
December 22, 2021

Mr. Dean Fiske
Strathmore Holdings, LLC
P.O. Box 743
Cheshire, CT 06410

**RE: Traffic Impact Study
East Mitchell Avenue Parcels
Assessor's Lots 57-261, 269-271, and 58-2
Cheshire, Connecticut
SLR #141.15841.00001**

Mr. Fiske:

At your request, we have undertaken this study to evaluate the traffic-related implications associated with the proposed residential development at the end of East Mitchell Avenue in Cheshire, Connecticut. The project proposes to build 56 units of multifamily housing (Mid Rise – Land Use Code [LUC] 221). Site access will be off East Mitchell Avenue.

The work comprising the study consisted of several tasks including field reconnaissance, data collection, review of roadway and traffic conditions, estimation of new site-generated traffic volumes, and assessment of future traffic operations. For this study, the following two intersections were evaluated:

1. Highland Avenue (Route 10) at East Mitchell Avenue
2. Highland Avenue (Route 10) at Maplecroft Plaza Main Driveway

EXISTING CONDITIONS

The existing information involving the vehicle volumes, speed, and accident history was collected to determine the existing conditions of the area around the proposed development site.

Site Environs

Route 10 is a Connecticut state highway that runs between New Haven and the Massachusetts state line near Granby. Within the project vicinity, Route 10 (Highland Avenue) is classified as a principal arterial. It runs north/south with one lane in each direction and has a speed limit of 35 miles per hour (mph). Sidewalks are present on the west side of the roadway.

East Mitchell Avenue is a local roadway that runs east/west that terminates approximately 700 feet east of Highland Avenue (Route 10). The roadway has one lane in each direction. On-street parking is not permitted, and sidewalks are not present on either side of the roadway. The primary access to the development is Route 10 via East Mitchell Avenue; however, there is emergency access via the driveway for the Gibson Associates residential complex.

Crash Data Summary

Information on traffic accident statistics for the study intersections was obtained from the Connecticut Crash Data Repository for the 3-year period of January 1, 2018, to December 17, 2021. The accident data collected for this period is shown in **Table 1**, summarized by location.

A total of 11 crashes were reported on Highland Avenue (Route 10) between East Mitchell Avenue and the Maplecroft Plaza driveway for the roughly 3-year period. 81 percent of the total crashes resulted in property damage only. No fatalities or serious injuries were reported. The most common collision type was rear-end collisions, comprising 90 percent of reported crashes.

TABLE 1
Crash Data Summary

LOCATION		CRASH SEVERITY			TYPE OF COLLISION		
		PROPERTY DAMAGE ONLY	POSSIBLE INJURY	TOTAL	REAR-END	SIDESWIPE (SAME DIRECTION)	TOTAL
INTERSECTIONS							
1	Highland Avenue (RT 10) at East Mitchell Ave	1	2	3	3	0	3
2	Highland Avenue (RT 10) at Maplecroft Plaza Main Dwy	1	3	4	3	1	4
ROAD SEGMENT							
Highland Avenue (RT 10) between East Mitchell Ave and Maplecroft Plaza Main Dwy		0	4	4	4	0	4
TOTAL		2	9	11	10	1	11

Source: Connecticut Crash Data Repository from January 1, 2018, to December 17, 2021.

Existing Traffic Volumes

Traffic monitoring data from June 2019 for Highland Avenue (Route 10) North of Route 70 was also obtained from the Connecticut Department of Transportation (CTDOT). The annualized average daily traffic (AADT) at this location was 13,200 vehicles (6,400 in the northbound direction and 6,800 in the southbound direction). Additionally, the average speed at this location was 28.8 mph and the 85th percentile speed was 33.7 mph.

To supplement the state traffic monitoring data, traffic counts were conducted at the intersection of Highland Avenue (Route 10) and East Mitchell Avenue. The counts were conducted on September 10, 2020, from 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m. to capture peak commuter activity. At the intersection of Highland Avenue and Maplecroft Plaza, turning movement counts previously collected in July 2016 by CTDOT were used. The 2016 counts were increased 4 percent (1 percent per year per CTDOT) to bring them to 2020 levels. Traffic counts are included in the Appendix.

Based on guidance from CTDOT, manual adjustments were made to the through volumes of the 2020 counts collected at East Mitchell Avenue to balance against the 2016 counts collected at the Maplecroft Plaza. Adjustments were made as shown in the chart below:

	NB THROUGH	SB THROUGH
AM	+32%	+48%
PM	+24%	+25%

The existing adjusted peak-hour traffic volumes are shown in **Figure 1**.

PROPOSED DEVELOPMENT

The proposed development off East Mitchell Avenue is planning to build 56 units of multifamily housing. Main access to the proposed development will utilize East Mitchell Avenue.

Proposed Development Trip Generation

The proposed site-generated peak-hour trips were estimated using statistical data published by the Institute of Transportation Engineers (ITE).¹ **Table 2** summarizes the site-generated traffic estimates for the proposed development during the study peak hours.

¹ *Trip Generation, 11th Edition*, Institute of Transportation Engineers, 2021

TABLE 2
Proposed Expansion New Site Traffic Estimates

LAND USE	UNITS	AM PEAK HOUR				PM PEAK HOUR			
		TRIP RATE	IN	OUT	TOTAL	TRIP RATE	IN	OUT	TOTAL
221 – Multi-family Housing (Mid-Rise)	56 DU	0.37/DU	5	16	21	0.39/DU	13	9	22

Notes:

1. *Trip Generation, 11th Edition*, Institute of Transportation Engineers
2. DU = Dwelling Units

As shown in Table 2, the proposed development is estimated to generate 21 new vehicle trips (5 vehicles entering and 16 vehicles exiting) during the morning peak hour and 22 new vehicle trips (13 vehicles entering and 9 vehicles exiting) during the afternoon peak hour.

Proposed Development Trip Distribution

The geographic distribution of the site-generated traffic was estimated based on review of the roadway traffic patterns in the vicinity of the site, as well as review of *Journey to Work* census commuting data. In summary, the development traffic will be distributed as 40 percent to and from the south, and 60 percent to and from the north. **Figure 2** illustrates the distribution for the site-generated traffic through the study area.

Based on the proposed expansion trip generation and trip distribution, the proposed development trips were assigned to the study area intersections. **Figure 3** displays the resulting proposed development trip assignment.

FUTURE (2021) CONDITIONS

The proposed development is anticipated to be completed by 2023. Future (2023) conditions were evaluated both with and without the proposed development to determine possible traffic impacts.

Background Traffic Volumes

The background traffic scenario is reflective of future (2023) conditions if the proposed development was not built. Background (2023) Conditions includes traffic associated with other nearby expected upcoming developments as well as general traffic growth.

Based on our knowledge of the area and correspondence with CTDOT, there is one pending development that will affect the study intersections. The pending development is located at 202 and 216 Highland Avenue (Route 10) at the northeast corner of the intersection of Highland Avenue (Route 10) at Maplecroft Plaza Main Driveway. The development proposes to redevelop the two parcels into an approximately 2,500-square-foot Chase Bank with ATM drive-through. A Traffic Impact Study was completed for the

planned development in March 2021 by SLR. A copy of the site-generated traffic figures is included in the Appendix.

Based on correspondence with CTDOT, background traffic growth is set for 1 percent growth per year. Background (2023) Conditions traffic volumes were estimated by applying the growth rate to the existing adjusted peak-hour traffic volumes and adding the Chase Bank site-generated trip assignment. The resultant Background (2023) Conditions peak-hour traffic volumes are shown in **Figure 4**.

Combined Traffic Volumes

The combined traffic scenario is reflective of future (2023) conditions once the proposed development is built and inhabited. Combined (2023) Conditions peak-hour traffic volumes were estimated by adding the estimated proposed development trip assignment (shown in Figure 3) to the Background (2023) Conditions traffic volumes (shown in Figure 4). The resultant Combined (2023) Conditions peak-hour traffic volumes are shown in **Figure 5**.

