROWE Professional Services Company

Project: Ypsilanti Traffic Impact Study
Study:4 Hr. Video Turning Movement Count
Weather:Sunny/Cldy PM Dry Deg 50s
Count By Miovision Video VCU 3FX NW

File Name : TMC_3 Huron & EB I-94 Ramps
Site Code : TMC_3
Start Date : 4/24/2019
Page No : 3

	S. Huron St. Southbound				EB I-94 On Ramp Westbound				S. Huron St. Northbound				EB I-94 Off Ramp Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	190	0	190	0	0	0	0	100	320	0	420	70	0	59	129	739
07:30 AM	0	212	0	212	0	0	0	0	**135**	**332**	0	**467**	77	0	67	144	823
07:45 AM	0	**252**	0	**252**	0	0	0	0	125	305	0	430	**99**	0	**87**	**186**	**868**
08:00 AM	0	166	0	166	0	0	0	0	113	307	0	420	85	0	75	160	746
Total Volume	0	820	0	820	0	0	0	0	473	1264	0	1737	331	0	288	619	3176
% App. Total	0	100	0		0	0	0		27.2	72.8	0		53.5	0	46.5		
PHF	.000	.813	.000	.813	.000	.000	.000	.000	.876	.952	.000	.930	.836	.000	.828	.832	.915
Pass Cars	0	801	0	801	0	0	0	0	463	1233	0	1696	320	0	272	592	3089
% Pass Cars	0	97.7	0	97.7	0	0	0	0	97.9	97.5	0	97.6	96.7	0	94.4	95.6	97.3
Single Units	0	13	0	13	0	0	0	0	8	27	0	35	4	0	5	9	57
% Single Units	0	1.6	0	1.6	0	0	0	0	1.7	2.1	0	2.0	1.2	0	1.7	1.5	1.8
Heavy Trucks	0	6	0	6	0	0	0	0	2	4	0	6	7	0	11	18	30
% Heavy Trucks	0	0.7	0	0.7	0	0	0	0	0.4	0.3	0	0.3	2.1	0	3.8	2.9	0.9



Traffic Data Collection, LLC

www:tdccounts.com

Phone: 586.786-5407

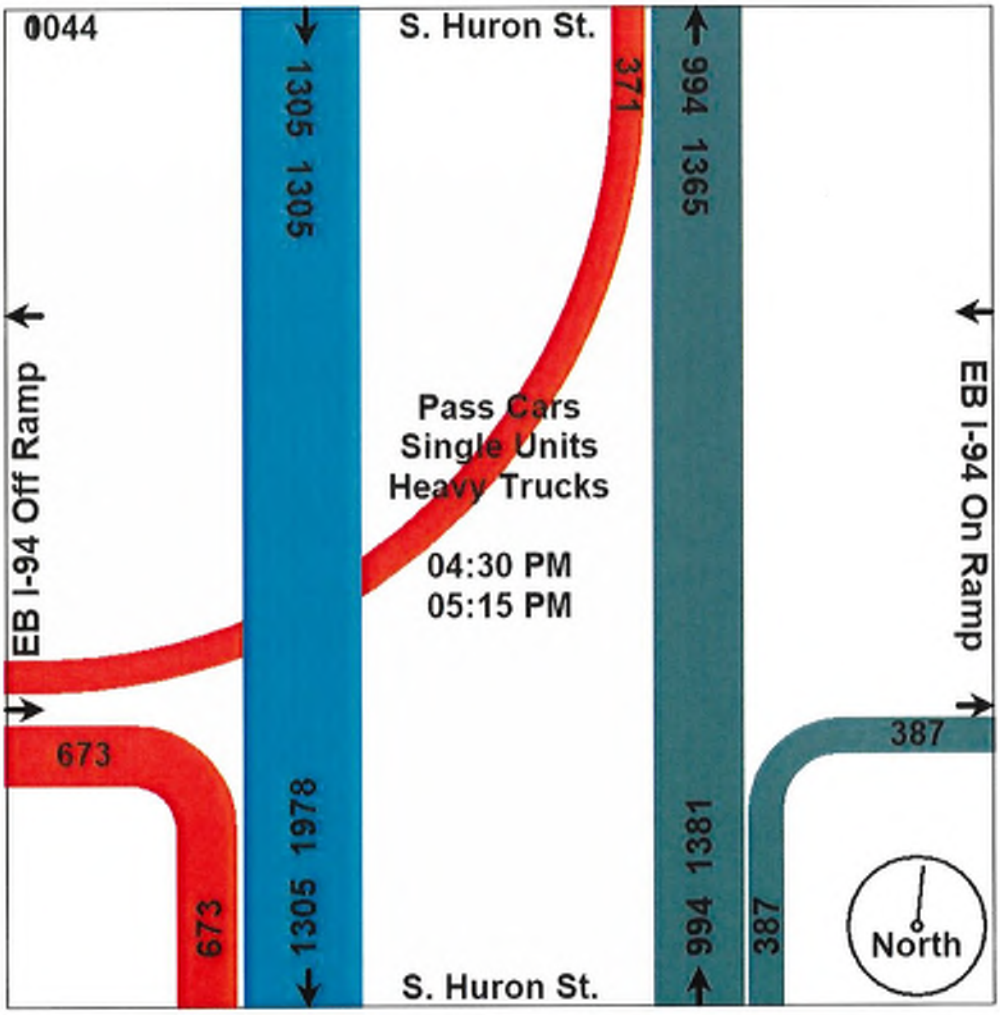
Traffic Study Performed For:

ROWE Professional Services Company

Project: Ypsilanti Traffic Impact Study
Study:4 Hr. Video Turning Movement Count
Weather:Sunny/Cldy PM Dry Deg 50s
Count By Miovision Video VCU 3FX NW

File Name : TMC_3 Huron & EB I-94 Ramps
Site Code : TMC_3
Start Date : 4/24/2019
Page No : 4

	S. Huron St. Southbound				EB I-94 On Ramp Westbound				S. Huron St. Northbound				EB I-94 Off Ramp Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	287	0	287	0	0	0	0	96	237	0	333	**178**	0	**108**	**286**	906
04:45 PM	0	354	0	354	0	0	0	0	85	248	0	333	167	0	94	261	948
05:00 PM	0	304	0	304	0	0	0	0	**103**	**258**	0	**361**	155	0	63	218	883
05:15 PM	0	**360**	0	**360**	0	0	0	0	103	251	0	354	173	0	106	279	**993**
Total Volume	0	1305	0	1305	0	0	0	0	387	994	0	1381	673	0	371	1044	3730
% App. Total	0	100	0		0	0	0		28	72	0		64.5	0	35.5		
PHF	.000	.906	.000	.906	.000	.000	.000	.000	.939	.963	.000	.956	.945	.000	.859	.913	.939
Pass Cars	0	1286	0	1286	0	0	0	0	380	987	0	1367	668	0	368	1036	3689
% Pass Cars	0	98.5	0	98.5	0	0	0	0	98.2	99.3	0	99.0	99.3	0	99.2	99.2	98.9
Single Units	0	12	0	12	0	0	0	0	4	3	0	7	1	0	0	1	20
% Single Units	0	0.9	0	0.9	0	0	0	0	1.0	0.3	0	0.5	0.1	0	0	0.1	0.5
Heavy Trucks	0	7	0	7	0	0	0	0	3	4	0	7	4	0	3	7	21
% Heavy Trucks	0	0.5	0	0.5	0	0	0	0	0.8	0.4	0	0.5	0.6	0	0.8	0.7	0.6



Traffic Data Collection, LLC

www:tdccounts.com
Phone: 586.786-5407

Traffic Study Performed For:

ROWE Professional Services Company

Project: Ypsilanti Traffic Impact Study
Study:4 Hr. Video Turning Movement Count
Weather:Sunny/Cldy PM Dry Deg 50s
Count By Miovision Video VCU 3FX NW

File Name : TMC_3 Huron & EB I-94 Ramps
Site Code : TMC_3
Start Date : 4/24/2019
Page No : 5

Aerial Photo

Traffic Data Collection, LLC

www:tdccounts.com

Phone: 586.786-5407

Traffic Study Performed For:

ROWE Professional Services Company

Project: Ypsilanti Traffic Impact Study
Study:4 Hr. Video Turning Movement Count
Weather:Sunny/Cldy PM Dry Deg 50s
Count By Miovision Video VCU 8EU SE

File Name : TMC_4 Huron & JamesLHart
Site Code : TMC_4
Start Date : 4/24/2019
Page No : 1

4 Hour video traffic study was conducted during typical weekdays, from 7:00 AM - 9:00 AM (Thursday) morning & 4:00 PM - 6:00 PM (Wednesday) afternoon peak hours, while school was in session.

Groups Printed- Pass Cars - Single Units - Heavy Trucks - Peds

	Huron St. Southbound					James L. Hart Pkwy Westbound					Huron St. Northbound					James L. Hart Pkwy Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	47	129	5	1	182	4	1	5	0	10	2	346	12	0	360	11	2	73	0	86	638
07:15 AM	58	188	7	1	254	4	0	0	0	4	2	342	23	0	367	11	4	70	0	85	710
07:30 AM	55	214	8	0	277	12	1	1	0	14	3	372	22	0	397	14	3	78	0	95	783
07:45 AM	80	238	12	5	335	9	3	3	0	15	3	351	23	0	377	12	2	66	6	86	813
Total	240	769	32	7	1048	29	5	9	0	43	10	1411	80	0	1501	48	11	287	6	352	2944
08:00 AM	57	189	6	1	253	9	0	3	0	12	4	353	28	0	385	15	2	68	0	85	735
08:15 AM	62	185	12	0	259	3	0	3	0	6	1	288	19	0	308	12	0	78	0	90	663
08:30 AM	55	192	5	2	254	9	1	3	0	13	0	297	9	0	306	17	0	61	0	78	651
08:45 AM	62	160	6	0	228	8	0	0	0	8	2	287	17	0	306	9	2	57	0	68	610
Total	236	726	29	3	994	29	1	9	0	39	7	1225	73	0	1305	53	4	264	0	321	2659
*** BREAK ***																					
04:00 PM	71	401	10	2	484	10	1	0	0	11	5	273	19	0	297	21	3	91	1	116	908
04:15 PM	49	387	9	0	445	12	0	1	0	13	4	212	19	0	235	30	1	81	0	112	805
04:30 PM	66	366	7	1	440	8	0	4	0	12	2	273	18	0	293	22	0	64	0	86	831
04:45 PM	81	415	10	0	506	5	1	1	0	7	5	242	14	0	261	27	0	62	0	89	863
Total	267	1569	36	3	1875	35	2	6	0	43	16	1000	70	0	1086	100	4	298	1	403	3407
05:00 PM	56	381	9	0	446	16	2	4	0	22	1	262	20	0	283	26	1	85	1	113	864
05:15 PM	68	454	7	0	529	11	3	2	0	16	2	252	13	1	268	23	3	78	0	104	917
05:30 PM	72	376	12	0	460	11	2	4	0	17	2	242	11	0	255	18	6	67	0	91	823
05:45 PM	60	379	13	0	452	8	0	2	0	10	2	216	14	0	232	39	0	62	0	101	795
Total	256	1590	41	0	1887	46	7	12	0	65	7	972	58	1	1038	106	10	292	1	409	3399
Grand Total	999	4654	138	13	5804	139	15	36	0	190	40	4608	281	1	4930	307	29	1141	8	1485	12409
Apprch %	17.2	80.2	2.4	0.2		73.2	7.9	18.9	0		0.8	93.5	5.7	0		20.7	2	76.8	0.5		
Total %	8.1	37.5	1.1	0.1	46.8	1.1	0.1	0.3	0	1.5	0.3	37.1	2.3	0	39.7	2.5	0.2	9.2	0.1	12	
Pass Cars	987	4574	133	0	5694	134	15	34	0	183	38	4549	280	0	4867	304	28	1103	0	1435	12179
% Pass Cars	98.8	98.3	96.4	0	98.1	96.4	100	94.4	0	96.3	95	98.7	99.6	0	98.7	99	96.6	96.7	0	96.6	98.1
Single Units	7	47	2	0	56	3	0	1	0	4	2	46	1	0	49	3	1	26	0	30	139
% Single Units	0.7	1	1.4	0	1	2.2	0	2.8	0	2.1	5	1	0.4	0	1	1	3.4	2.3	0	2	1.1
Heavy Trucks	5	33	3	0	41	2	0	1	0	3	0	13	0	0	13	0	0	12	0	12	69
% Heavy Trucks	0.5	0.7	2.2	0	0.7	1.4	0	2.8	0	1.6	0	0.3	0	0	0.3	0	0	1.1	0	0.8	0.6
Peds	0	0	0	13	13	0	0	0	0	0	0	0	0	1	1	0	0	0	8	8	22
% Peds	0	0	0	100	0.2	0	0	0	0	0	0	0	0	100	0	0	0	0	100	0.5	0.2

TDC Traffic Comments: Signalized intersection with push button ped. signals for west & north legs. Video VCU camera was located within SE intersection quadrant. Note: Peds. are excluded from peak hour reports. Traffic study was conducted for Ypsilanti Traffic Impact Study for ROWE Professional Services Company.

Traffic Data Collection, LLC

www:tdccounts.com

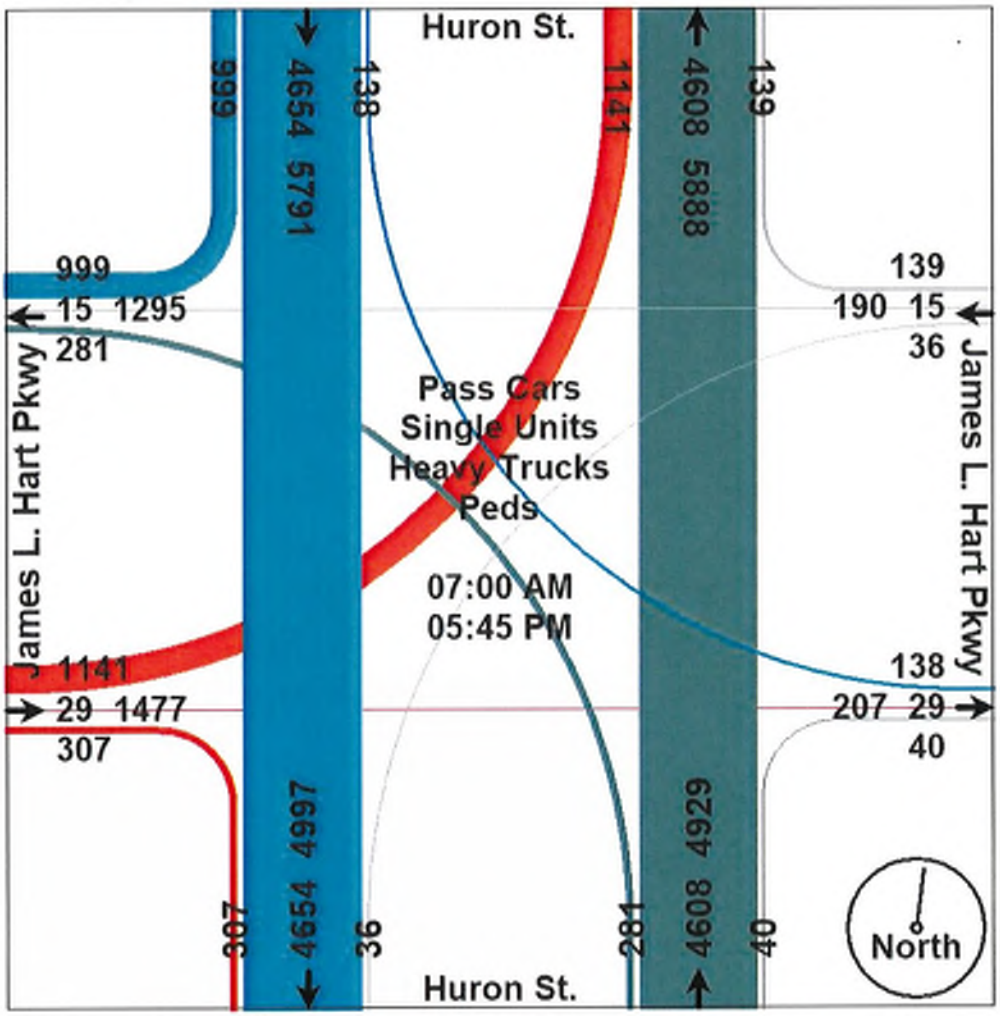
Phone: 586.786-5407

Traffic Study Performed For:

ROWE Professional Services Company

Project: Ypsilanti Traffic Impact Study
Study:4 Hr. Video Turning Movement Count
Weather:Sunny/Cldy PM Dry Deg 50s
Count By Miovision Video VCU 8EU SE

File Name : TMC_4 Huron & JamesLHart
Site Code : TMC_4
Start Date : 4/24/2019
Page No : 2



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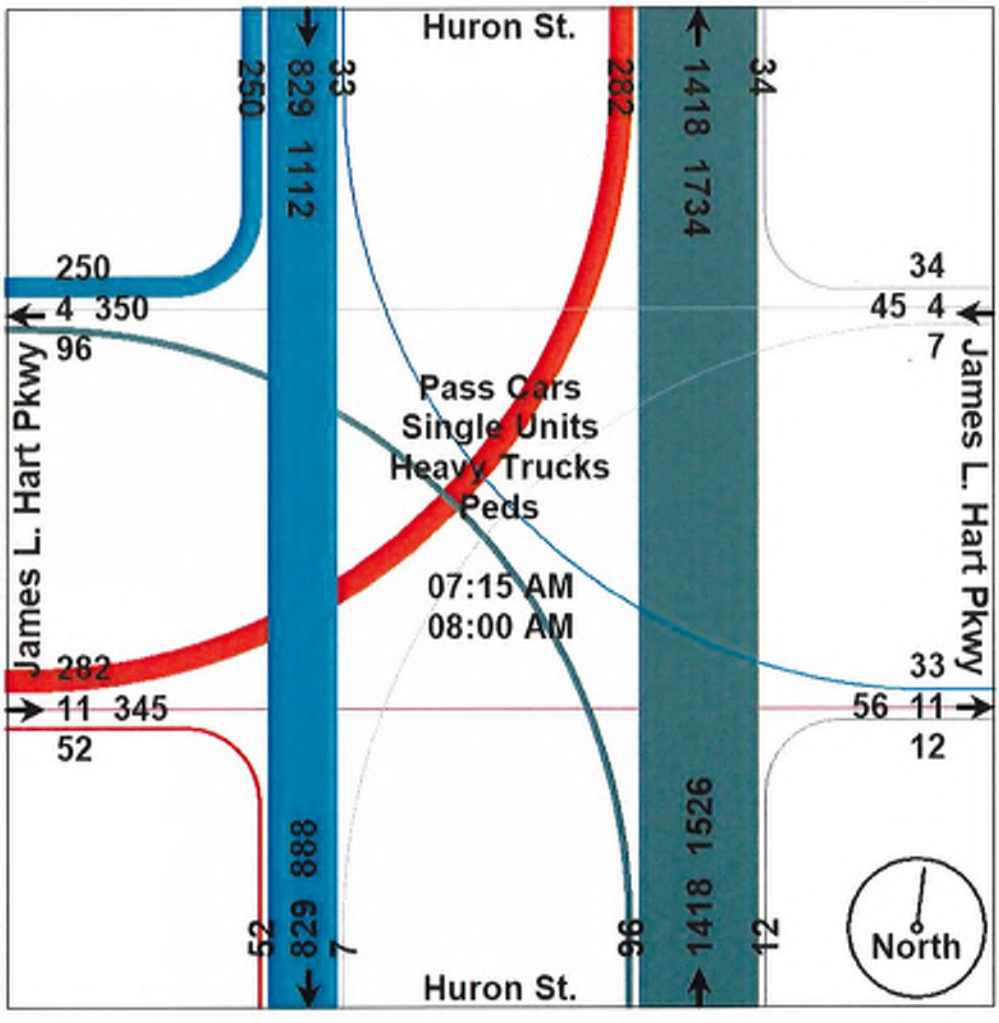
File Name : TMC_4 Huron & JamesLHart
Site Code : TMC_4
Start Date : 4/24/2019
Page No : 3

	Huron St. Southbound				James L. Hart Pkwy Westbound				Huron St. Northbound				James L. Hart Pkwy Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	58	188	7	253	4	0	0	4	2	342	23	367	11	4	70	85	709
07:30 AM	55	214	8	277	12	1	1	14	3	372	22	397	14	3	78	95	783
07:45 AM	80	238	12	330	9	3	3	15	3	351	23	377	12	2	66	80	802
08:00 AM	57	189	6	252	9	0	3	12	4	353	28	385	15	2	68	85	734
Total Volume	250	829	33	1112	34	4	7	45	12	1418	96	1526	52	11	282	345	3028
% App. Total	22.5	74.6	3		75.6	8.9	15.6		0.8	92.9	6.3		15.1	3.2	81.7		
PHF	.781	.871	.688	.842	.708	.333	.583	.750	.750	.953	.857	.961	.867	.688	.904	.908	.944
Pass Cars	245	807	29	1081	31	4	6	41	10	1401	96	1507	52	10	260	322	2951
% Pass Cars	98.0	97.3	87.9	97.2	91.2	100	85.7	91.1	83.3	98.8	100	98.8	100	90.9	92.2	93.3	97.5
Single Units	3	11	1	15	2	0	1	3	2	14	0	16	0	1	15	16	50
% Single Units	1.2	1.3	3.0	1.3	5.9	0	14.3	6.7	16.7	1.0	0	1.0	0	9.1	5.3	4.6	1.7
Heavy Trucks	2	11	3	16	1	0	0	1	0	3	0	3	0	0	7	7	27
% Heavy Trucks	0.8	1.3	9.1	1.4	2.9	0	0	2.2	0	0.2	0	0.2	0	0	2.5	2.0	0.9
Peds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Peds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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Phone: 586.786-5407

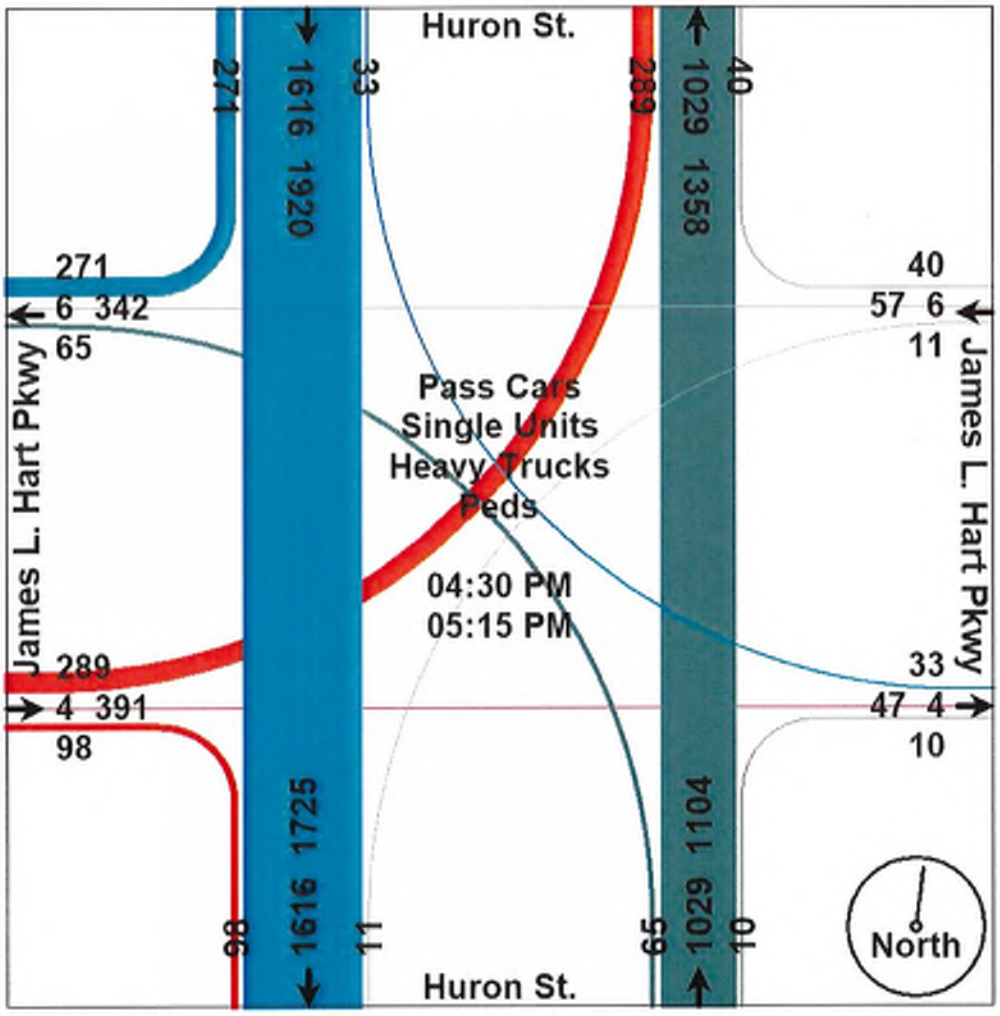
Traffic Study Performed For:

ROWE Professional Services Company

Project: Ypsilanti Traffic Impact Study
Study:4 Hr. Video Turning Movement Count
Weather:Sunny/Cldy PM Dry Deg 50s
Count By Miovision Video VCU 8EU SE

File Name : TMC_4 Huron & JamesLHart
Site Code : TMC_4
Start Date : 4/24/2019
Page No : 4

	Huron St. Southbound				James L. Hart Pkwy Westbound				Huron St. Northbound				James L. Hart Pkwy Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	66	366	7	439	8	0	**4**	12	2	**273**	18	**293**	22	0	64	86	830
04:45 PM	**81**	415	**10**	506	5	1	1	7	**5**	242	14	261	**27**	0	62	89	863
05:00 PM	56	381	9	446	**16**	2	4	**22**	1	262	**20**	283	26	1	**85**	**112**	863
05:15 PM	68	**454**	7	**529**	11	**3**	2	16	2	252	13	267	23	**3**	78	104	**916**
Total Volume	271	1616	33	1920	40	6	11	57	10	1029	65	1104	98	4	289	391	3472
% App. Total	14.1	84.2	1.7		70.2	10.5	19.3		0.9	93.2	5.9		25.1	1	73.9		
PHF	.836	.890	.825	.907	.625	.500	.688	.648	.500	.942	.813	.942	.907	.333	.850	.873	.948
Pass Cars	269	1595	32	1896	39	6	11	56	10	1016	65	1091	97	4	287	388	3431
% Pass Cars	99.3	98.7	97.0	98.8	97.5	100	100	98.2	100	98.7	100	98.8	99.0	100	99.3	99.2	98.8
Single Units	2	11	1	14	1	0	0	1	0	6	0	6	1	0	1	2	23
% Single Units	0.7	0.7	3.0	0.7	2.5	0	0	1.8	0	0.6	0	0.5	1.0	0	0.3	0.5	0.7
Heavy Trucks	0	10	0	10	0	0	0	0	0	7	0	7	0	0	1	1	18
% Heavy Trucks	0	0.6	0	0.5	0	0	0	0	0	0.7	0	0.6	0	0	0.3	0.3	0.5
Peds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Peds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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Traffic Study Performed For:

ROWE Professional Services Company

Project: Ypsilanti Traffic Impact Study
Study:4 Hr. Video Turning Movement Count
Weather:Sunny/Cldy PM Dry Deg 50s
Count By Miovision Video VCU 8EU SE

File Name : TMC_4 Huron & JamesLHart
Site Code : TMC_4
Start Date : 4/24/2019
Page No : 5

Aerial Photo

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Traffic Study Performed For:

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Project: Ypsilanti Traffic Impact Study
Study:4 Hr. Video Turning Movement Count
Weather:Sunny/Cldy PM Dry Deg 50s
Count By Miovision Video VCU 3EP SE

File Name : TMC_5 Huron & Joe Hall
Site Code : TMC_5
Start Date : 4/24/2019
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4 Hour video traffic study was conducted during typical weekdays, from 7:00 AM - 9:00 AM (Thursday) morning & 4:00 PM - 6:00 PM (Wednesday) afternoon peak hours, while school was in session.

Groups Printed- Pass Cars - Single Units - Heavy Trucks - Peds

	Huron St. Southbound					Joe Hall Drive Westbound					Huron St. Northbound					Joe Hall Drive Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
07:00 AM	8	135	1	0	144	0	0	0	0	0	0	357	39	0	396	15	0	5	0	20	560
07:15 AM	15	190	0	0	205	0	0	0	0	0	0	369	52	0	421	18	0	6	0	24	650
07:30 AM	14	216	0	0	230	0	0	0	0	0	1	399	36	0	436	25	0	6	0	31	697
07:45 AM	20	234	4	0	258	0	0	0	0	0	2	384	56	0	442	15	0	4	0	19	719
Total	57	775	5	0	837	0	0	0	0	0	3	1509	183	0	1695	73	0	21	0	94	2626
08:00 AM	12	203	7	0	222	0	0	1	0	1	0	370	48	0	418	24	0	5	0	29	670
08:15 AM	18	180	2	0	200	0	0	0	0	0	0	295	42	0	337	17	0	2	0	19	556
08:30 AM	17	191	3	0	211	0	0	0	0	0	1	334	43	0	378	22	0	6	0	28	617
08:45 AM	16	156	2	0	174	0	0	0	0	0	0	290	38	0	328	25	0	5	0	30	532
Total	63	730	14	0	807	0	0	1	0	1	1	1289	171	0	1461	88	0	18	0	106	2375
*** BREAK ***																					
04:00 PM	13	400	0	0	413	3	0	0	0	3	0	298	22	0	320	46	0	8	0	54	790
04:15 PM	11	412	0	0	423	2	0	3	0	5	0	228	30	0	258	33	0	8	0	41	727
04:30 PM	14	384	0	0	398	7	0	0	0	7	0	272	38	0	310	38	0	6	0	44	759
04:45 PM	11	438	0	0	449	0	1	0	0	1	0	267	32	0	299	39	0	7	0	46	795
Total	49	1634	0	0	1683	12	1	3	0	16	0	1065	122	0	1187	156	0	29	0	185	3071
05:00 PM	13	386	0	0	399	2	0	1	0	3	0	268	27	0	295	48	0	3	0	51	748
05:15 PM	13	459	0	0	472	4	0	0	0	4	1	271	21	0	293	37	0	5	0	42	811
05:30 PM	5	391	0	0	396	4	0	2	0	6	0	237	23	0	260	41	0	8	0	49	711
05:45 PM	13	400	0	0	413	0	0	0	0	0	0	236	38	0	274	45	0	5	0	50	737
Total	44	1636	0	0	1680	10	0	3	0	13	1	1012	109	0	1122	171	0	21	0	192	3007
Grand Total	213	4775	19	0	5007	22	1	7	0	30	5	4875	585	0	5465	488	0	89	0	577	11079
Apprch %	4.3	95.4	0.4	0		73.3	3.3	23.3	0		0.1	89.2	10.7	0		84.6	0	15.4	0		
Total %	1.9	43.1	0.2	0	45.2	0.2	0	0.1	0	0.3	0	44	5.3	0	49.3	4.4	0	0.8	0	5.2	
Pass Cars	196	4698	19	0	4913	21	1	7	0	29	5	4821	577	0	5403	487	0	86	0	573	10918
% Pass Cars	92	98.4	100	0	98.1	95.5	100	100	0	96.7	100	98.9	98.6	0	98.9	99.8	0	96.6	0	99.3	98.5
Single Units	8	56	0	0	64	1	0	0	0	1	0	42	6	0	48	1	0	2	0	3	116
% Single Units	3.8	1.2	0	0	1.3	4.5	0	0	0	3.3	0	0.9	1	0	0.9	0.2	0	2.2	0	0.5	1
Heavy Trucks	9	21	0	0	30	0	0	0	0	0	0	12	2	0	14	0	0	1	0	1	45
% Heavy Trucks	4.2	0.4	0	0	0.6	0	0	0	0	0	0	0.2	0.3	0	0.3	0	0	1.1	0	0.2	0.4
Peds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Peds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TDC Traffic Comments: Non-signalized intersection. Video VCU camera was located within SE intersection quadrant. Note: Peds. are excluded from peak hour reports. Traffic study was conducted for Ypsilanti Traffic Impact Study for ROWE Professional Services Company.