INTERSECTION CAPACITY ANALYSIS

Intersection capacity analysis was performed at the study intersections under Background (2023) and Combined (2023) Conditions to evaluate each intersection's ability to process traffic volumes. These evaluations were used to determine possible traffic impacts from the proposed development, based on the comparison of background and combined traffic operations.

Intersection operation results are expressed as a level of service (LOS). LOS is used to provide a qualitative evaluation of the efficiency of operations of an intersection in terms of delay and inconvenience based on certain quantitative calculations. A description of the various LOS designations, A through F, is given in the Appendix. LOS A describes operations with very low average control delay per vehicle while LOS F describes operations with long average delays. The study intersections were evaluated using *Synchro 10 (Trafficware)* traffic analysis software package. **Table 3** summarizes the capacity analysis findings under Background and Combined (2021) Conditions. The *Synchro* analysis worksheets are included in the Appendix.

It is important to note LOS A to LOS D are generally considered acceptable conditions. However, in some areas, LOS E during peak hours is often deemed acceptable and can indicate an efficient tradeoff between traffic flow and the amount of land devoted to the movement of motor vehicles.

As shown in Table 3, both study intersections are not expected to experience decreases in individual movement LOS because of the proposed redevelopment. All individual movements at both study intersections are expected to operate at acceptable LOS (LOS A to LOS D) under Background and Combined (2023) Conditions during both peak periods except for the eastbound right turn movement out of the Maplecroft Plaza. The right turn movement is expected to operate at a LOS E under Background and Combined (2023) Conditions during the p.m. peak period. This is largely due to the no-right-on-red restriction at this approach; however, the proposed development is not anticipated to impact this movement.

Queueing was also analyzed for the study area. At the intersection of Highland Avenue (Route 10) and Maplecroft Plaza, the southbound through/left 95th percentile queue is expected to extend beyond the East Mitchell Avenue intersection under both Background and Combined (2023) Conditions during both peak periods; however, the development will not notably impact these operations.

TABLE 3
Capacity Analysis Summary
Future (2023) Conditions

INTERSECTION/LANE GROUP	LEVEL OF SERVICE			
	AM PEAK HOUR		PM PEAK HOUR	
	BACKGROUND	COMBINED	BACKGROUND	COMBINED
Unsignalized				
Highland Avenue (Route 10) at East Mitchell Avenue				
Westbound Left-Right	D	D	D	D
Southbound Through-Left	A	A	A	A
Signalized				
Highland Avenue (Route 10) at Maplecroft Plaza				
Northbound Left	D	D	D	D
Northbound Through-Right	D	D	E	E
Westbound Left-Through-Right	C	C	C	C
Eastbound Left-Through	A	A	A	A
Eastbound Right	A	A	A	A
Southbound Left	A	A	A	A
Southbound Through-Right	B	B	B	B
Overall	A	B	B	B

Notes: LOS calculations were performed using *Synchro 10*. The unsignalized intersection was analyzed with HCM 2010.

INTERSECTION SIGHT DISTANCE ANALYSIS

Intersection sight distances were measured at the proposed driveways. Intersection sight distance is determined through the creation of clear sight triangles. Each quadrant of the intersection should contain a triangular area free of obstructions. For vehicles approaching an intersection, the length of the legs of the triangle should be long enough such that the driver can see any potentially conflicting vehicles in sufficient time to slow or stop before colliding. For vehicles departing from an intersection, the length of the legs of the triangle should be sufficient for a stopped driver to depart from the intersection and turn onto the main road safely.

Intersection sight distances were measured in accordance with criteria set forth in the 2003 CTDOT *Highway Design Manual*. For a design speed of 25 mph, 280 feet of sight distance is required for a passenger car turning left or right onto a two-lane facility without a median.

There is adequate sight distance based on CTDOT minimum requirements at the proposed driveways on East Mitchell Avenue. It is important to note that vegetation within clear sight triangles must be kept trimmed, especially during the spring and summer, to ensure that sufficient intersection sight distance is provided throughout the year.

SUMMARY

A study was conducted to assess the traffic impacts of the proposed East Mitchell Avenue 56 mid-rise apartment units. The crash analysis of the study area does not indicate any existing crash patterns. Based on the results of the capacity and queue analysis, it is our opinion that the increase in East Mitchell Avenue traffic can be accommodated by the surrounding roadway system without any offsite mitigation. No significant LOS impacts are anticipated to be caused by the proposed development.

We hope this report is useful to you and the Town of Cheshire. If you have any questions or need anything further, please do not hesitate to contact either of the undersigned.

Sincerely,

SLR International Corporation



David G. Sullivan, PE
US Manager of Traffic & Transportation Planning



Emily A. Foster, PE
Associate Transportation Engineer

Figures

- Figure 1 – Existing Adjusted Peak Hour Traffic Volumes
- Figure 2 – Proposed Development Trip Distribution
- Figure 3 – Proposed Development Trip Assignment
- Figure 4 – Background (2023) Conditions Peak Hour Traffic Volumes
- Figure 5 – Combined (2023) Conditions Peak Hour Traffic Volumes

Appendix

- Traffic Volume Counts
- COVID Adjustments
- Chase Bank Site Generated Traffic Figures
- LOS Designation Descriptions
- *Synchro* Analysis Worksheets

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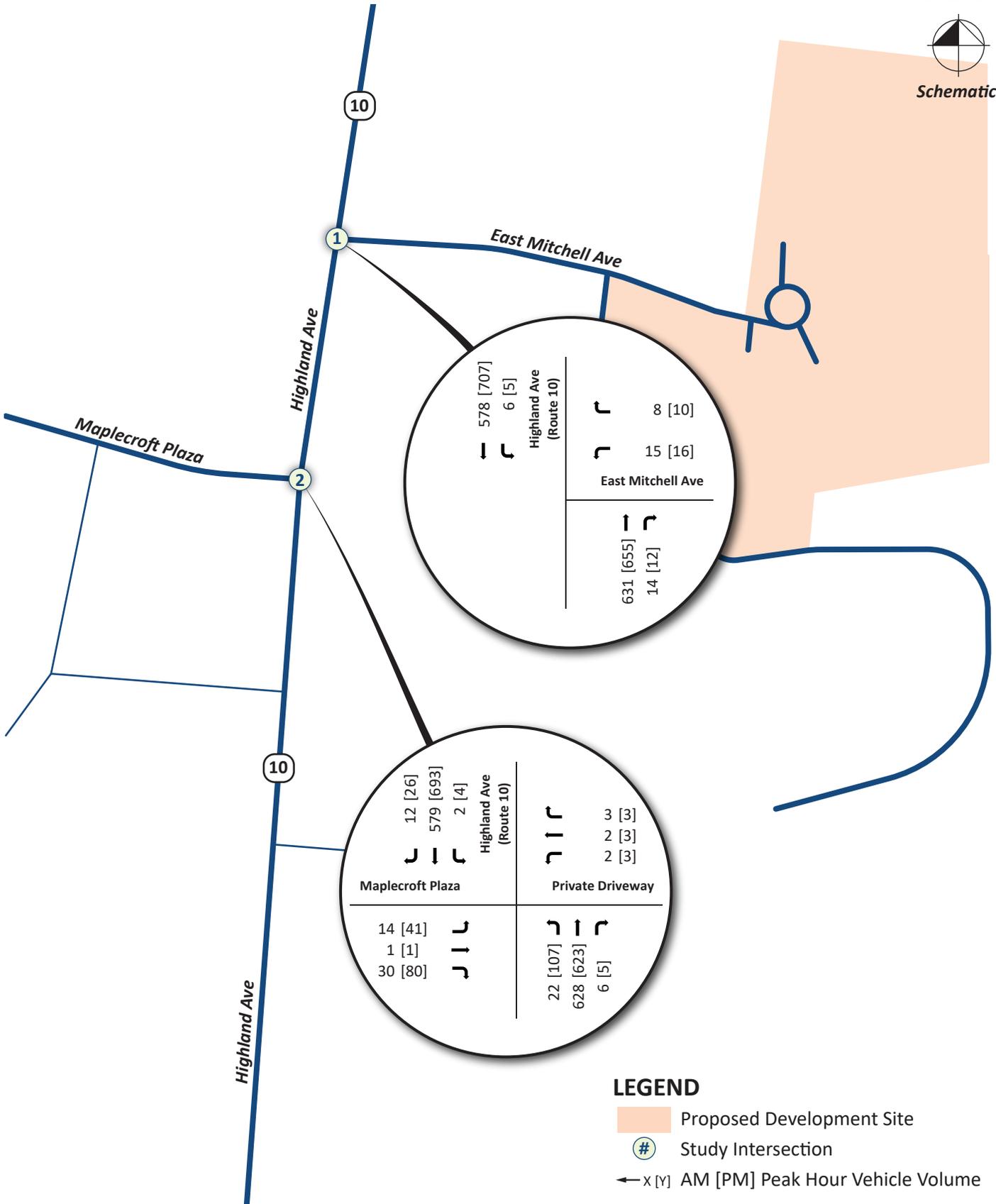


Figure 1
Existing Adjusted Peak Hour Traffic Volumes

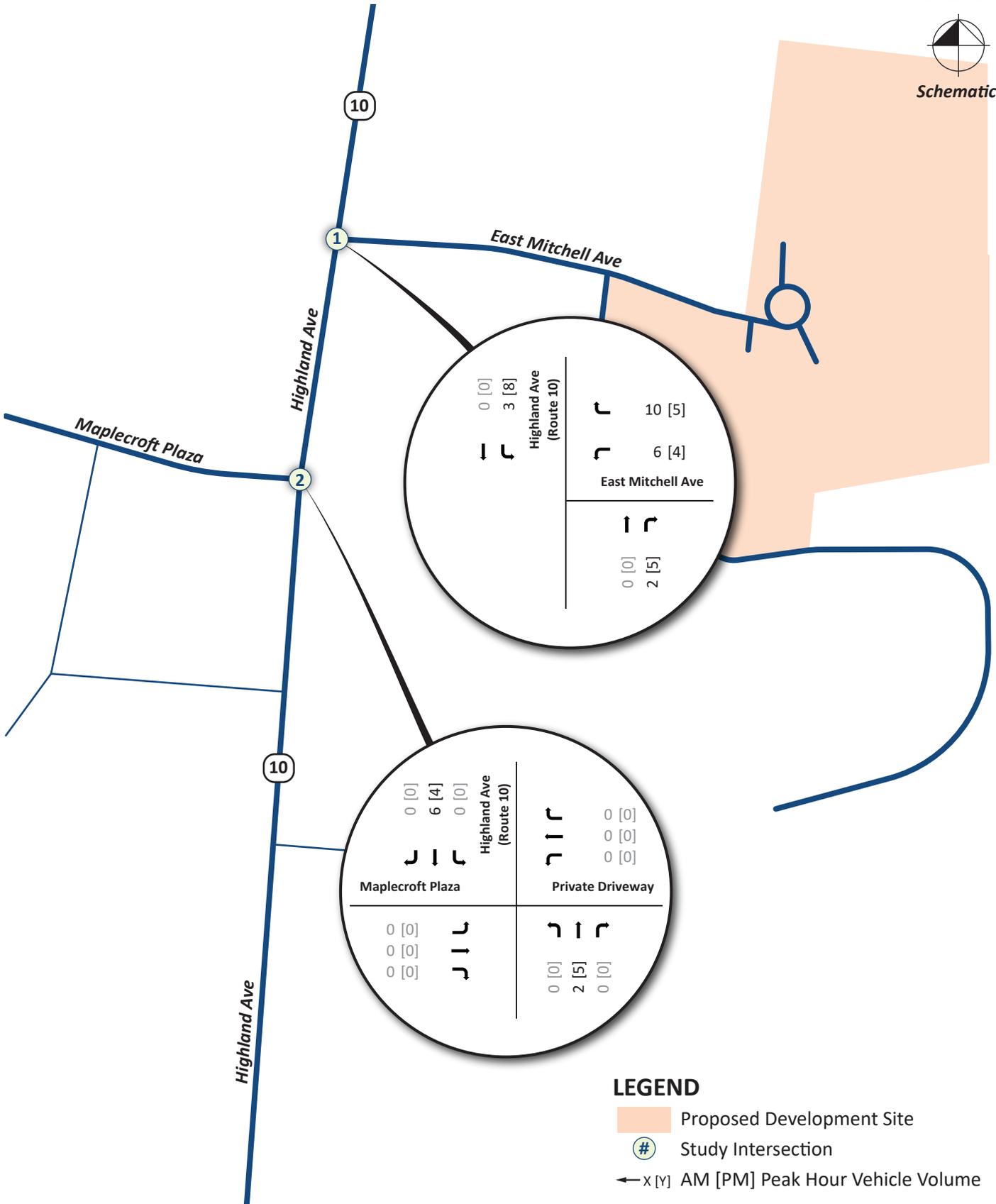


Figure 3
Proposed Development Trip Assignment

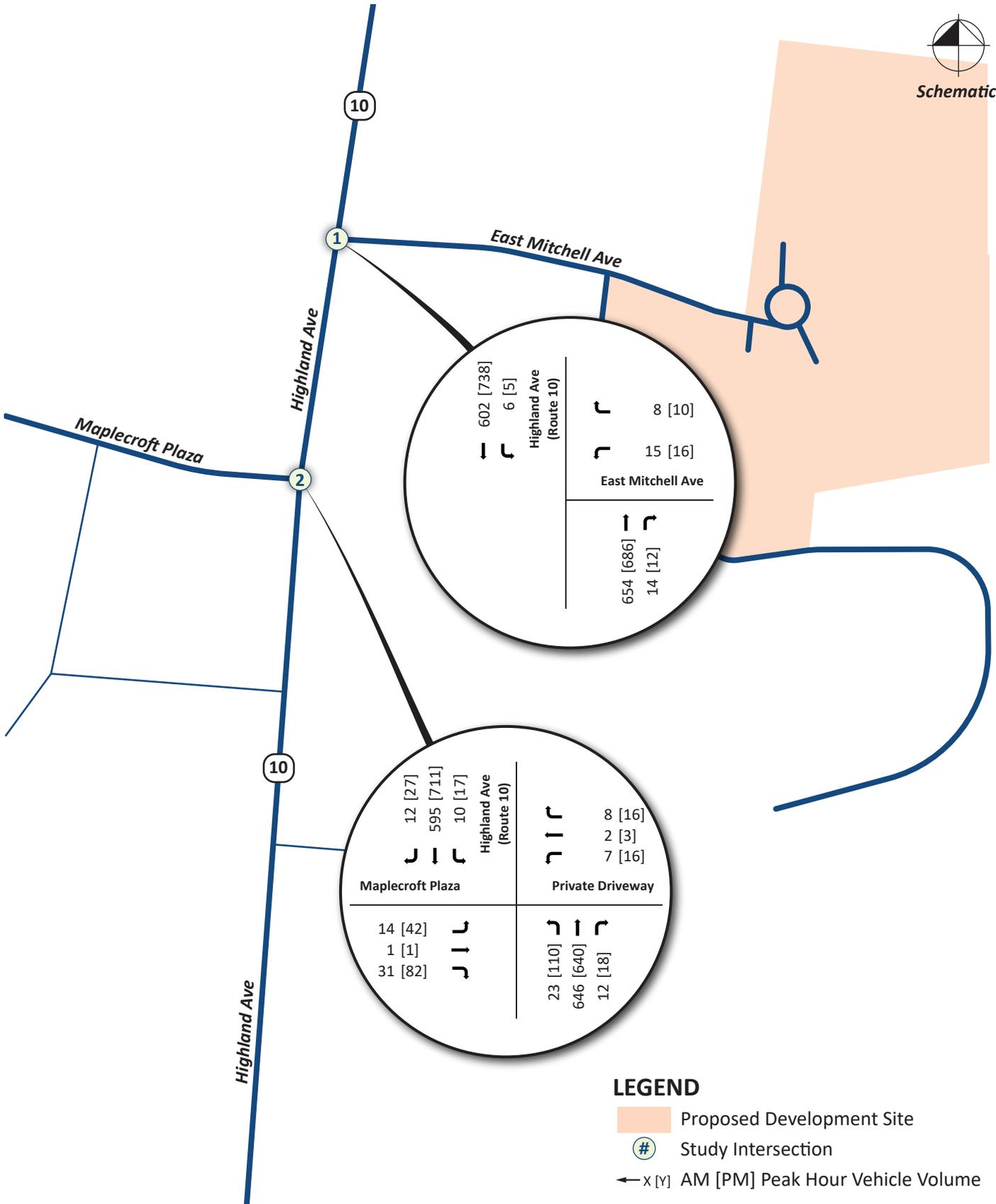
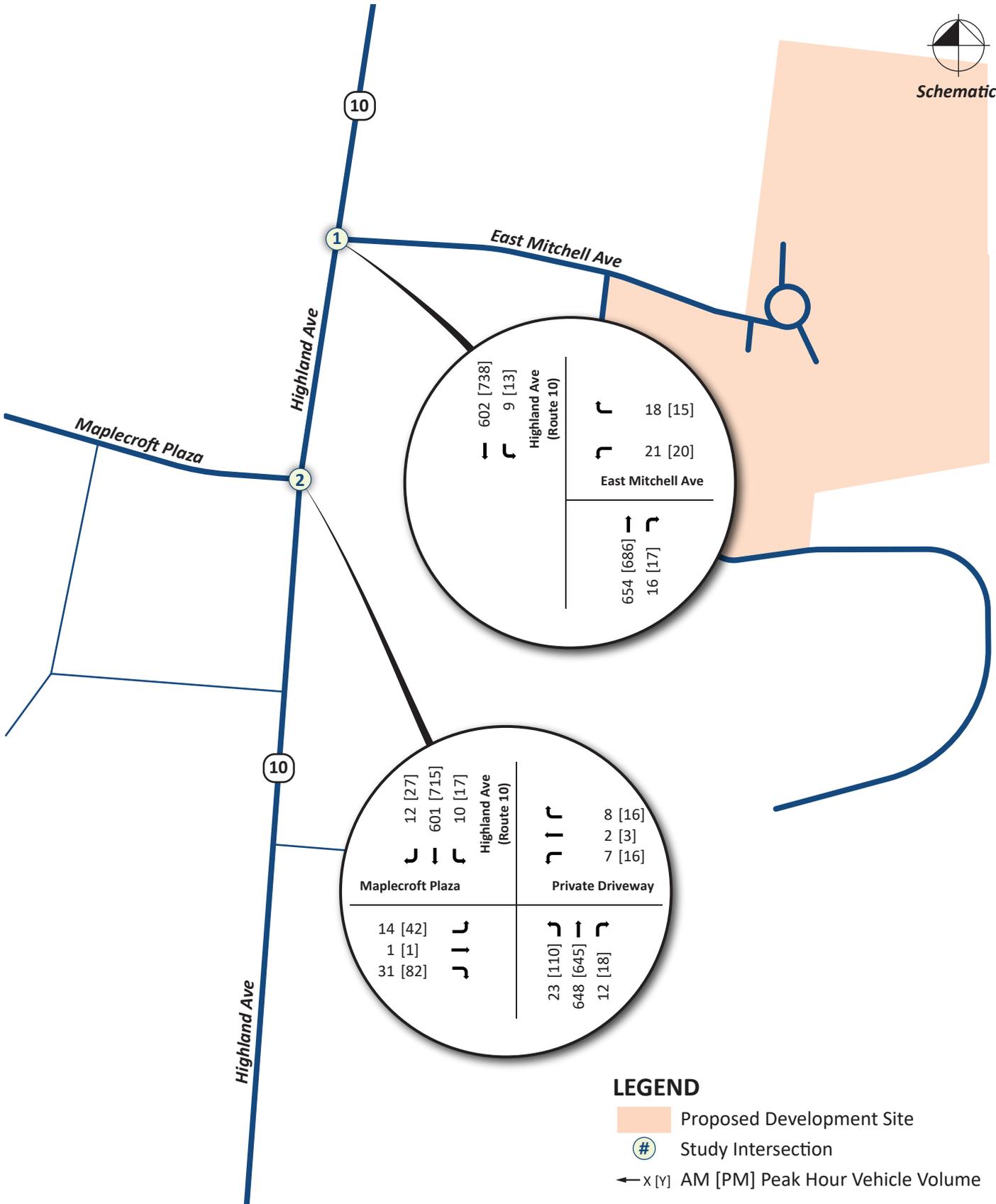


Figure 4
Background (2023) Conditions Peak Hour Traffic Volumes



LEGEND

- Proposed Development Site
- # Study Intersection
- ← x [Y] AM [PM] Peak Hour Vehicle Volume

Figure 5
Combined (2023) Conditions Peak Hour Traffic Volumes

APPENDIX

File Name: H:\RTC ALL COUNTS 2016\JUNE 2020\1270-1TH.ppd

Start Date: 9/10/2020

Start Time: 7:00:00 AM

Site Code: 00000001

Comment 1: ALL COUNTS

Comment 2:

Comment 3:

Comment 4:

Start Time	HIGHLAND AVE. SOUTHBOUND				E. MITCHELL AVE. WESTBOUND				RTE. 10 NORTHBOUND			
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds
07:00 AM	0	59	1	0	1	0	2	0	7	100	0	0
07:15 AM	0	61	1	0	2	0	1	0	5	103	0	0
07:30 AM	0	69	1	0	2	0	2	0	12	120	0	0
07:45 AM	0	92	0	0	0	0	1	0	2	116	0	0
08:00 AM	0	93	1	0	2	0	1	0	3	119	0	0
08:15 AM	0	97	2	0	3	0	6	0	3	110	0	0
08:30 AM	0	92	0	0	2	0	6	0	1	121	0	0
08:45 AM	0	108	3	0	1	0	2	0	7	127	0	0
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	120	1	0	2	0	2	0	4	118	0	0
04:15 PM	0	121	0	0	3	0	4	0	5	122	0	0
04:30 PM	0	158	2	0	1	0	1	0	4	129	0	0
04:45 PM	0	142	1	0	2	0	4	0	1	138	0	0
05:00 PM	0	143	2	0	4	0	7	0	2	139	0	0
05:15 PM	0	112	4	0	3	0	2	0	5	110	0	0
05:30 PM	0	112	4	0	1	0	2	0	0	88	0	0
05:45 PM	0	106	3	0	2	0	2	0	2	81	0	0