Traffic Data Collection, LLC

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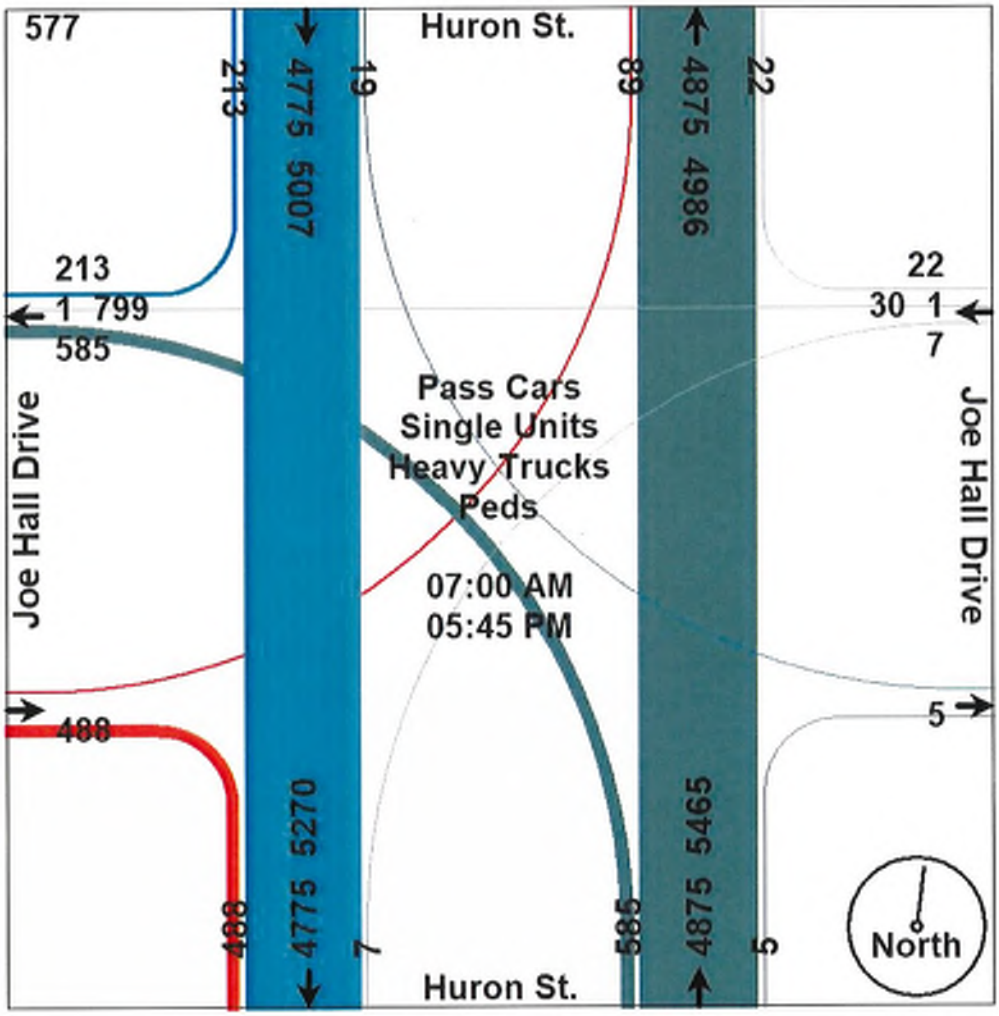
Phone: 586.786-5407

Traffic Study Performed For:

ROWE Professional Services Company

Project: Ypsilanti Traffic Impact Study
Study:4 Hr. Video Turning Movement Count
Weather:Sunny/Cldy PM Dry Deg 50s
Count By Miovision Video VCU 3EP SE

File Name : TMC_5 Huron & Joe Hall
Site Code : TMC_5
Start Date : 4/24/2019
Page No : 2



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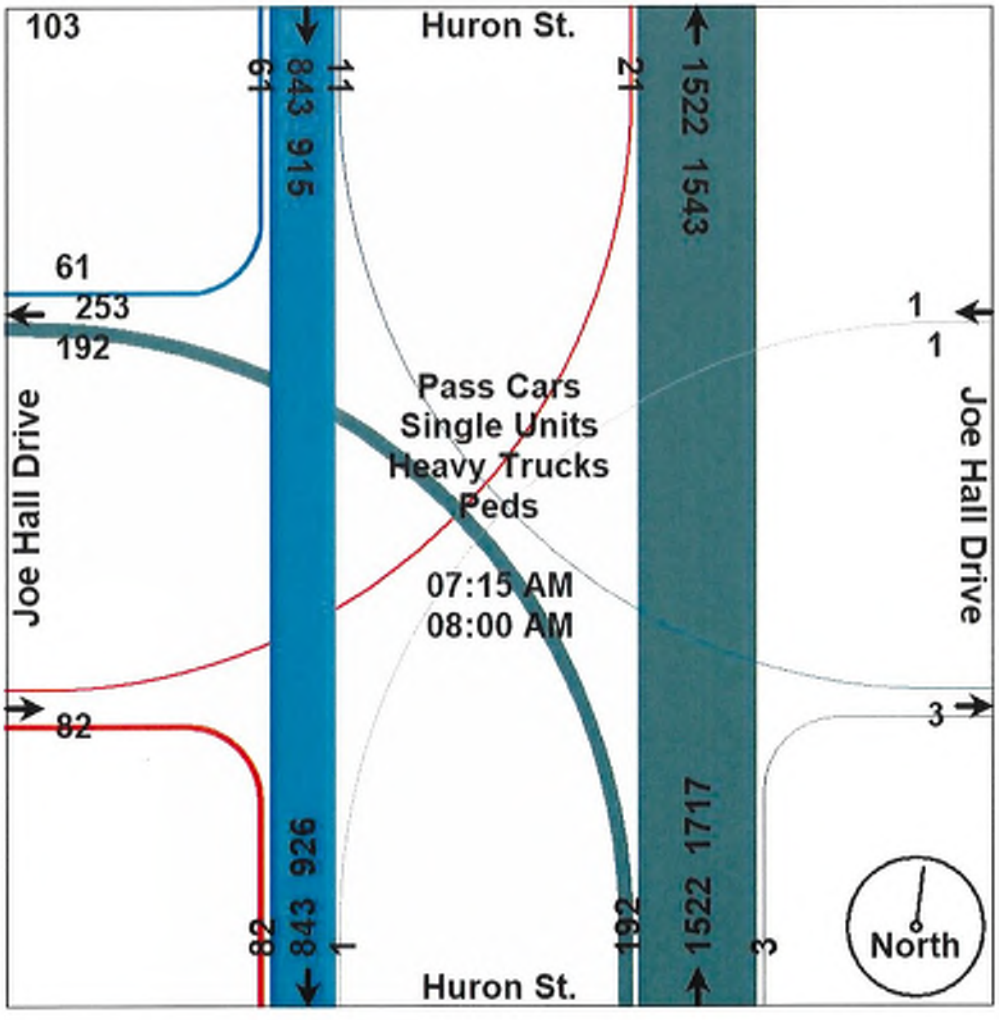
File Name : TMC_5 Huron & Joe Hall
Site Code : TMC_5
Start Date : 4/24/2019
Page No : 3

	Huron St. Southbound				Joe Hall Drive Westbound				Huron St. Northbound				Joe Hall Drive Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	15	190	0	205	0	0	0	0	0	369	52	421	18	0	**6**	24	650
07:30 AM	14	216	0	230	0	0	0	0	1	**399**	36	436	**25**	0	6	**31**	697
07:45 AM	**20**	**234**	4	**258**	0	0	0	0	**2**	384	**56**	**442**	15	0	4	19	**719**
08:00 AM	12	203	**7**	222	0	0	**1**	**1**	0	370	48	418	24	0	5	29	670
Total Volume	61	843	11	915	0	0	1	1	3	1522	192	1717	82	0	21	103	2736
% App. Total	6.7	92.1	1.2		0	0	100		0.2	88.6	11.2		79.6	0	20.4		
PHF	.763	.901	.393	.887	.000	.000	.250	.250	.375	.954	.857	.971	.820	.000	.875	.831	.951
Pass Cars	58	823	11	892	0	0	1	1	3	1506	186	1695	82	0	18	100	2688
% Pass Cars	95.1	97.6	100	97.5	0	0	100	100	100	98.9	96.9	98.7	100	0	85.7	97.1	98.2
Single Units	1	12	0	13	0	0	0	0	0	14	4	18	0	0	2	2	33
% Single Units	1.6	1.4	0	1.4	0	0	0	0	0	0.9	2.1	1.0	0	0	9.5	1.9	1.2
Heavy Trucks	2	8	0	10	0	0	0	0	0	2	2	4	0	0	1	1	15
% Heavy Trucks	3.3	0.9	0	1.1	0	0	0	0	0	0.1	1.0	0.2	0	0	4.8	1.0	0.5
Peds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Peds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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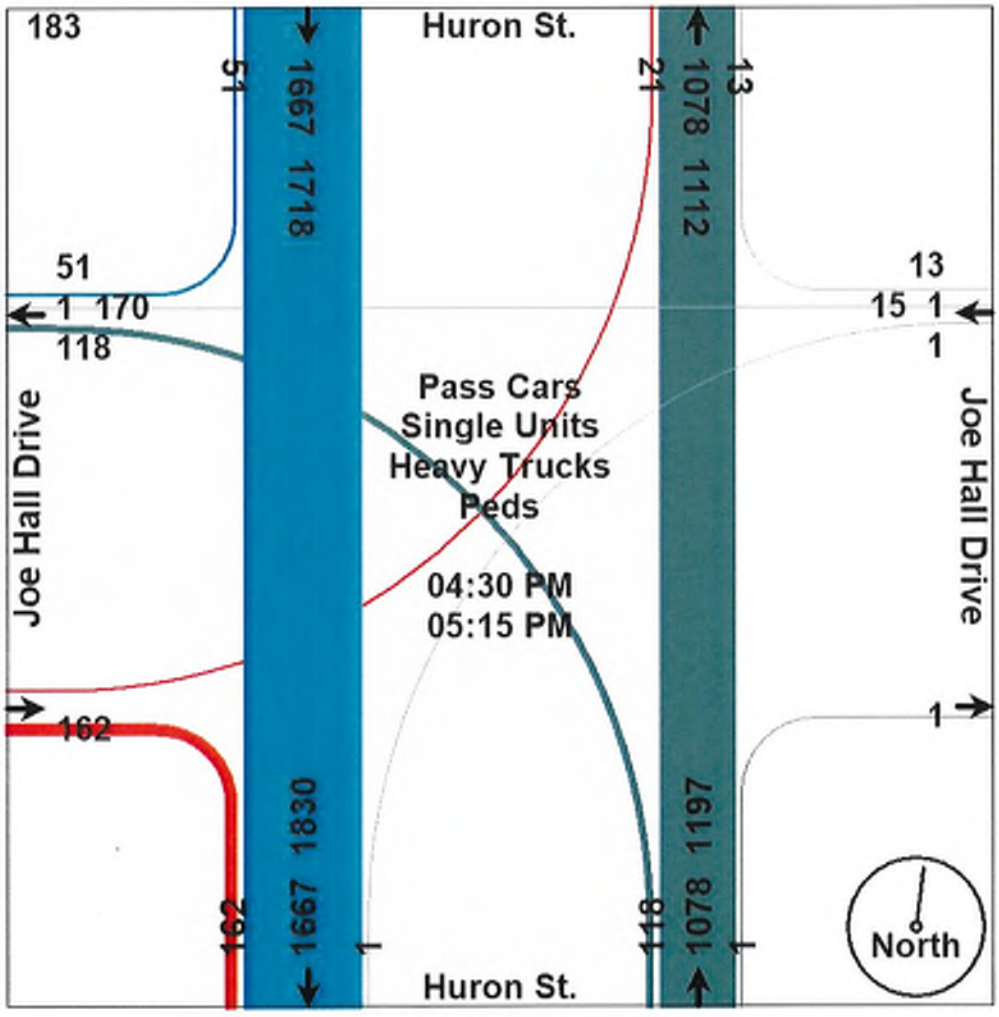
Study:4 Hr. Video Turning Movement Count
Weather:Sunny/Cldy PM Dry Deg 50s
Count By Miovision Video VCU 3EP SE

File Name : TMC_5 Huron & Joe Hall
Site Code : TMC_5
Start Date : 4/24/2019
Page No : 4

	Huron St. Southbound				Joe Hall Drive Westbound				Huron St. Northbound				Joe Hall Drive Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**14**	384	0	398	**7**	0	0	**7**	0	**272**	**38**	**310**	38	0	6	44	759
04:45 PM	11	438	0	449	0	**1**	0	1	0	267	32	299	39	0	**7**	46	795
05:00 PM	13	386	0	399	2	0	**1**	3	0	268	27	295	**48**	0	3	**51**	748
05:15 PM	13	**459**	0	**472**	4	0	0	4	**1**	271	21	293	37	0	5	42	**811**
Total Volume	51	1667	0	1718	13	1	1	15	1	1078	118	1197	162	0	21	183	3113
% App. Total	3	97	0		86.7	6.7	6.7		0.1	90.1	9.9		88.5	0	11.5		
PHF	.911	.908	.000	.910	.464	.250	.250	.536	.250	.991	.776	.965	.844	.000	.750	.897	.960
Pass Cars	42	1654	0	1696	13	1	1	15	1	1068	118	1187	161	0	21	182	3080
% Pass Cars	82.4	99.2	0	98.7	100	100	100	100	100	99.1	100	99.2	99.4	0	100	99.5	98.9
Single Units	3	8	0	11	0	0	0	0	0	3	0	3	1	0	0	1	15
% Single Units	5.9	0.5	0	0.6	0	0	0	0	0	0.3	0	0.3	0.6	0	0	0.5	0.5
Heavy Trucks	6	5	0	11	0	0	0	0	0	7	0	7	0	0	0	0	18
% Heavy Trucks	11.8	0.3	0	0.6	0	0	0	0	0	0.6	0	0.6	0	0	0	0	0.6
Peds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Peds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Traffic Data Collection, LLC

www:tdccounts.com
Phone: 586.786-5407

Traffic Study Performed For:

ROWE Professional Services Company

Project: Ypsilanti Traffic Impact Study
Study:4 Hr. Video Turning Movement Count
Weather:Sunny/Cldy PM Dry Deg 50s
Count By Miovision Video VCU 3EP SE