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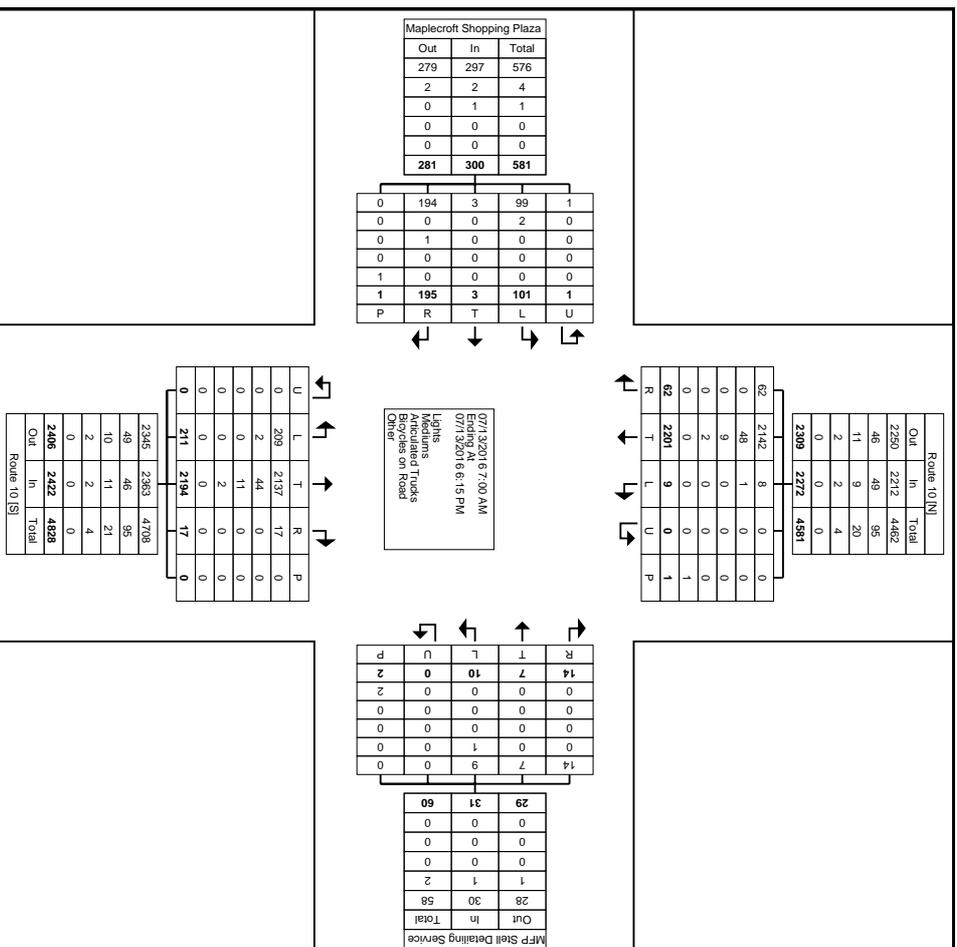
Count Name: Cheshire - Rt 10 at Maplecroft
Shopping Plaza. Int. No. 025-225 - bike/ped
TMC
Site Code:
Start Date: 07/13/2016
Page No: 1

Turning Movement Data

Start Time	Route 10 Southbound						MFP Stell Detailing Service Driveway Westbound						Route 10 Northbound						Maplecroft Shopping Plaza Drive Eastbound						Int. Total	
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total		
7:00 AM	1	87	0	0	0	88	1	0	0	0	0	1	0	97	1	0	0	0	98	2	0	1	0	0	3	190
7:15 AM	1	75	1	0	0	77	0	0	0	0	0	0	0	93	0	0	0	0	93	2	0	3	0	0	5	175
7:30 AM	1	97	0	0	0	98	1	0	0	0	0	2	1	129	3	0	0	0	133	3	0	1	0	0	4	237
7:45 AM	3	135	1	0	0	139	0	1	2	0	0	3	2	129	8	0	0	0	139	4	0	6	0	0	10	291
Hourly Total	6	394	2	0	0	402	2	1	3	0	0	6	3	448	12	0	0	0	463	11	0	11	0	0	22	893
8:00 AM	2	107	0	0	0	109	0	0	0	0	0	0	3	139	7	0	0	0	149	9	0	1	0	0	10	268
8:15 AM	1	119	0	0	0	120	2	0	0	0	0	1	1	176	3	0	0	0	180	3	0	4	0	0	7	309
8:30 AM	2	171	2	0	0	175	1	2	2	0	0	5	1	144	1	0	0	0	146	11	1	5	0	0	17	343
8:45 AM	7	160	0	0	0	167	0	0	0	0	0	0	1	145	10	0	0	0	156	6	0	3	0	0	9	332
Hourly Total	12	557	2	0	0	571	3	2	2	0	0	7	6	604	21	0	0	0	631	29	1	13	0	0	43	1252
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***																										
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:00 PM	3	134	1	0	0	138	3	1	1	0	0	1	5	138	21	0	0	0	160	25	0	13	0	0	38	341
4:15 PM	5	176	0	0	0	181	2	0	0	0	0	2	2	152	22	0	0	0	175	20	0	8	0	0	28	386
4:30 PM	9	186	1	0	0	196	0	2	0	0	0	2	2	129	27	0	0	0	158	23	0	8	1	0	32	388
4:45 PM	5	145	1	0	0	151	0	1	1	0	0	2	0	146	29	0	0	0	175	14	0	12	0	0	26	354
Hourly Total	22	641	3	0	0	666	5	4	2	0	0	11	4	565	99	0	0	0	668	82	0	41	1	0	124	1469
5:00 PM	7	170	2	0	0	179	2	0	1	0	0	3	3	160	18	0	0	0	181	19	1	11	0	0	31	394
5:15 PM	4	165	0	0	0	169	1	0	1	0	0	2	0	164	29	0	0	0	193	21	0	8	0	0	29	393
5:30 PM	8	127	0	0	0	135	0	0	0	0	0	0	0	140	18	0	0	0	158	16	0	9	0	0	1	25
5:45 PM	3	145	0	0	0	148	1	0	1	0	0	2	1	113	14	0	0	0	128	17	1	8	0	0	26	304
Hourly Total	22	607	2	0	0	631	4	0	3	0	0	7	4	577	79	0	0	0	660	73	2	36	0	1	111	1409
6:00 PM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Grand Total	62	2201	9	0	0	2272	14	7	10	0	0	2	31	17	2194	211	0	0	2422	195	3	101	1	1	300	5025
Approach %	2.7	96.9	0.4	0.0	0.0	-	45.2	22.6	32.3	0.0	0.0	-	-	0.7	90.6	8.7	0.0	0.0	-	65.0	1.0	33.7	0.3	-	-	-
Total %	1.2	43.8	0.2	0.0	0.0	45.2	0.3	0.1	0.2	0.0	0.0	0.6	0.3	43.7	4.2	0.0	0.0	0.0	48.2	3.9	0.1	2.0	0.0	-	6.0	-
Lights	62	2142	8	0	0	2212	14	7	9	0	0	30	17	2137	209	0	0	0	2363	194	3	99	1	-	297	4902
% Lights	100.0	97.3	88.9	-	-	97.4	100.0	100.0	90.0	-	-	96.8	100.0	97.4	99.1	-	-	-	97.6	99.5	100.0	98.0	100.0	-	99.0	97.6
Mediums	0	48	1	0	0	49	0	0	1	0	0	1	0	44	2	0	0	0	46	0	0	2	0	0	2	98
% Mediums	0.0	2.2	11.1	-	-	2.2	0.0	0.0	10.0	-	-	3.2	0.0	2.0	0.9	-	-	-	1.9	0.0	0.0	2.0	0.0	-	0.7	2.0
Articulated Trucks	0	9	0	0	0	9	0	0	0	0	0	0	0	11	0	0	0	0	11	1	0	0	0	0	1	21
% Articulated Trucks	0.0	0.4	0.0	-	-	0.4	0.0	0.0	0.0	-	-	0.0	0.0	0.5	0.0	-	-	-	0.5	0.5	0.0	0.0	0.0	-	0.3	0.4
Bicycles on Road	0	2	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	4
% Bicycles on Road	0.0	0.1	0.0	-	-	0.1	0.0	0.0	0.0	-	-	0.0	0.0	0.1	0.0	-	-	-	0.1	0.0	0.0	0.0	0.0	-	0.0	0.1
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	-

Connecticut DOT
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Start Date: 07/13/2016
Page No.: 3



Turning Movement Data Plot

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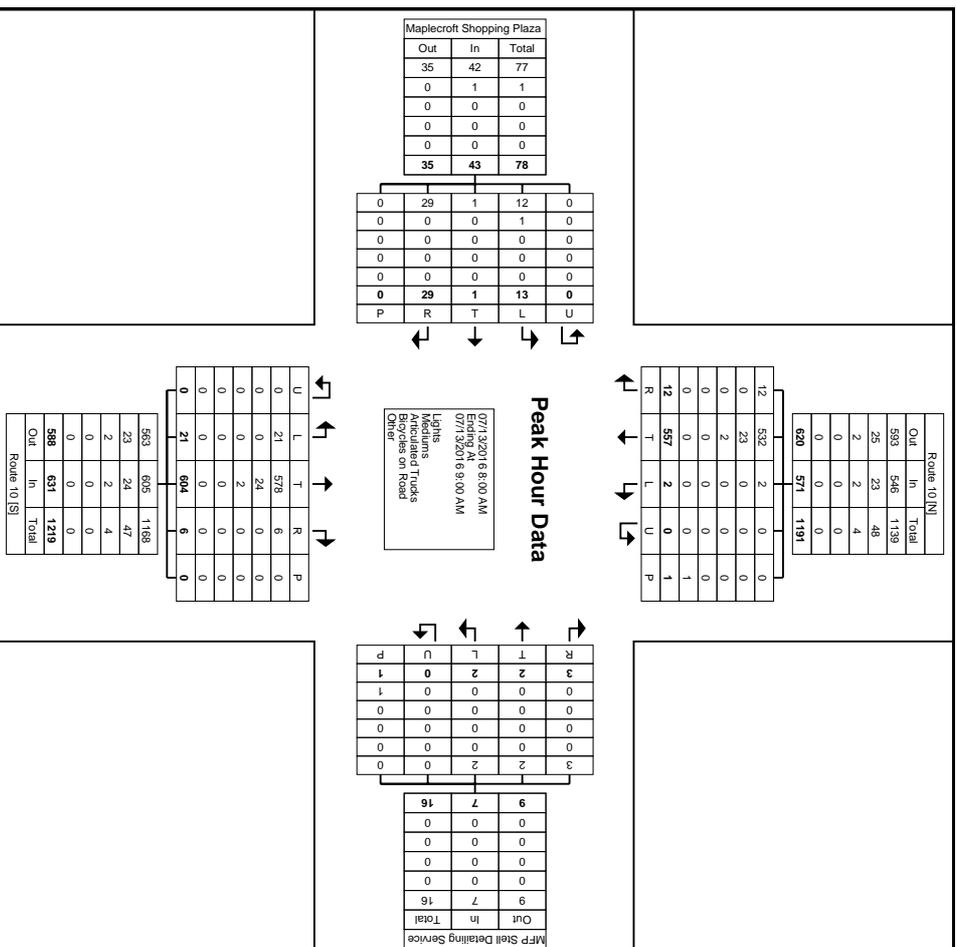
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Page No: 4

Turning Movement Peak Hour Data (8:00 AM)

Start Time	Route 10 Southbound						MFP Stell Detailing Service Driveway Westbound						Route 10 Northbound						Maplecroft Shopping Plaza Drive Eastbound						Int. Total
	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	Right	Thru	Left	U-Turn	Peds	App. Total	
8:00 AM	2	107	0	0	0	109	0	0	0	0	0	0	3	139	7	0	0	149	9	0	1	0	0	10	268
8:15 AM	1	119	0	0	1	120	2	0	0	1	2	2	1	176	3	0	0	180	3	0	4	0	0	7	309
8:30 AM	2	171	2	0	0	175	1	2	2	0	5	1	1	144	1	0	0	146	11	1	5	0	0	17	343
8:45 AM	7	160	0	0	0	167	0	0	0	0	0	1	1	145	10	0	0	156	6	0	3	0	0	9	332
Total	12	557	2	0	1	571	3	2	2	0	7	6	6	604	21	0	0	631	29	1	13	0	0	43	1252
Approach %	2.1	97.5	0.4	0.0	-	-	42.9	28.6	28.6	0.0	-	1.0	95.7	3.3	0.0	-	-	67.4	2.3	30.2	0.0	-	-	-	-
Total %	1.0	44.5	0.2	0.0	-	45.6	0.2	0.2	0.2	0.0	0.6	0.5	48.2	1.7	0.0	-	50.4	2.3	0.1	1.0	0.0	-	3.4	-	
PHF	0.429	0.814	0.250	0.000	-	0.816	0.375	0.250	0.250	0.000	0.350	0.500	0.858	0.525	0.000	-	0.876	0.659	0.250	0.650	0.000	-	0.632	0.913	
Lights	12	532	2	0	-	546	3	2	2	0	7	6	578	21	0	-	605	29	1	12	0	-	42	1200	
% Lights	100.0	95.5	100.0	-	-	95.6	100.0	100.0	100.0	-	100.0	100.0	95.7	100.0	-	-	95.9	100.0	100.0	92.3	-	-	97.7	95.8	
Mediums	0	23	0	0	-	23	0	0	0	0	0	0	24	0	0	-	24	0	0	1	0	-	1	48	
% Mediums	0.0	4.1	0.0	-	-	4.0	0.0	0.0	0.0	-	0.0	0.0	4.0	0.0	-	-	3.8	0.0	0.0	7.7	-	-	2.3	3.8	
Articulated Trucks	0	2	0	0	-	2	0	0	0	0	0	0	2	0	0	-	2	0	0	0	0	-	0	4	
% Articulated Trucks	0.0	0.4	0.0	-	-	0.4	0.0	0.0	0.0	-	0.0	0.0	0.3	0.0	-	-	0.3	0.0	0.0	0.0	-	-	0.0	0.3	
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	-	0	0	
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	0	-	
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	0	-	
Pedestrians	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	0	-	-	-	-	-	0	-	

Connecticut DOT
P.O. Box 317546
Newington, Connecticut, United States 06131
(860) 594-2087 gary.sojka@ct.gov