File Name : TMC_5 Huron & Joe Hall
Site Code : TMC_5
Start Date : 4/24/2019

Aerial Photo

LEVEL OF SERVICE

OUTPUT REPORTS

Intersection	
Int Delay, s/veh	6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	0	82	1	0	0	192	1522	3	11	843	61
Future Vol, veh/h	21	0	82	1	0	0	192	1522	3	11	843	61
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	-	-	-	-	250	-	-	250	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	60	60	60	95	95	95	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	0	93	2	0	0	202	1602	3	12	937	68

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2166	2970	469	2501	3037	803	1005	0	0	1605	0	0
Stage 1	961	961	-	2008	2008	-	-	-	-	-	-	-
Stage 2	1205	2009	-	493	1029	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	26	14	541	15	13	326	685	-	-	403	-	-
Stage 1	275	333	-	61	102	-	-	-	-	-	-	-
Stage 2	195	102	-	526	309	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 20	10	541	9	9	326	685	-	-	403	-	-
Mov Cap-2 Maneuver	~ 20	10	-	9	9	-	-	-	-	-	-	-
Stage 1	194	323	-	43	72	-	-	-	-	-	-	-
Stage 2	137	72	-	422	300	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	120.9	$ 480.4	1.4	0.2
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	685	-	-	20	541	9	403	-	-
HCM Lane V/C Ratio	0.295	-	-	1.193	0.172	0.185	0.03	-	-
HCM Control Delay (s)	12.4	-	-	$ 542.4	13	$ 480.4	14.2	-	-
HCM Lane LOS	B	-	-	F	B	F	B	-	-
HCM 95th %tile Q(veh)	1.2	-	-	3.2	0.6	0.5	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	6.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	0	83	1	0	0	194	1541	3	11	853	62
Future Vol, veh/h	21	0	83	1	0	0	194	1541	3	11	853	62
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	-	-	-	-	250	-	-	250	-	125
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	25	25	25	95	95	95	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	0	94	4	0	0	204	1622	3	12	948	69

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2191	3005	474	2530	3073	813	1017	0	0	1625	0	0
Stage 1	972	972	-	2032	2032	-	-	-	-	-	-	-
Stage 2	1219	2033	-	498	1041	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	25	13	537	14	12	322	678	-	-	396	-	-
Stage 1	271	329	-	59	99	-	-	-	-	-	-	-
Stage 2	191	99	-	523	305	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 19	9	537	9	8	322	678	-	-	396	-	-
Mov Cap-2 Maneuver	~ 19	9	-	9	8	-	-	-	-	-	-	-
Stage 1	189	319	-	41	69	-	-	-	-	-	-	-
Stage 2	134	69	-	418	296	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	128.4	$ 589.2	1.4	0.2
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	678	-	-	19	537	9	396	-	-
HCM Lane V/C Ratio	0.301	-	-	1.256	0.176	0.444	0.031	-	-
HCM Control Delay (s)	12.6	-	-	$ 584.3	13.1	$ 589.2	14.4	-	-
HCM Lane LOS	B	-	-	F	B	F	B	-	-
HCM 95th %tile Q(veh)	1.3	-	-	3.3	0.6	1	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	0	83	1	0	0	194	1541	3	11	853	62
Future Volume (veh/h)	21	0	83	1	0	0	194	1541	3	11	853	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	24	0	94	4	0	0	204	1622	3	12	948	69
Peak Hour Factor	0.88	0.88	0.88	0.25	0.25	0.25	0.95	0.95	0.95	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	228	0	129	121	0	0	560	2511	5	253	2272	1014
Arrive On Green	0.08	0.00	0.08	0.08	0.00	0.00	0.07	0.69	0.69	0.03	1.00	1.00
Sat Flow, veh/h	1418	0	1585	379	0	0	1781	3639	7	1781	3554	1585
Grp Volume(v), veh/h	24	0	94	4	0	0	204	792	833	12	948	69
Grp Sat Flow(s),veh/h/ln	1418	0	1585	379	0	0	1781	1777	1869	1781	1777	1585
Q Serve(g_s), s	0.0	0.0	4.6	0.2	0.0	0.0	3.0	19.9	19.9	0.2	0.0	0.0
Cycle Q Clear(g_c), s	1.0	0.0	4.6	4.9	0.0	0.0	3.0	19.9	19.9	0.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	228	0	129	121	0	0	560	1226	1290	253	2272	1014
V/C Ratio(X)	0.11	0.00	0.73	0.03	0.00	0.00	0.36	0.65	0.65	0.05	0.42	0.07
Avail Cap(c_a), veh/h	256	0	160	146	0	0	654	1226	1290	369	2272	1014
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.80	0.80	0.80
Uniform Delay (d), s/veh	34.2	0.0	35.9	38.2	0.0	0.0	3.8	6.9	6.9	6.4	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	11.8	0.1	0.0	0.0	0.4	2.6	2.5	0.1	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	2.2	0.1	0.0	0.0	0.7	5.7	5.9	0.1	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.4	0.0	47.6	38.3	0.0	0.0	4.2	9.6	9.4	6.4	0.5	0.1
LnGrp LOS	C	A	D	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h		118			4			1829			1029	
Approach Delay, s/veh		44.9			38.3			8.9			0.5	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.8	60.8		12.4	10.8	56.8		12.4				
Change Period (Y+Rc), s	* 5.6	* 5.6		5.9	* 5.6	* 5.6		5.9				
Max Green Setting (Gmax), s	* 6.4	* 48		8.1	* 9.4	* 45		8.1				
Max Q Clear Time (g_c+I1), s	2.2	21.9		6.6	5.0	2.0		6.9				
Green Ext Time (p_c), s	0.0	12.8		0.1	0.2	7.7		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	7.5
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	0	99	1	0	0	206	1541	3	11	853	68
Future Volume (veh/h)	29	0	99	1	0	0	206	1541	3	11	853	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	33	0	112	4	0	0	217	1622	3	12	948	76
Peak Hour Factor	0.88	0.88	0.88	0.25	0.25	0.25	0.95	0.95	0.95	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	249	0	148	121	0	0	556	2468	5	246	2219	990
Arrive On Green	0.09	0.00	0.09	0.09	0.00	0.00	0.07	0.68	0.68	0.03	1.00	1.00
Sat Flow, veh/h	1418	0	1585	336	0	0	1781	3639	7	1781	3554	1585
Grp Volume(v), veh/h	33	0	112	4	0	0	217	792	833	12	948	76
Grp Sat Flow(s),veh/h/ln	1418	0	1585	336	0	0	1781	1777	1869	1781	1777	1585
Q Serve(g_s), s	0.0	0.0	5.5	0.2	0.0	0.0	3.3	20.7	20.7	0.2	0.0	0.0
Cycle Q Clear(g_c), s	1.4	0.0	5.5	5.8	0.0	0.0	3.3	20.7	20.7	0.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	249	0	148	121	0	0	556	1205	1268	246	2219	990
V/C Ratio(X)	0.13	0.00	0.76	0.03	0.00	0.00	0.39	0.66	0.66	0.05	0.43	0.08
Avail Cap(c_a), veh/h	260	0	160	131	0	0	643	1205	1268	363	2219	990
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.79	0.79	0.79
Uniform Delay (d), s/veh	33.5	0.0	35.4	38.2	0.0	0.0	4.1	7.5	7.5	6.9	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	17.2	0.1	0.0	0.0	0.4	2.8	2.7	0.1	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	2.8	0.1	0.0	0.0	0.8	6.1	6.3	0.1	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.7	0.0	52.5	38.3	0.0	0.0	4.5	10.3	10.2	7.0	0.5	0.1
LnGrp LOS	C	A	D	D	A	A	A	B	B	A	A	A
Approach Vol, veh/h		145			4			1842			1036	
Approach Delay, s/veh		48.2			38.3			9.5			0.5	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.8	59.9		13.4	11.1	55.5		13.4				
Change Period (Y+Rc), s	* 5.6	* 5.6		5.9	* 5.6	* 5.6		5.9				
Max Green Setting (Gmax), s	* 6.4	* 48		8.1	* 9.4	* 45		8.1				
Max Q Clear Time (g_c+I1), s	2.2	22.7		7.5	5.3	2.0		7.8				
Green Ext Time (p_c), s	0.0	12.7		0.0	0.2	7.7		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	8.3
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	29.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	0	162	1	1	13	118	1078	1	0	1722	53
Future Vol, veh/h	21	0	162	1	1	13	118	1078	1	0	1722	53
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	-	-	-	-	250	-	-	250	-	125
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	60	60	60	99	99	99	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	0	193	2	2	22	119	1089	1	0	1892	58

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2676	3220	946	2274	3278	545	1950	0	0	1090	0	0
Stage 1	1892	1892	-	1328	1328	-	-	-	-	-	-	-
Stage 2	784	1328	-	946	1950	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 11	10	262	22	9	482	296	-	-	636	-	-
Stage 1	72	117	-	164	223	-	-	-	-	-	-	-
Stage 2	352	223	-	281	109	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 5	6	262	4	5	482	296	-	-	636	-	-
Mov Cap-2 Maneuver	~ 5	6	-	4	5	-	-	-	-	-	-	-
Stage 1	43	117	-	98	133	-	-	-	-	-	-	-
Stage 2	199	133	-	74	109	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s$	408.9	287.4	2.5	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	296	-	-	5	262	31	636	-	-
HCM Lane V/C Ratio	0.403	-	-	5	0.736	0.806	-	-	-
HCM Control Delay (s)	25.1	-	-	$ 3183.8	49.2	287.4	0	-	-
HCM Lane LOS	D	-	-	F	E	F	A	-	-
HCM 95th %tile Q(veh)	1.9	-	-	4.6	5.2	2.7	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	36.7

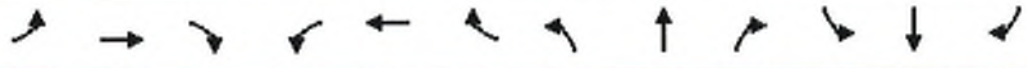
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	0	162	1	1	13	119	1092	1	0	1742	54
Future Vol, veh/h	21	0	162	1	1	13	119	1092	1	0	1742	54
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	-	-	-	-	250	-	-	250	-	125
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	46	46	46	99	99	99	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	0	193	2	2	28	120	1103	1	0	1914	59

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2707	3258	957	2301	3317	552	1973	0	0	1104	0	0
Stage 1	1914	1914	-	1344	1344	-	-	-	-	-	-	-
Stage 2	793	1344	-	957	1973	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 10	9	258	21	8	477	290	-	-	628	-	-
Stage 1	70	114	-	160	219	-	-	-	-	-	-	-
Stage 2	348	219	-	277	106	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 4	5	258	4	5	477	290	-	-	628	-	-
Mov Cap-2 Maneuver	~ 4	5	-	4	5	-	-	-	-	-	-	-
Stage 1	41	114	-	94	128	-	-	-	-	-	-	-
Stage 2	189	128	-	70	106	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	$ 512	$ 367.6	2.5	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	290	-	-	4	258	31	628	-	-
HCM Lane V/C Ratio	0.414	-	-	6.25	0.748	1.052	-	-	-
HCM Control Delay (s)	25.9	-	-	$ 4067.8	51.1	$ 367.6	0	-	-
HCM Lane LOS	D	-	-	F	F	F	A	-	-
HCM 95th %tile Q(veh)	1.9	-	-	4.6	5.4	3.6	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	0	162	1	1	13	119	1092	1	0	1742	54
Future Volume (veh/h)	21	0	162	1	1	13	119	1092	1	0	1742	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	25	0	193	2	2	28	120	1103	1	0	1914	59
Peak Hour Factor	0.84	0.84	0.84	0.46	0.46	0.46	0.99	0.99	0.99	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	217	0	232	51	24	186	214	2586	2	389	2067	922
Arrive On Green	0.15	0.00	0.15	0.15	0.15	0.15	0.06	0.71	0.71	0.00	0.58	0.58
Sat Flow, veh/h	1380	0	1585	19	163	1273	1781	3643	3	1781	3554	1585
Grp Volume(v), veh/h	25	0	193	32	0	0	120	538	566	0	1914	59
Grp Sat Flow(s),veh/h/ln	1380	0	1585	1455	0	0	1781	1777	1870	1781	1777	1585
Q Serve(g_s), s	0.0	0.0	9.5	0.0	0.0	0.0	1.9	10.1	10.1	0.0	39.1	1.3
Cycle Q Clear(g_c), s	2.4	0.0	9.5	9.5	0.0	0.0	1.9	10.1	10.1	0.0	39.1	1.3
Prop In Lane	1.00		1.00	0.06		0.87	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	217	0	232	261	0	0	214	1261	1327	389	2067	922
V/C Ratio(X)	0.12	0.00	0.83	0.12	0.00	0.00	0.56	0.43	0.43	0.00	0.93	0.06
Avail Cap(c_a), veh/h	258	0	279	308	0	0	231	1261	1327	507	2067	922
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.09	0.09
Uniform Delay (d), s/veh	30.2	0.0	33.2	29.7	0.0	0.0	18.9	4.8	4.8	0.0	15.2	7.3
Incr Delay (d2), s/veh	0.2	0.0	16.3	0.2	0.0	0.0	2.6	1.1	1.0	0.0	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	4.6	0.5	0.0	0.0	1.4	3.1	3.3	0.0	13.6	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.4	0.0	49.5	30.0	0.0	0.0	21.5	5.9	5.8	0.0	16.1	7.3
LnGrp LOS	C	A	D	C	A	A	C	A	A	A	B	A
Approach Vol, veh/h		218			32			1224			1973	
Approach Delay, s/veh		47.3			30.0			7.4			15.9	
Approach LOS		D			C			A			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	62.4		17.6	10.3	52.1		17.6				
Change Period (Y+Rc), s	* 5.6	* 5.6		5.9	* 5.6	* 5.6		5.9				
Max Green Setting (Gmax), s	* 5.4	* 43		14.1	* 5.4	* 43		14.1				
Max Q Clear Time (g_c+I1), s	0.0	12.1		11.5	3.9	41.1		11.5				
Green Ext Time (p_c), s	0.0	8.8		0.3	0.0	2.1		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	15.0
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	0	173	1	1	13	130	1092	1	0	1742	62
Future Volume (veh/h)	27	0	173	1	1	13	130	1092	1	0	1742	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	32	0	206	2	2	28	131	1103	1	0	1914	68
Peak Hour Factor	0.84	0.84	0.84	0.46	0.46	0.46	0.99	0.99	0.99	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	217	0	244	51	25	196	207	2558	2	385	2037	908
Arrive On Green	0.15	0.00	0.15	0.15	0.15	0.15	0.06	0.70	0.70	0.00	0.38	0.38
Sat Flow, veh/h	1380	0	1585	18	164	1269	1781	3643	3	1781	3554	1585
Grp Volume(v), veh/h	32	0	206	32	0	0	131	538	566	0	1914	68
Grp Sat Flow(s),veh/h/ln	1380	0	1585	1451	0	0	1781	1777	1870	1781	1777	1585
Q Serve(g_s), s	0.0	0.0	10.1	0.0	0.0	0.0	2.2	10.3	10.3	0.0	41.5	2.2
Cycle Q Clear(g_c), s	3.2	0.0	10.1	10.1	0.0	0.0	2.2	10.3	10.3	0.0	41.5	2.2
Prop In Lane	1.00		1.00	0.06		0.87	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	217	0	244	271	0	0	207	1248	1313	385	2037	908
V/C Ratio(X)	0.15	0.00	0.84	0.12	0.00	0.00	0.63	0.43	0.43	0.00	0.94	0.07
Avail Cap(c_a), veh/h	248	0	279	306	0	0	222	1248	1313	503	2037	908
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.09	0.09
Uniform Delay (d), s/veh	30.0	0.0	32.9	29.2	0.0	0.0	19.2	5.1	5.1	0.0	23.3	11.2
Incr Delay (d2), s/veh	0.3	0.0	18.5	0.2	0.0	0.0	5.2	1.1	1.0	0.0	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	5.0	0.5	0.0	0.0	1.7	3.3	3.4	0.0	18.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.3	0.0	51.4	29.4	0.0	0.0	24.4	6.2	6.1	0.0	24.5	11.2
LnGrp LOS	C	A	D	C	A	A	C	A	A	A	C	B
Approach Vol, veh/h		238			32			1235			1982	
Approach Delay, s/veh		48.6			29.4			8.1			24.0	
Approach LOS		D			C			A			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	61.8		18.2	10.3	51.4		18.2				
Change Period (Y+Rc), s	* 5.6	* 5.6		5.9	* 5.6	* 5.6		5.9				
Max Green Setting (Gmax), s	* 5.4	* 43		14.1	* 5.4	* 43		14.1				
Max Q Clear Time (g_c+I1), s	0.0	12.3		12.1	4.2	43.5		12.1				
Green Ext Time (p_c), s	0.0	8.8		0.2	0.0	0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	20.1
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	282	11	54	7	4	34	97	1434	12	33	854	250
Future Volume (veh/h)	282	11	54	7	4	34	97	1434	12	33	854	250
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	313	12	60	10	6	48	102	1509	13	38	982	287
Peak Hour Factor	0.90	0.90	0.90	0.71	0.71	0.71	0.95	0.95	0.95	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	309	309	262	302	309	262	415	1728	771	325	1728	771
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.11	0.49	0.49	0.11	0.49	0.49
Sat Flow, veh/h	1350	1870	1585	1328	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	313	12	60	10	6	48	102	1509	13	38	982	287
Grp Sat Flow(s),veh/h/ln	1350	1870	1585	1328	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	13.0	0.4	2.6	0.5	0.2	2.1	0.0	30.3	0.3	0.0	15.7	9.1
Cycle Q Clear(g_c), s	13.2	0.4	2.6	0.9	0.2	2.1	0.0	30.3	0.3	0.0	15.7	9.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	309	309	262	302	309	262	415	1728	771	325	1728	771
V/C Ratio(X)	1.01	0.04	0.23	0.03	0.02	0.18	0.25	0.87	0.02	0.12	0.57	0.37
Avail Cap(c_a), veh/h	309	309	262	302	309	262	415	1728	771	325	1728	771
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.4	28.1	29.0	28.5	28.0	28.8	18.7	18.3	10.6	27.5	14.6	12.9
Incr Delay (d2), s/veh	54.4	0.1	0.4	0.0	0.0	0.3	0.3	6.4	0.0	0.2	1.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.6	0.2	1.0	0.2	0.1	0.8	1.3	11.8	0.1	0.6	5.6	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.8	28.1	29.4	28.5	28.0	29.1	19.0	24.8	10.7	27.6	16.0	14.3
LnGrp LOS	F	C	C	C	C	C	B	C	B	C	B	B
Approach Vol, veh/h		385			64			1624			1307	
Approach Delay, s/veh		78.5			28.9			24.3			15.9	
Approach LOS		E			C			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.0	45.0		20.0	15.0	45.0		20.0				
Change Period (Y+Rc), s	* 6.1	* 6.1		* 6.8	* 6.1	* 6.1		* 6.8				
Max Green Setting (Gmax), s	* 8.9	* 39		* 13	* 8.9	* 39		* 13				
Max Q Clear Time (g_c+I1), s	2.0	32.3		15.2	2.0	17.7		4.1				
Green Ext Time (p_c), s	0.0	4.7		0.0	0.1	7.6		0.1				