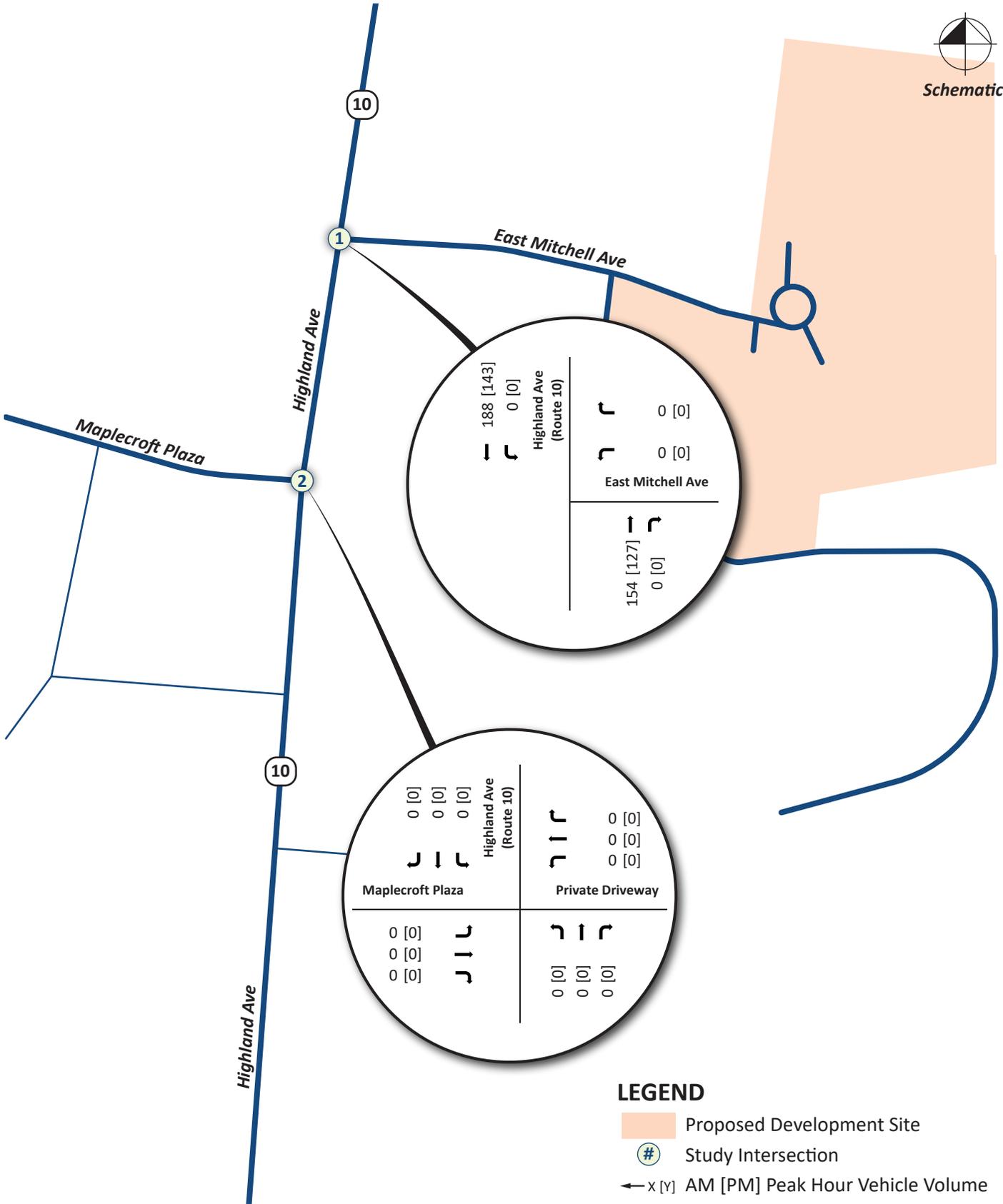
Count Name: Cheshire - Rt 10 at Maplecroft Shopping Plaza. Int. No. 025-225 - bike/ped TMC
Site Code:
Start Date: 07/13/2016
Page No.: 5



Turning Movement Peak Hour Data Plot (8:00 AM)

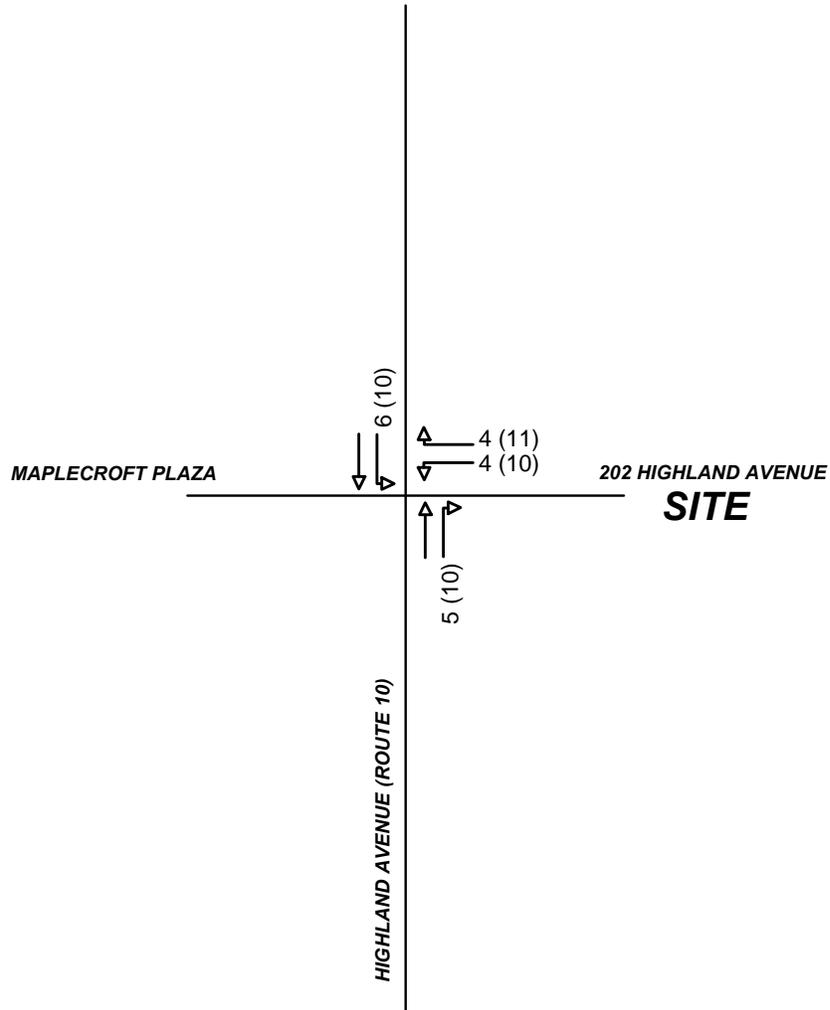


Schematic





SCHEMATIC



	Entering	Exiting	Total
Total Site-Generated Trips	14 (25)	10 (26)	24 (51)
Pass-By Trips	-3 (-5)	-2 (-5)	-5 (-10)
New Trips	11 (20)	8 (21)	19 (41)

**SITE-GENERATED TRAFFIC (NEW)
CHASE BANK WITH DRIVE-THROUGH**

**202 & 216 Highland Avenue (Route 10)
Cheshire, Connecticut**

LEGEND

= a.m. peak hour
(##) = p.m. peak hour

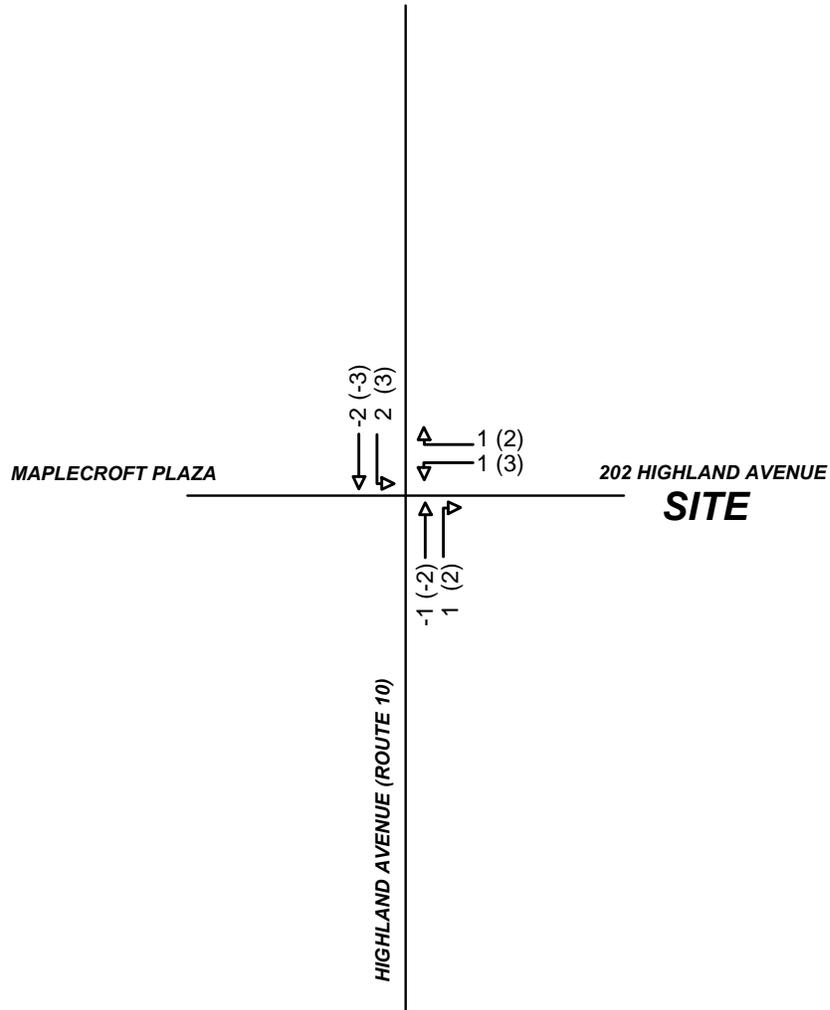


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203.344.7887
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FIGURE 4