Intersection Summary	
HCM 6th Ctrl Delay	27.3
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	298	11	57	7	4	34	102	1448	12	33	863	268
Future Volume (veh/h)	298	11	57	7	4	34	102	1448	12	33	863	268
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	331	12	63	10	6	48	107	1524	13	38	992	308
Peak Hour Factor	0.90	0.90	0.90	0.71	0.71	0.71	0.95	0.95	0.95	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	309	309	262	301	309	262	410	1728	771	322	1728	771
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.11	0.49	0.49	0.11	0.49	0.49
Sat Flow, veh/h	1350	1870	1585	1325	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	331	12	63	10	6	48	107	1524	13	38	992	308
Grp Sat Flow(s),veh/h/ln	1350	1870	1585	1325	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	13.0	0.4	2.8	0.5	0.2	2.1	0.0	30.9	0.3	0.0	15.9	9.9
Cycle Q Clear(g_c), s	13.2	0.4	2.8	0.9	0.2	2.1	0.0	30.9	0.3	0.0	15.9	9.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	309	309	262	301	309	262	410	1728	771	322	1728	771
V/C Ratio(X)	1.07	0.04	0.24	0.03	0.02	0.18	0.26	0.88	0.02	0.12	0.57	0.40
Avail Cap(c_a), veh/h	309	309	262	301	309	262	410	1728	771	322	1728	771
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.4	28.1	29.0	28.5	28.0	28.8	19.4	18.5	10.6	28.0	14.6	13.1
Incr Delay (d2), s/veh	71.2	0.1	0.5	0.0	0.0	0.3	0.3	6.9	0.0	0.2	1.4	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.1	0.2	1.1	0.2	0.1	0.8	1.4	12.1	0.1	0.6	5.7	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	106.6	28.1	29.5	28.5	28.0	29.1	19.7	25.4	10.7	28.2	16.0	14.6
LnGrp LOS	F	C	C	C	C	C	B	C	B	C	B	B
Approach Vol, veh/h		406			64			1644			1338	
Approach Delay, s/veh		92.3			28.9			24.9			16.1	
Approach LOS		F			C			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.0	45.0		20.0	15.0	45.0		20.0				
Change Period (Y+Rc), s	* 6.1	* 6.1		* 6.8	* 6.1	* 6.1		* 6.8				
Max Green Setting (Gmax), s	* 8.9	* 39		* 13	* 8.9	* 39		* 13				
Max Q Clear Time (g_c+I1), s	2.0	32.9		15.2	2.0	17.9		4.1				
Green Ext Time (p_c), s	0.0	4.4		0.0	0.1	7.8		0.1				

Intersection Summary		
HCM 6th Ctrl Delay		29.5
HCM 6th LOS		C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	298	11	57	7	4	34	102	1448	12	33	863	268
Future Volume (veh/h)	298	11	57	7	4	34	102	1448	12	33	863	268
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	331	12	63	10	6	48	107	1524	13	38	992	308
Peak Hour Factor	0.90	0.90	0.90	0.71	0.71	0.71	0.95	0.95	0.95	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	445	496	420	435	496	420	306	1506	672	221	1506	672
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.10	0.56	0.56	0.07	0.42	0.42
Sat Flow, veh/h	1350	1870	1585	1325	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	331	12	63	10	6	48	107	1524	13	38	992	308
Grp Sat Flow(s),veh/h/ln	1350	1870	1585	1325	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	19.2	0.4	2.4	0.5	0.2	1.8	0.0	33.9	0.3	0.0	17.9	11.1
Cycle Q Clear(g_c), s	19.4	0.4	2.4	0.8	0.2	1.8	0.0	33.9	0.3	0.0	17.9	11.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	445	496	420	435	496	420	306	1506	672	221	1506	672
V/C Ratio(X)	0.74	0.02	0.15	0.02	0.01	0.11	0.35	1.01	0.02	0.17	0.66	0.46
Avail Cap(c_a), veh/h	445	496	420	435	496	420	306	1506	672	221	1506	672
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.79	0.79	0.79	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.8	21.7	22.5	22.1	21.7	22.3	27.0	17.5	10.1	34.3	18.4	16.5
Incr Delay (d2), s/veh	6.7	0.0	0.2	0.0	0.0	0.1	0.5	23.6	0.0	0.4	2.3	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	0.2	0.9	0.1	0.1	0.7	1.8	13.5	0.1	0.7	6.8	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.5	21.8	22.7	22.1	21.7	22.4	27.6	41.1	10.2	34.7	20.7	18.7
LnGrp LOS	D	C	C	C	C	C	C	F	B	C	C	B
Approach Vol, veh/h		406			64			1644			1338	
Approach Delay, s/veh		33.1			22.3			40.0			20.6	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	40.0		28.0	12.0	40.0		28.0				
Change Period (Y+Rc), s	* 6.1	* 6.1		* 6.8	* 6.1	* 6.1		* 6.8				
Max Green Setting (Gmax), s	* 5.9	* 34		* 21	* 5.9	* 34		* 21				
Max Q Clear Time (g_c+I1), s	2.0	35.9		21.4	2.0	19.9		3.8				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.1	6.4		0.1				

Intersection Summary												
HCM 6th Ctrl Delay			31.3									
HCM 6th LOS			C									

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

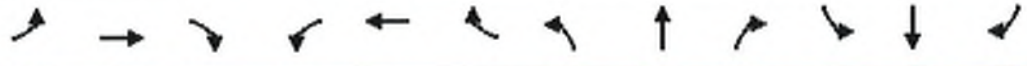
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	298	11	58	7	4	34	103	1455	12	33	868	268
Future Volume (veh/h)	298	11	58	7	4	34	103	1455	12	33	868	268
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	331	12	64	10	6	48	108	1532	13	38	998	308
Peak Hour Factor	0.90	0.90	0.90	0.71	0.71	0.71	0.95	0.95	0.95	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	445	496	420	434	496	420	305	1506	672	221	1506	672
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.10	0.56	0.56	0.07	0.42	0.42
Sat Flow, veh/h	1350	1870	1585	1323	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	331	12	64	10	6	48	108	1532	13	38	998	308
Grp Sat Flow(s),veh/h/ln	1350	1870	1585	1323	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	19.2	0.4	2.5	0.5	0.2	1.8	0.0	33.9	0.3	0.0	18.0	11.1
Cycle Q Clear(g_c), s	19.4	0.4	2.5	0.8	0.2	1.8	0.0	33.9	0.3	0.0	18.0	11.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	445	496	420	434	496	420	305	1506	672	221	1506	672
V/C Ratio(X)	0.74	0.02	0.15	0.02	0.01	0.11	0.35	1.02	0.02	0.17	0.66	0.46
Avail Cap(c_a), veh/h	445	496	420	434	496	420	305	1506	672	221	1506	672
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.79	0.79	0.79	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.8	21.7	22.5	22.1	21.7	22.3	27.3	17.5	10.1	34.3	18.5	16.5
Incr Delay (d2), s/veh	6.7	0.0	0.2	0.0	0.0	0.1	0.6	25.1	0.0	0.4	2.3	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	0.2	0.9	0.1	0.1	0.7	1.8	13.8	0.1	0.7	6.9	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.5	21.8	22.7	22.1	21.7	22.4	27.8	42.5	10.2	34.7	20.8	18.7
LnGrp LOS	D	C	C	C	C	C	C	F	B	C	C	B
Approach Vol, veh/h		407			64			1653			1344	
Approach Delay, s/veh		33.1			22.3			41.3			20.7	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.0	40.0		28.0	12.0	40.0		28.0
Change Period (Y+Rc), s	* 6.1	* 6.1		* 6.8	* 6.1	* 6.1		* 6.8
Max Green Setting (Gmax), s	* 5.9	* 34		* 21	* 5.9	* 34		* 21
Max Q Clear Time (g_c+I1), s	2.0	35.9		21.4	2.0	20.0		3.8
Green Ext Time (p_c), s	0.0	0.0		0.0	0.1	6.4		0.1

Intersection Summary	
HCM 6th Ctrl Delay	32.0
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	289	4	98	11	6	40	65	1037	10	33	1666	279
Future Volume (veh/h)	289	4	98	11	6	40	65	1037	10	33	1666	279
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	318	4	108	16	9	58	69	1103	11	37	1872	313
Peak Hour Factor	0.91	0.91	0.91	0.69	0.69	0.69	0.94	0.94	0.94	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	355	379	321	347	379	321	288	1595	711	390	1595	711
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.11	0.45	0.45	0.11	0.45	0.45
Sat Flow, veh/h	1334	1870	1585	1281	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	318	4	108	16	9	58	69	1103	11	37	1872	313
Grp Sat Flow(s),veh/h/ln	1334	1870	1585	1281	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	15.9	0.1	4.7	0.8	0.3	2.4	0.0	19.8	0.3	0.0	35.9	10.9
Cycle Q Clear(g_c), s	16.2	0.1	4.7	0.9	0.3	2.4	0.0	19.8	0.3	0.0	35.9	10.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	355	379	321	347	379	321	288	1595	711	390	1595	711
V/C Ratio(X)	0.90	0.01	0.34	0.05	0.02	0.18	0.24	0.69	0.02	0.09	1.17	0.44
Avail Cap(c_a), veh/h	355	379	321	347	379	321	288	1595	711	390	1595	711
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.4	25.5	27.3	25.9	25.6	26.4	31.6	17.6	12.2	20.4	22.0	15.1
Incr Delay (d2), s/veh	24.1	0.0	0.6	0.1	0.0	0.3	0.4	2.5	0.0	0.1	85.2	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	0.1	1.8	0.2	0.1	0.9	1.1	7.5	0.1	0.5	31.4	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.4	25.5	27.9	25.9	25.6	26.7	32.0	20.1	12.3	20.5	107.3	17.1
LnGrp LOS	E	C	C	C	C	C	C	C	B	C	F	B
Approach Vol, veh/h		430			83			1183			2222	
Approach Delay, s/veh		49.7			26.4			20.7			93.1	
Approach LOS		D			C			C			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.0	42.0		23.0	15.0	42.0		23.0				
Change Period (Y+Rc), s	* 6.1	* 6.1		* 6.8	* 6.1	* 6.1		* 6.8				
Max Green Setting (Gmax), s	* 8.9	* 36		* 16	* 8.9	* 36		* 16				
Max Q Clear Time (g_c+I1), s	2.0	21.8		18.2	2.0	37.9		4.4				
Green Ext Time (p_c), s	0.0	6.2		0.0	0.1	0.0		0.1				

Intersection Summary	
HCM 6th Ctrl Delay	65.1
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

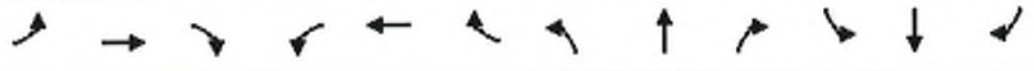
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	302	4	102	11	6	40	69	1047	10	33	1683	294
Future Volume (veh/h)	302	4	102	11	6	40	69	1047	10	33	1683	294
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	332	4	112	16	9	58	73	1114	11	37	1891	330
Peak Hour Factor	0.91	0.91	0.91	0.69	0.69	0.69	0.94	0.94	0.94	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	355	379	321	346	379	321	288	1595	711	387	1595	711
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.11	0.45	0.45	0.11	0.45	0.45
Sat Flow, veh/h	1334	1870	1585	1276	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	332	4	112	16	9	58	73	1114	11	37	1891	330
Grp Sat Flow(s),veh/h/ln	1334	1870	1585	1276	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	15.9	0.1	4.9	0.8	0.3	2.4	0.0	20.1	0.3	0.0	35.9	11.6
Cycle Q Clear(g_c), s	16.2	0.1	4.9	0.9	0.3	2.4	0.0	20.1	0.3	0.0	35.9	11.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	355	379	321	346	379	321	288	1595	711	387	1595	711
V/C Ratio(X)	0.94	0.01	0.35	0.05	0.02	0.18	0.25	0.70	0.02	0.10	1.19	0.46
Avail Cap(c_a), veh/h	355	379	321	346	379	321	288	1595	711	387	1595	711
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.7	25.5	27.4	25.9	25.6	26.4	31.6	17.7	12.2	20.7	22.0	15.4
Incr Delay (d2), s/veh	31.5	0.0	0.6	0.1	0.0	0.3	0.5	2.6	0.0	0.1	90.3	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.5	0.1	1.8	0.2	0.1	0.9	1.3	8.2	0.1	0.5	33.5	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.2	25.5	28.0	25.9	25.6	26.7	32.1	20.3	12.3	20.8	112.3	17.5
LnGrp LOS	E	C	C	C	C	C	C	C	B	C	F	B
Approach Vol, veh/h		448			83			1198			2258	
Approach Delay, s/veh		55.6			26.4			20.9			97.0	
Approach LOS		E			C			C			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.0	42.0		23.0	15.0	42.0		23.0				
Change Period (Y+Rc), s	* 6.1	* 6.1		* 6.8	* 6.1	* 6.1		* 6.8				
Max Green Setting (Gmax), s	* 8.9	* 36		* 16	* 8.9	* 36		* 16				
Max Q Clear Time (g_c+I1), s	2.0	22.1		18.2	2.0	37.9		4.4				
Green Ext Time (p_c), s	0.0	6.8		0.0	0.1	0.0		0.1				

Intersection Summary	
HCM 6th Ctrl Delay	68.0
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	302	4	102	11	6	40	69	1047	10	33	1683	294
Future Volume (veh/h)	302	4	102	11	6	40	69	1047	10	33	1683	294
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	332	4	112	16	9	58	73	1114	11	37	1891	330
Peak Hour Factor	0.91	0.91	0.91	0.69	0.69	0.69	0.94	0.94	0.94	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	355	379	321	346	379	321	201	1768	789	448	1768	789
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.13	0.99	0.99	0.06	0.50	0.50
Sat Flow, veh/h	1334	1870	1585	1276	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	332	4	112	16	9	58	73	1114	11	37	1891	330
Grp Sat Flow(s),veh/h/ln	1334	1870	1585	1276	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	15.9	0.1	4.9	0.8	0.3	2.4	0.0	0.3	0.0	0.0	39.8	10.6
Cycle Q Clear(g_c), s	16.2	0.1	4.9	0.9	0.3	2.4	0.0	0.3	0.0	0.0	39.8	10.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	355	379	321	346	379	321	201	1768	789	448	1768	789
V/C Ratio(X)	0.94	0.01	0.35	0.05	0.02	0.18	0.36	0.63	0.01	0.08	1.07	0.42
Avail Cap(c_a), veh/h	355	379	321	346	379	321	201	1768	789	448	1768	789
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.7	25.5	27.4	25.9	25.6	26.4	32.8	0.1	0.1	8.5	20.1	12.8
Incr Delay (d2), s/veh	31.5	0.0	0.6	0.1	0.0	0.3	1.0	1.6	0.0	0.1	42.8	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.5	0.1	1.8	0.2	0.1	0.9	1.3	0.4	0.0	0.3	25.1	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.2	25.5	28.0	25.9	25.6	26.7	33.8	1.7	0.1	8.6	62.9	14.4
LnGrp LOS	E	C	C	C	C	C	C	A	A	A	F	B
Approach Vol, veh/h		448			83			1198			2258	
Approach Delay, s/veh		55.6			26.4			3.6			54.9	
Approach LOS		E			C			A			D	

Timer - Assigned Phs	1	2	4	5	6	8
Phs Duration (G+Y+Rc), s	11.1	45.9	23.0	11.1	45.9	23.0
Change Period (Y+Rc), s	* 6.1	* 6.1	* 6.8	* 6.1	* 6.1	* 6.8
Max Green Setting (Gmax), s	* 5	* 40	* 16	* 5	* 40	* 16
Max Q Clear Time (g_c+I1), s	2.0	2.3	18.2	2.0	41.8	4.4
Green Ext Time (p_c), s	0.0	10.5	0.0	0.0	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	39.0
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	302	4	104	11	6	40	69	1053	10	33	1688	294
Future Volume (veh/h)	302	4	104	11	6	40	69	1053	10	33	1688	294
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	332	4	114	16	9	58	73	1120	11	37	1897	330
Peak Hour Factor	0.91	0.91	0.91	0.69	0.69	0.69	0.94	0.94	0.94	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	355	379	321	346	379	321	201	1768	789	358	1768	789
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.08	0.66	0.66	0.06	0.50	0.50
Sat Flow, veh/h	1334	1870	1585	1274	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	332	4	114	16	9	58	73	1120	11	37	1897	330
Grp Sat Flow(s),veh/h/ln	1334	1870	1585	1274	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	15.9	0.1	4.9	0.8	0.3	2.4	0.0	14.7	0.2	0.0	39.8	10.6
Cycle Q Clear(g_c), s	16.2	0.1	4.9	0.9	0.3	2.4	0.0	14.7	0.2	0.0	39.8	10.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	355	379	321	346	379	321	201	1768	789	358	1768	789
V/C Ratio(X)	0.94	0.01	0.36	0.05	0.02	0.18	0.36	0.63	0.01	0.10	1.07	0.42
Avail Cap(c_a), veh/h	355	379	321	346	379	321	201	1768	789	358	1768	789
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.7	25.5	27.4	25.9	25.6	26.4	34.4	9.3	6.8	16.8	20.1	12.8
Incr Delay (d2), s/veh	31.5	0.0	0.7	0.1	0.0	0.3	1.0	1.6	0.0	0.1	44.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.5	0.1	1.9	0.2	0.1	0.9	1.3	4.3	0.1	0.5	25.4	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.2	25.5	28.1	25.9	25.6	26.7	35.4	10.9	6.9	16.9	64.1	14.4
LnGrp LOS	E	C	C	C	C	C	D	B	A	B	F	B
Approach Vol, veh/h		450			83			1204			2264	
Approach Delay, s/veh		55.4			26.4			12.3			56.1	
Approach LOS		E			C			B			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.1	45.9		23.0	11.1	45.9		23.0				
Change Period (Y+Rc), s	* 6.1	* 6.1		* 6.8	* 6.1	* 6.1		* 6.8				
Max Green Setting (Gmax), s	* 5	* 40		* 16	* 5	* 40		* 16				
Max Q Clear Time (g_c+I1), s	2.0	16.7		18.2	2.0	41.8		4.4				
Green Ext Time (p_c), s	0.0	9.0		0.0	0.0	0.0		0.1				

Intersection Summary	
HCM 6th Ctrl Delay	42.2
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	288	331	0	1264	820	0
Future Volume (vph)	288	331	0	1264	820	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.3	6.3	
Lane Util. Factor	0.97	0.91		0.95	0.95	
Frt	0.95	0.85		1.00	1.00	
Flt Protected	0.97	1.00		1.00	1.00	
Satd. Flow (prot)	3327	1441		3539	3539	
Flt Permitted	0.97	1.00		1.00	1.00	
Satd. Flow (perm)	3327	1441		3539	3539	
Peak-hour factor, PHF	0.84	0.84	0.95	0.95	0.81	0.81
Adj. Flow (vph)	343	394	0	1331	1012	0
RTOR Reduction (vph)	47	47	0	0	0	0
Lane Group Flow (vph)	458	185	0	1331	1012	0
Turn Type	Prot	Perm		NA	NA	
Protected Phases	2			1	1	
Permitted Phases		2				
Actuated Green, G (s)	28.0	28.0		39.7	39.7	
Effective Green, g (s)	28.0	28.0		39.7	39.7	
Actuated g/C Ratio	0.35	0.35		0.50	0.50	
Clearance Time (s)	6.0	6.0		6.3	6.3	
Lane Grp Cap (vph)	1164	504		1756	1756	
v/s Ratio Prot	c0.14			c0.38	0.29	
v/s Ratio Perm		0.13				
v/c Ratio	0.39	0.37		0.76	0.58	
Uniform Delay, d1	19.6	19.4		16.3	14.2	
Progression Factor	1.00	1.00		0.61	1.29	
Incremental Delay, d2	1.0	2.1		1.7	1.3	
Delay (s)	20.6	21.5		11.7	19.6	
Level of Service	C	C		B	B	
Approach Delay (s)	20.9			11.7	19.6	
Approach LOS	C			B	B	

Intersection Summary			
HCM 2000 Control Delay	16.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.3
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	291	338	0	1286	839	0
Future Volume (vph)	291	338	0	1286	839	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.3	6.3	
Lane Util. Factor	0.97	0.91		0.95	0.95	
Frt	0.95	0.85		1.00	1.00	
Flt Protected	0.97	1.00		1.00	1.00	
Satd. Flow (prot)	3326	1441		3539	3539	
Flt Permitted	0.97	1.00		1.00	1.00	
Satd. Flow (perm)	3326	1441		3539	3539	
Peak-hour factor, PHF	0.84	0.84	0.95	0.95	0.81	0.81
Adj. Flow (vph)	346	402	0	1354	1036	0
RTOR Reduction (vph)	44	44	0	0	0	0
Lane Group Flow (vph)	467	193	0	1354	1036	0
Turn Type	Prot	Perm		NA	NA	
Protected Phases	2			1	1	
Permitted Phases		2				
Actuated Green, G (s)	28.0	28.0		39.7	39.7	
Effective Green, g (s)	28.0	28.0		39.7	39.7	
Actuated g/C Ratio	0.35	0.35		0.50	0.50	
Clearance Time (s)	6.0	6.0		6.3	6.3	
Lane Grp Cap (vph)	1164	504		1756	1756	
v/s Ratio Prot	c0.14			c0.38	0.29	
v/s Ratio Perm		0.13				
v/c Ratio	0.40	0.38		0.77	0.59	
Uniform Delay, d1	19.7	19.5		16.4	14.4	
Progression Factor	1.00	1.00		0.62	1.28	
Incremental Delay, d2	1.0	2.2		1.7	1.4	
Delay (s)	20.7	21.7		12.0	19.8	
Level of Service	C	C		B	B	
Approach Delay (s)	21.0			12.0	19.8	
Approach LOS	C			B	B	

Intersection Summary			
HCM 2000 Control Delay	16.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.3
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	291	342	0	1291	840	0
Future Volume (vph)	291	342	0	1291	840	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.3	6.3	
Lane Util. Factor	0.97	0.91		0.95	0.95	
Frt	0.95	0.85		1.00	1.00	
Flt Protected	0.97	1.00		1.00	1.00	
Satd. Flow (prot)	3325	1441		3539	3539	
Flt Permitted	0.97	1.00		1.00	1.00	
Satd. Flow (perm)	3325	1441		3539	3539	
Peak-hour factor, PHF	0.84	0.84	0.95	0.95	0.81	0.81
Adj. Flow (vph)	346	407	0	1359	1037	0
RTOR Reduction (vph)	44	44	0	0	0	0
Lane Group Flow (vph)	469	196	0	1359	1037	0
Turn Type	Prot	Perm		NA	NA	
Protected Phases	2			1	1	
Permitted Phases		2				
Actuated Green, G (s)	28.0	28.0		39.7	39.7	
Effective Green, g (s)	28.0	28.0		39.7	39.7	
Actuated g/C Ratio	0.35	0.35		0.50	0.50	
Clearance Time (s)	6.0	6.0		6.3	6.3	
Lane Grp Cap (vph)	1163	504		1756	1756	
v/s Ratio Prot	c0.14			c0.38	0.29	
v/s Ratio Perm		0.14				
v/c Ratio	0.40	0.39		0.77	0.59	
Uniform Delay, d1	19.7	19.6		16.5	14.4	
Progression Factor	1.00	1.00		0.32	1.28	
Incremental Delay, d2	1.0	2.3		1.7	1.4	
Delay (s)	20.7	21.8		7.0	19.8	
Level of Service	C	C		A	B	
Approach Delay (s)	21.1			7.0	19.8	
Approach LOS	C			A	B	

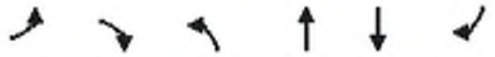
Intersection Summary			
HCM 2000 Control Delay	14.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.3
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	371	673	0	994	1305	0
Future Volume (vph)	371	673	0	994	1305	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.3	6.3	
Lane Util. Factor	0.97	0.91		0.95	0.95	
Frt	0.93	0.85		1.00	1.00	
Flt Protected	0.97	1.00		1.00	1.00	
Satd. Flow (prot)	3270	1441		3539	3539	
Flt Permitted	0.97	1.00		1.00	1.00	
Satd. Flow (perm)	3270	1441		3539	3539	
Peak-hour factor, PHF	0.95	0.95	0.95	0.96	0.91	0.81
Adj. Flow (vph)	391	708	0	1035	1434	0
RTOR Reduction (vph)	14	14	0	0	0	0
Lane Group Flow (vph)	731	340	0	1035	1434	0
Turn Type	Prot	Perm		NA	NA	
Protected Phases	2			1	1	
Permitted Phases		2				
Actuated Green, G (s)	28.0	28.0		39.7	39.7	
Effective Green, g (s)	28.0	28.0		39.7	39.7	
Actuated g/C Ratio	0.35	0.35		0.50	0.50	
Clearance Time (s)	6.0	6.0		6.3	6.3	
Lane Grp Cap (vph)	1144	504		1756	1756	
v/s Ratio Prot	0.22			0.29	c0.41	
v/s Ratio Perm		c0.24				
v/c Ratio	0.64	0.68		0.59	0.82	
Uniform Delay, d1	21.8	22.1		14.3	17.1	
Progression Factor	1.00	1.00		0.39	0.55	
Incremental Delay, d2	2.7	7.1		1.1	3.8	
Delay (s)	24.5	29.2		6.7	13.1	
Level of Service	C	C		A	B	
Approach Delay (s)	26.0			6.7	13.1	
Approach LOS	C			A	B	

Intersection Summary			
HCM 2000 Control Delay	15.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.3
Intersection Capacity Utilization	74.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



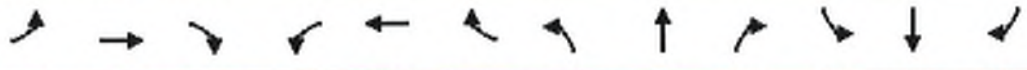
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	375	684	0	1011	1326	0
Future Volume (vph)	375	684	0	1011	1326	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.3	6.3	
Lane Util. Factor	0.97	0.91		0.95	0.95	
Frt	0.93	0.85		1.00	1.00	
Flt Protected	0.97	1.00		1.00	1.00	
Satd. Flow (prot)	3270	1441		3539	3539	
Flt Permitted	0.97	1.00		1.00	1.00	
Satd. Flow (perm)	3270	1441		3539	3539	
Peak-hour factor, PHF	0.95	0.95	0.95	0.96	0.91	0.81
Adj. Flow (vph)	395	720	0	1053	1457	0
RTOR Reduction (vph)	13	13	0	0	0	0
Lane Group Flow (vph)	742	347	0	1053	1457	0
Turn Type	Prot	Perm		NA	NA	
Protected Phases	2			1	1	
Permitted Phases		2				
Actuated Green, G (s)	28.0	28.0		39.7	39.7	
Effective Green, g (s)	28.0	28.0		39.7	39.7	
Actuated g/C Ratio	0.35	0.35		0.50	0.50	
Clearance Time (s)	6.0	6.0		6.3	6.3	
Lane Grp Cap (vph)	1144	504		1756	1756	
v/s Ratio Prot	0.23			0.30	c0.41	
v/s Ratio Perm		c0.24				
v/c Ratio	0.65	0.69		0.60	0.83	
Uniform Delay, d1	21.9	22.3		14.5	17.3	
Progression Factor	1.00	1.00		0.65	0.93	
Incremental Delay, d2	2.9	7.5		1.1	4.1	
Delay (s)	24.7	29.8		10.4	20.1	
Level of Service	C	C		B	C	
Approach Delay (s)	26.3			10.4	20.1	
Approach LOS	C			B	C	

Intersection Summary			
HCM 2000 Control Delay	19.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.3
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	375	688	0	1015	1327	0
Future Volume (vph)	375	688	0	1015	1327	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.3	6.3	
Lane Util. Factor	0.97	0.91		0.95	0.95	
Frt	0.93	0.85		1.00	1.00	
Flt Protected	0.97	1.00		1.00	1.00	
Satd. Flow (prot)	3269	1441		3539	3539	
Flt Permitted	0.97	1.00		1.00	1.00	
Satd. Flow (perm)	3269	1441		3539	3539	
Peak-hour factor, PHF	0.95	0.95	0.95	0.96	0.91	0.81
Adj. Flow (vph)	395	724	0	1057	1458	0
RTOR Reduction (vph)	13	13	0	0	0	0
Lane Group Flow (vph)	744	349	0	1057	1458	0
Turn Type	Prot	Perm		NA	NA	
Protected Phases	2			1	1	
Permitted Phases		2				
Actuated Green, G (s)	28.0	28.0		39.7	39.7	
Effective Green, g (s)	28.0	28.0		39.7	39.7	
Actuated g/C Ratio	0.35	0.35		0.50	0.50	
Clearance Time (s)	6.0	6.0		6.3	6.3	
Lane Grp Cap (vph)	1144	504		1756	1756	
v/s Ratio Prot	0.23			0.30	c0.41	
v/s Ratio Perm		c0.24				
v/c Ratio	0.65	0.69		0.60	0.83	
Uniform Delay, d1	21.9	22.3		14.5	17.3	
Progression Factor	1.00	1.00		0.52	0.93	
Incremental Delay, d2	2.9	7.6		1.1	4.1	
Delay (s)	24.8	29.9		8.7	20.1	
Level of Service	C	C		A	C	
Approach Delay (s)	26.4			8.7	20.1	
Approach LOS	C			A	C	

Intersection Summary			
HCM 2000 Control Delay	18.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.3
Intersection Capacity Utilization	75.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



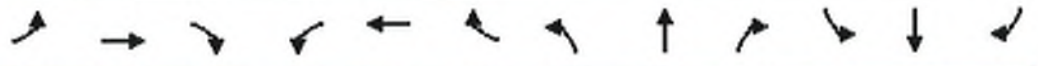
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑↑↱	↱		↑↑				
Traffic Volume (vph)	0	0	0	0	382	437	0	1067	0	0	0	0
Future Volume (vph)	0	0	0	0	382	437	0	1067	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					12.7	12.7		5.3				
Lane Util. Factor					0.91	0.91		0.95				
Frt					0.95	0.85		1.00				
Flt Protected					1.00	1.00		1.00				
Satd. Flow (prot)					3225	1441		3539				
Flt Permitted					1.00	1.00		1.00				
Satd. Flow (perm)					3225	1441		3539				
Peak-hour factor, PHF	0.92	0.92	0.92	0.94	0.94	0.94	0.95	0.95	0.95	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	406	465	0	1123	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	54	54	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	547	216	0	1123	0	0	0	0
Turn Type					NA	Perm		NA				
Protected Phases					2			1				
Permitted Phases						2						
Actuated Green, G (s)					18.3	18.3		43.7				
Effective Green, g (s)					18.3	18.3		43.7				
Actuated g/C Ratio					0.23	0.23		0.55				
Clearance Time (s)					12.7	12.7		5.3				
Lane Grp Cap (vph)					737	329		1933				
v/s Ratio Prot					c0.17			c0.32				
v/s Ratio Perm						0.15						
v/c Ratio					0.74	0.66		0.58				
Uniform Delay, d1					28.7	28.0		12.1				
Progression Factor					1.00	1.00		0.56				
Incremental Delay, d2					6.7	9.8		0.9				
Delay (s)					35.3	37.8		7.6				
Level of Service					D	D		A				
Approach Delay (s)		0.0			36.1			7.6			0.0	
Approach LOS		A			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	20.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	390	441	0	1084	0	0	0	0
Future Volume (vph)	0	0	0	0	390	441	0	1084	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					12.7	12.7		5.3				
Lane Util. Factor					0.91	0.91		0.95				
Frt					0.95	0.85		1.00				
Flt Protected					1.00	1.00		1.00				
Satd. Flow (prot)					3227	1441		3539				
Flt Permitted					1.00	1.00		1.00				
Satd. Flow (perm)					3227	1441		3539				
Peak-hour factor, PHF	0.92	0.92	0.92	0.94	0.94	0.94	0.95	0.95	0.95	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	415	469	0	1141	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	52	52	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	560	220	0	1141	0	0	0	0
Turn Type					NA	Perm		NA				
Protected Phases					2			1				
Permitted Phases						2						
Actuated Green, G (s)					18.3	18.3		43.7				
Effective Green, g (s)					18.3	18.3		43.7				
Actuated g/C Ratio					0.23	0.23		0.55				
Clearance Time (s)					12.7	12.7		5.3				
Lane Grp Cap (vph)					738	329		1933				
v/s Ratio Prot					c0.17			c0.32				
v/s Ratio Perm						0.15						
v/c Ratio					0.76	0.67		0.59				
Uniform Delay, d1					28.8	28.1		12.2				
Progression Factor					1.00	1.00		0.55				
Incremental Delay, d2					7.2	10.4		0.9				
Delay (s)					36.0	38.5		7.7				
Level of Service					D	D		A				
Approach Delay (s)		0.0			36.8			7.7			0.0	
Approach LOS		A			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	20.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

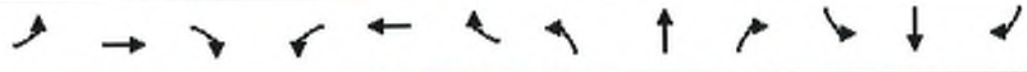


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	390	441	0	1089	0	0	0	0
Future Volume (vph)	0	0	0	0	390	441	0	1089	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					12.7	12.7		5.3				
Lane Util. Factor					0.91	0.91		0.95				
Frt					0.95	0.85		1.00				
Flt Protected					1.00	1.00		1.00				
Satd. Flow (prot)					3227	1441		3539				
Flt Permitted					1.00	1.00		1.00				
Satd. Flow (perm)					3227	1441		3539				
Peak-hour factor, PHF	0.92	0.92	0.92	0.94	0.94	0.94	0.95	0.95	0.95	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	415	469	0	1146	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	51	51	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	561	221	0	1146	0	0	0	0
Turn Type					NA	Perm		NA				
Protected Phases					2			1				
Permitted Phases						2						
Actuated Green, G (s)					18.3	18.3		43.7				
Effective Green, g (s)					18.3	18.3		43.7				
Actuated g/C Ratio					0.23	0.23		0.55				
Clearance Time (s)					12.7	12.7		5.3				
Lane Grp Cap (vph)					738	329		1933				
v/s Ratio Prot					c0.17			c0.32				
v/s Ratio Perm						0.15						
v/c Ratio					0.76	0.67		0.59				
Uniform Delay, d1					28.8	28.1		12.2				
Progression Factor					1.00	1.00		0.54				
Incremental Delay, d2					7.2	10.5		1.0				
Delay (s)					36.1	38.6		7.6				
Level of Service					D	D		A				
Approach Delay (s)		0.0			36.8			7.6			0.0	
Approach LOS		A			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	20.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	63.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

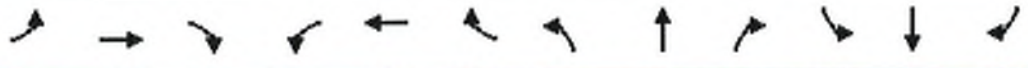
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	432	361	2	1020	0	0	0	0
Future Volume (vph)	0	0	0	0	432	361	2	1020	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					12.7	12.7		5.3				
Lane Util. Factor					0.91	0.91		0.95				
Frt					0.97	0.85		1.00				
Flt Protected					1.00	1.00		1.00				
Satd. Flow (prot)					3281	1441		3539				
Flt Permitted					1.00	1.00		1.00				
Satd. Flow (perm)					3281	1441		3539				
Peak-hour factor, PHF	0.92	0.92	0.92	0.94	0.88	0.88	0.90	0.90	0.90	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	491	410	2	1133	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	29	40	0	65	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	597	235	0	1070	0	0	0	0
Turn Type					NA	Perm	Perm	NA				
Protected Phases					2			1				
Permitted Phases						2	1					
Actuated Green, G (s)					21.3	21.3		40.7				
Effective Green, g (s)					21.3	21.3		40.7				
Actuated g/C Ratio					0.27	0.27		0.51				
Clearance Time (s)					12.7	12.7		5.3				
Lane Grp Cap (vph)					873	383		1800				
v/s Ratio Prot					c0.18							
v/s Ratio Perm						0.16		0.30				
v/c Ratio					0.68	0.61		0.59				
Uniform Delay, d1					26.3	25.7		13.8				
Progression Factor					1.00	1.00		1.10				
Incremental Delay, d2					4.3	7.1		1.2				
Delay (s)					30.6	32.9		16.5				
Level of Service					C	C		B				
Approach Delay (s)		0.0			31.3			16.5			0.0	
Approach LOS		A			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	23.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	438	365	2	1037	0	0	0	0
Future Volume (vph)	0	0	0	0	438	365	2	1037	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					12.7	12.7		5.3				
Lane Util. Factor					0.91	0.91		0.95				
Frt					0.97	0.85		1.00				
Flt Protected					1.00	1.00		1.00				
Satd. Flow (prot)					3280	1441		3539				
Flt Permitted					1.00	1.00		1.00				
Satd. Flow (perm)					3280	1441		3539				
Peak-hour factor, PHF	0.92	0.92	0.92	0.94	0.88	0.88	0.90	0.90	0.90	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	498	415	2	1152	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	29	38	0	65	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	606	240	0	1089	0	0	0	0
Turn Type					NA	Perm	Perm	NA				
Protected Phases					2			1				
Permitted Phases						2	1					
Actuated Green, G (s)					21.3	21.3		40.7				
Effective Green, g (s)					21.3	21.3		40.7				
Actuated g/C Ratio					0.27	0.27		0.51				
Clearance Time (s)					12.7	12.7		5.3				
Lane Grp Cap (vph)					873	383		1800				
v/s Ratio Prot					c0.18							
v/s Ratio Perm						0.17		0.31				
v/c Ratio					0.69	0.63		0.61				
Uniform Delay, d1					26.4	25.8		13.9				
Progression Factor					1.00	1.00		1.55				
Incremental Delay, d2					4.5	7.5		1.3				
Delay (s)					30.9	33.4		22.8				
Level of Service					C	C		C				
Approach Delay (s)		0.0			31.7			22.8			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	26.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	59.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	438	365	2	1041	0	0	0	0
Future Volume (vph)	0	0	0	0	438	365	2	1041	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					12.7	12.7		5.3				
Lane Util. Factor					0.91	0.91		0.95				
Frt					0.97	0.85		1.00				
Flt Protected					1.00	1.00		1.00				
Satd. Flow (prot)					3280	1441		3539				
Flt Permitted					1.00	1.00		1.00				
Satd. Flow (perm)					3280	1441		3539				
Peak-hour factor, PHF	0.92	0.92	0.92	0.94	0.88	0.88	0.90	0.90	0.90	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	498	415	2	1157	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	29	38	0	65	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	606	240	0	1094	0	0	0	0
Turn Type					NA	Perm	Perm	NA				
Protected Phases					2			1				
Permitted Phases						2	1					
Actuated Green, G (s)					21.3	21.3		40.7				
Effective Green, g (s)					21.3	21.3		40.7				
Actuated g/C Ratio					0.27	0.27		0.51				
Clearance Time (s)					12.7	12.7		5.3				
Lane Grp Cap (vph)					873	383		1800				
v/s Ratio Prot					c0.18							
v/s Ratio Perm						0.17		0.31				
v/c Ratio					0.69	0.63		0.61				
Uniform Delay, d1					26.4	25.8		14.0				
Progression Factor					1.00	1.00		1.57				
Incremental Delay, d2					4.5	7.5		1.3				
Delay (s)					30.9	33.4		23.2				
Level of Service					C	C		C				
Approach Delay (s)		0.0			31.7			23.2			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	27.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations				↑↑↑	↰↰	
Traffic Volume (vph)	0	0	0	632	382	0
Future Volume (vph)	0	0	0	632	382	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)				5.3	5.7	
Lane Util. Factor				0.91	0.97	
Frt				1.00	1.00	
Flt Protected				1.00	0.95	
Satd. Flow (prot)				5085	3433	
Flt Permitted				1.00	0.95	
Satd. Flow (perm)				5085	3433	
Peak-hour factor, PHF	0.92	0.92	0.92	0.91	0.68	0.68
Adj. Flow (vph)	0	0	0	695	562	0
RTOR Reduction (vph)	0	0	0	0	274	0
Lane Group Flow (vph)	0	0	0	695	289	0
Turn Type				NA	Prot	
Protected Phases				1	2	
Permitted Phases						
Actuated Green, G (s)				43.7	25.3	
Effective Green, g (s)				43.7	25.3	
Actuated g/C Ratio				0.55	0.32	
Clearance Time (s)				5.3	5.7	
Lane Grp Cap (vph)				2777	1085	
v/s Ratio Prot				c0.14	c0.08	
v/s Ratio Perm						
v/c Ratio				0.25	0.27	
Uniform Delay, d1				9.5	20.4	
Progression Factor				1.00	0.00	
Incremental Delay, d2				0.2	0.5	
Delay (s)				9.8	0.5	
Level of Service				A	A	
Approach Delay (s)	0.0			9.8	0.5	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	5.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations				↑↑↑	↰↰	
Traffic Volume (vph)	0	0	0	645	390	0
Future Volume (vph)	0	0	0	645	390	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)				5.3	5.7	
Lane Util. Factor				0.91	0.97	
Frt				1.00	1.00	
Flt Protected				1.00	0.95	
Satd. Flow (prot)				5085	3433	
Flt Permitted				1.00	0.95	
Satd. Flow (perm)				5085	3433	
Peak-hour factor, PHF	0.92	0.92	0.92	0.91	0.68	0.68
Adj. Flow (vph)	0	0	0	709	574	0
RTOR Reduction (vph)	0	0	0	0	265	0
Lane Group Flow (vph)	0	0	0	709	309	0
Turn Type				NA	Prot	
Protected Phases				1	2	
Permitted Phases						
Actuated Green, G (s)				43.7	25.3	
Effective Green, g (s)				43.7	25.3	
Actuated g/C Ratio				0.55	0.32	
Clearance Time (s)				5.3	5.7	
Lane Grp Cap (vph)				2777	1085	
v/s Ratio Prot				c0.14	c0.09	
v/s Ratio Perm						
v/c Ratio				0.26	0.29	
Uniform Delay, d1				9.6	20.6	
Progression Factor				1.00	0.00	
Incremental Delay, d2				0.2	0.6	
Delay (s)				9.8	0.6	
Level of Service				A	A	
Approach Delay (s)	0.0			9.8	0.6	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	5.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

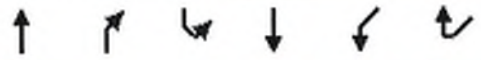
Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations				↑↑↑	↰↰	
Traffic Volume (vph)	0	0	0	646	390	0
Future Volume (vph)	0	0	0	646	390	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)				5.3	5.7	
Lane Util. Factor				0.91	0.97	
Frt				1.00	1.00	
Flt Protected				1.00	0.95	
Satd. Flow (prot)				5085	3433	
Flt Permitted				1.00	0.95	
Satd. Flow (perm)				5085	3433	
Peak-hour factor, PHF	0.92	0.92	0.92	0.91	0.68	0.68
Adj. Flow (vph)	0	0	0	710	574	0
RTOR Reduction (vph)	0	0	0	0	264	0
Lane Group Flow (vph)	0	0	0	710	310	0
Turn Type				NA	Prot	
Protected Phases				1	2	
Permitted Phases						
Actuated Green, G (s)				43.7	25.3	
Effective Green, g (s)				43.7	25.3	
Actuated g/C Ratio				0.55	0.32	
Clearance Time (s)				5.3	5.7	
Lane Grp Cap (vph)				2777	1085	
v/s Ratio Prot				c0.14	c0.09	
v/s Ratio Perm						
v/c Ratio				0.26	0.29	
Uniform Delay, d1				9.6	20.6	
Progression Factor				1.00	0.00	
Incremental Delay, d2				0.2	0.6	
Delay (s)				9.8	0.6	
Level of Service				A	A	
Approach Delay (s)	0.0			9.8	0.6	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	5.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	63.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations				↑↑↑	↰↰	
Traffic Volume (vph)	0	0	0	1355	434	0
Future Volume (vph)	0	0	0	1355	434	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)				5.3	5.7	
Lane Util. Factor				0.91	0.97	
Frt				1.00	1.00	
Flt Protected				1.00	0.95	
Satd. Flow (prot)				5085	3433	
Flt Permitted				1.00	0.95	
Satd. Flow (perm)				5085	3433	
Peak-hour factor, PHF	0.92	0.92	0.92	0.91	0.85	0.85
Adj. Flow (vph)	0	0	0	1489	511	0
RTOR Reduction (vph)	0	0	0	0	25	0
Lane Group Flow (vph)	0	0	0	1489	486	0
Turn Type				NA	Prot	
Protected Phases				1	2	
Permitted Phases						
Actuated Green, G (s)				40.7	28.3	
Effective Green, g (s)				40.7	28.3	
Actuated g/C Ratio				0.51	0.35	
Clearance Time (s)				5.3	5.7	
Lane Grp Cap (vph)				2586	1214	
v/s Ratio Prot				c0.29	c0.14	
v/s Ratio Perm						
v/c Ratio				0.58	0.40	
Uniform Delay, d1				13.7	19.5	
Progression Factor				1.00	0.02	
Incremental Delay, d2				0.9	0.7	
Delay (s)				14.6	1.2	
Level of Service				B	A	
Approach Delay (s)	0.0			14.6	1.2	
Approach LOS	A			B	A	

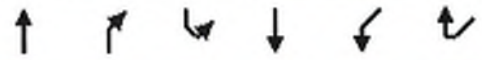
Intersection Summary			
HCM 2000 Control Delay	11.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations				↑↑↑	↰↰	
Traffic Volume (vph)	0	0	0	1375	440	0
Future Volume (vph)	0	0	0	1375	440	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)				5.3	5.7	
Lane Util. Factor				0.91	0.97	
Frt				1.00	1.00	
Flt Protected				1.00	0.95	
Satd. Flow (prot)				5085	3433	
Flt Permitted				1.00	0.95	
Satd. Flow (perm)				5085	3433	
Peak-hour factor, PHF	0.92	0.92	0.92	0.91	0.85	0.85
Adj. Flow (vph)	0	0	0	1511	518	0
RTOR Reduction (vph)	0	0	0	0	24	0
Lane Group Flow (vph)	0	0	0	1511	494	0
Turn Type				NA	Prot	
Protected Phases				1	2	
Permitted Phases						
Actuated Green, G (s)				40.7	28.3	
Effective Green, g (s)				40.7	28.3	
Actuated g/C Ratio				0.51	0.35	
Clearance Time (s)				5.3	5.7	
Lane Grp Cap (vph)				2586	1214	
v/s Ratio Prot				c0.30	c0.14	
v/s Ratio Perm						
v/c Ratio				0.58	0.41	
Uniform Delay, d1				13.7	19.5	
Progression Factor				1.00	0.03	
Incremental Delay, d2				1.0	0.7	
Delay (s)				14.7	1.2	
Level of Service				B	A	
Approach Delay (s)	0.0			14.7	1.2	
Approach LOS	A			B	A	

Intersection Summary			
HCM 2000 Control Delay	11.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	59.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

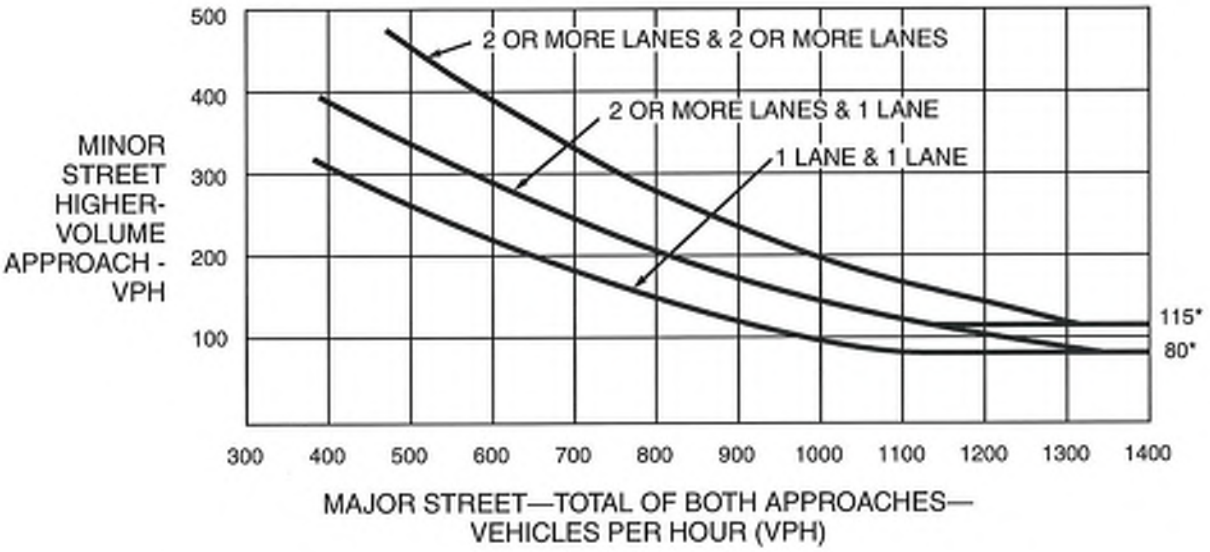


Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations				↑↑↑	↰↰	
Traffic Volume (vph)	0	0	0	1376	440	0
Future Volume (vph)	0	0	0	1376	440	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)				5.3	5.7	
Lane Util. Factor				0.91	0.97	
Frt				1.00	1.00	
Flt Protected				1.00	0.95	
Satd. Flow (prot)				5085	3433	
Flt Permitted				1.00	0.95	
Satd. Flow (perm)				5085	3433	
Peak-hour factor, PHF	0.92	0.92	0.92	0.91	0.85	0.85
Adj. Flow (vph)	0	0	0	1512	518	0
RTOR Reduction (vph)	0	0	0	0	24	0
Lane Group Flow (vph)	0	0	0	1512	494	0
Turn Type				NA	Prot	
Protected Phases				1	2	
Permitted Phases						
Actuated Green, G (s)				40.7	28.3	
Effective Green, g (s)				40.7	28.3	
Actuated g/C Ratio				0.51	0.35	
Clearance Time (s)				5.3	5.7	
Lane Grp Cap (vph)				2586	1214	
v/s Ratio Prot				c0.30	c0.14	
v/s Ratio Perm						
v/c Ratio				0.58	0.41	
Uniform Delay, d1				13.7	19.5	
Progression Factor				1.00	0.03	
Incremental Delay, d2				1.0	0.7	
Delay (s)				14.7	1.2	
Level of Service				B	A	
Approach Delay (s)	0.0			14.7	1.2	
Approach LOS	A			B	A	

Intersection Summary			
HCM 2000 Control Delay	11.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

TRAFFIC SIGNAL WARRANT 2

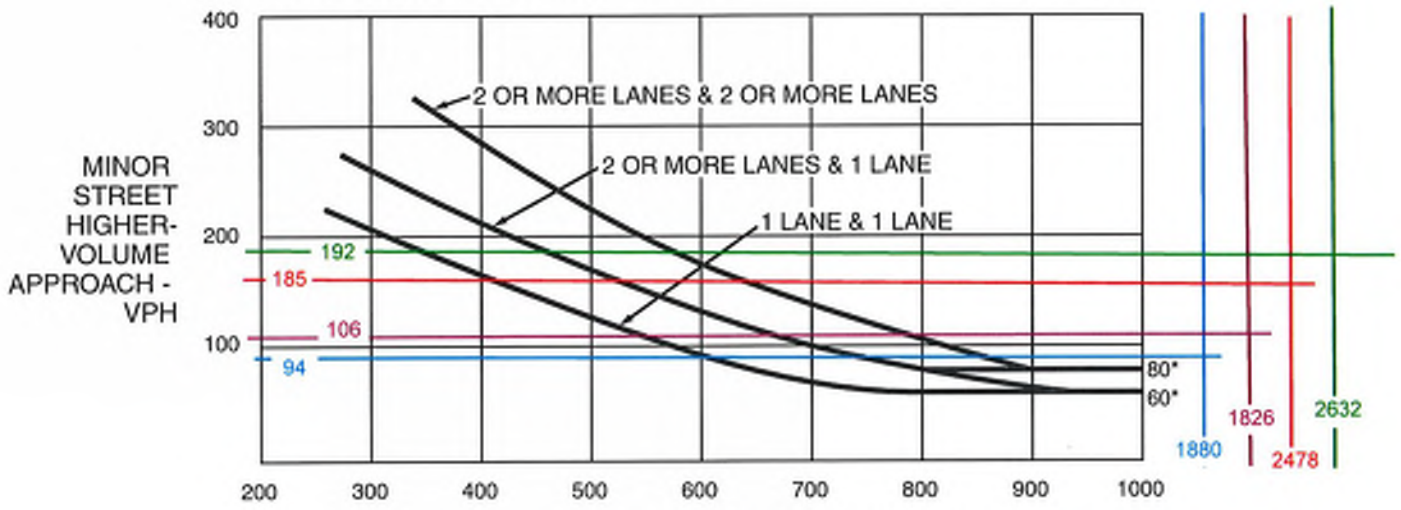
Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)

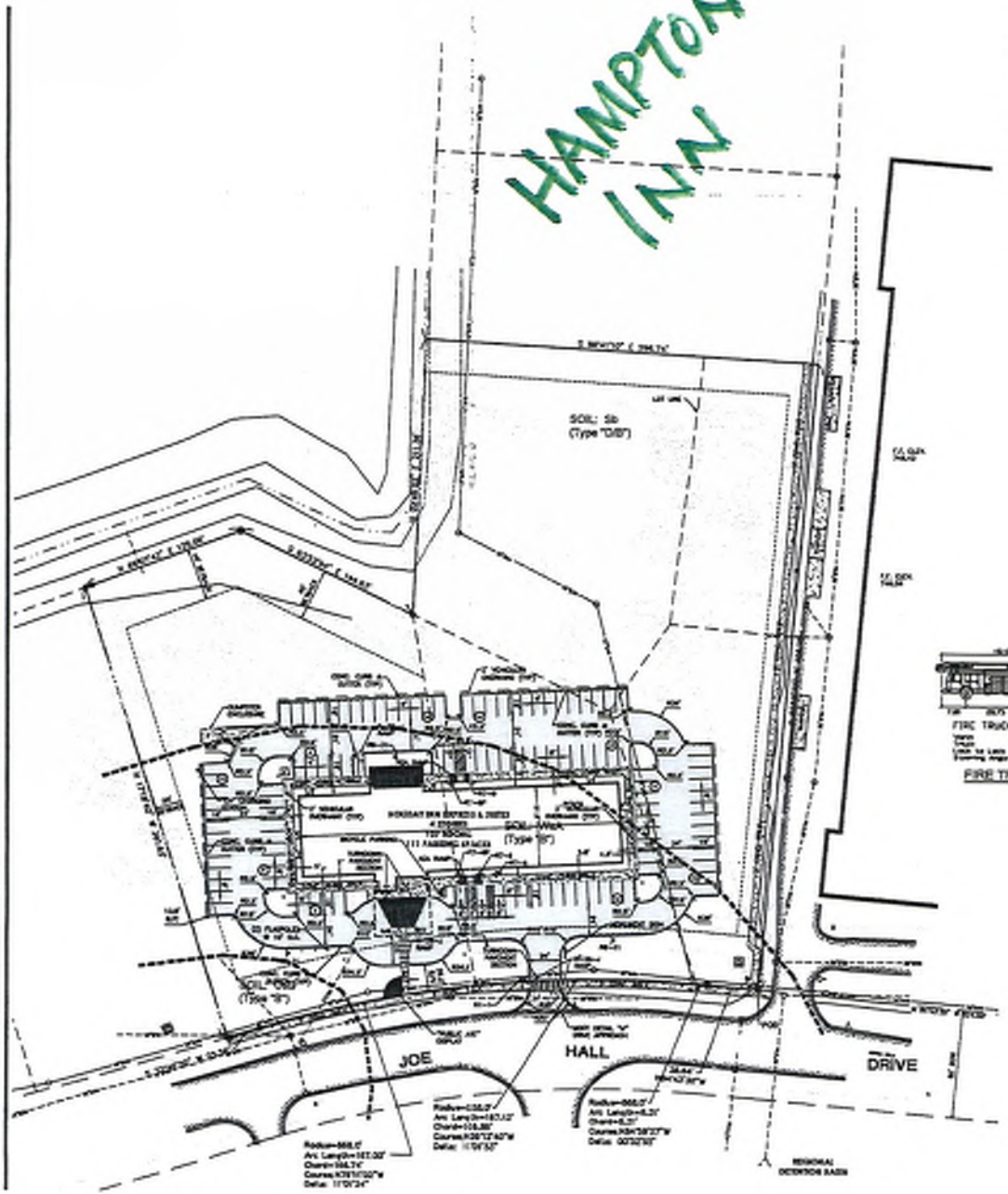


*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

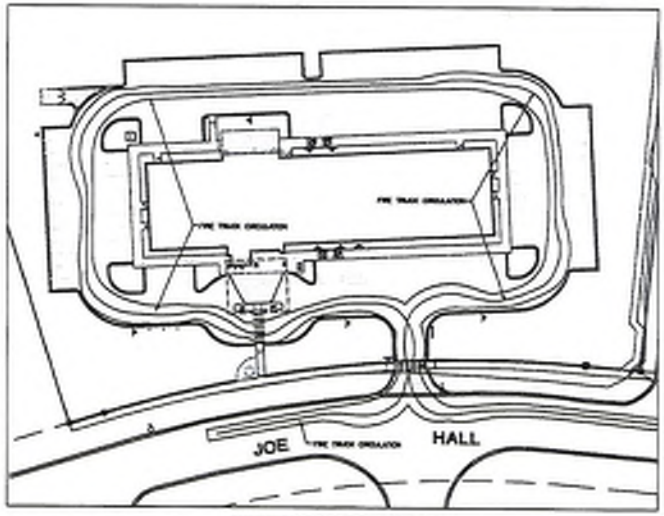
SITE PLANS

JAMES HATCH PKWY

HAMPTON INN



FIRE TRUCK



FIRE TRUCK CIRCULATION

LOCATION MAP

STELLAR DEVELOPMENT, LLC

HOLIDAY INN EXPRESS & SUITES

469 JOE HALL DRIVE

YPSILANTI TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

SITE LAYOUT AND PAVING PLAN

C3.0