SCHEMATIC



	Entering	Exiting	Total
Total Site-Generated Trips	14 (25)	10 (26)	24 (51)
Pass-By Trips	-3 (-5)	-2 (-5)	-5 (-10)
Net-New Trips	11 (20)	8 (21)	19 (41)

**SITE-GENERATED TRAFFIC (PASS-BY)
CHASE BANK WITH DRIVE-THROUGH**

**202 & 216 Highland Avenue (Route 10)
Cheshire, Connecticut**

LEGEND

= a.m. peak hour
(##) = p.m. peak hour

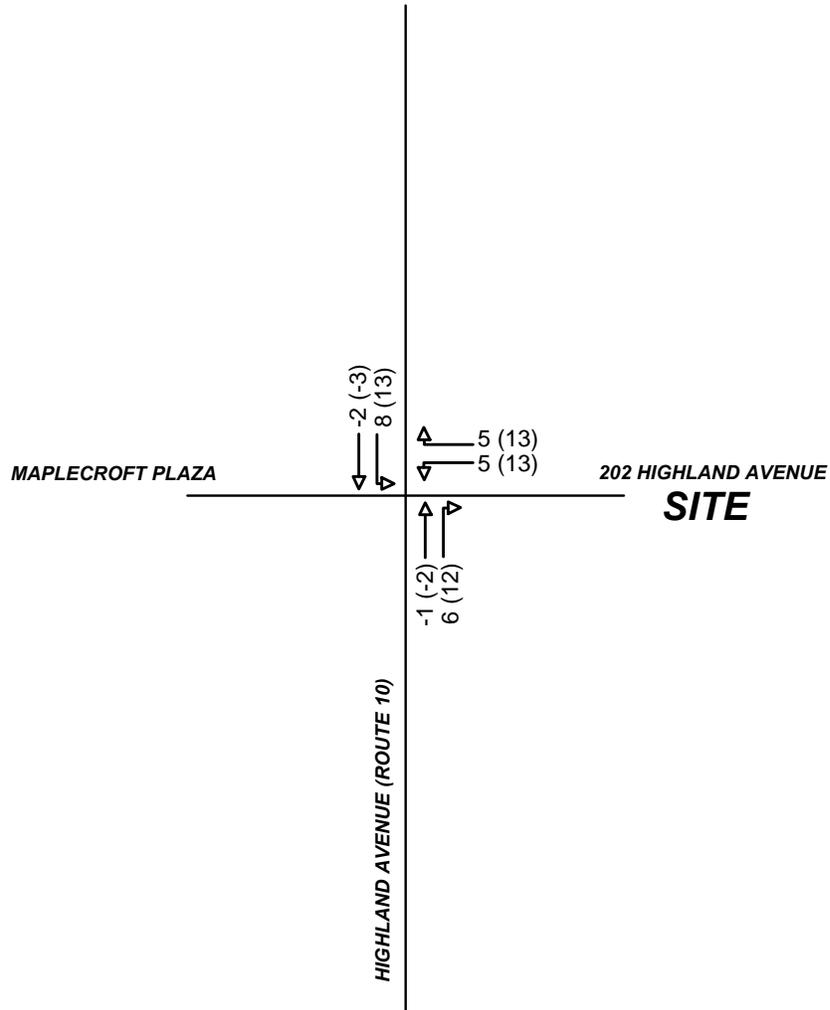


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FIGURE 5



SCHEMATIC



	Entering	Exiting	Total
Total Site-Generated Trips	14 (25)	10 (26)	24 (51)
Pass-By Trips	-3 (-5)	-2 (-5)	-5 (-10)
Net-New Trips	11 (20)	8 (21)	19 (41)

**SITE-GENERATED TRAFFIC (TOTAL)
CHASE BANK WITH DRIVE-THROUGH**

**202 & 216 Highland Avenue (Route 10)
Cheshire, Connecticut**

LEGEND

= a.m. peak hour
(##) = p.m. peak hour



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FIGURE 6

LEVEL OF SERVICE

FOR TWO-WAY

STOP SIGN CONTROLLED INTERSECTIONS

The level of service for a TWSC (two-way stop controlled) intersection is determined by the computed or measured control delay and is defined for each minor movement. Level of service is not defined for the intersection as a whole. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. LOS criteria are given in the Table. LOS criteria are given below:

LEVEL-OF SERVICE CRITERIA FOR AWSC INTERSECTIONS	
LOS¹	CONTROL DELAY (s/veh)
A	≤ 10
B	> 10 AND ≤ 15
C	> 15 AND ≤ 25
D	> 25 AND ≤ 35
E	> 35 AND ≤ 50
F	> 50

Note: LOS criteria apply to each lane on a given approach and to each approach on the minor street.
 LOS is not calculated for major-street approaches or for the intersection as a whole.
 LOS F is assigned to a movement if the volume-to-capacity ratio exceeds 1.0, regardless of the control delay

Reference: Highway Capacity Manual Version 6.0, Transportation Research Board, 2016.

LEVEL OF SERVICE FOR SIGNALIZED INTERSECTIONS (MOTORIZED VEHICLE MODE)

Level of service for signalized intersections is defined in terms of control delay, which is a measure of driver discomfort, frustration, fuel consumption, and increased travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions: in the absence of traffic control, geometric delay, any incidents, and any other vehicles. Specifically, LOS criteria for traffic signals are stated in terms of the average control delay per vehicle, typically for a 15-min analysis period. Delay is a complex measure and depends on a number of variables, including the quality of progression, the cycle length, the green ratio, and the v/c ratio for the lane group. The criteria are given below.

LEVEL-OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS MOTORIZED VEHICLE MODE		
LOS By Volume-to-Capacity Ratio¹		CONTROL DELAY (s/veh)
v/c ≤ 1.0	v/c > 1.0	
A	F	≤ 10
B	F	> 10 AND ≤ 20
C	F	> 20 AND ≤ 35
D	F	> 35 AND ≤ 55
E	F	> 55 AND ≤ 80
F	F	> 80

¹ For approach-based and intersection-wide assessments, LOS is defined solely by control delay.

Specific descriptions of each LOS for signalized intersections are provided below:

Level of Service A describes operations with a control delay of 10 s/veh and 20 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If LOS A is the result of favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.

Level of Service B describes operations with control delay between 10 and 20 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.

Level of Service C describes operations with control delay between 20 and 35 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual *cycle failures* (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.

Level of Service D describes operations with control delay between 35 and 55 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.

Level of Service E describes operations with control delay between 55 and 80 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.

Level of Service F describes operations with control delay exceeding 80 s/veh or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

Reference: Highway Capacity Manual 6, Transportation Research Board, 2016.

East Mitchell Ave
Lanes, Volumes, Timings

Background Conditions
AM Peak

	WBL	WBR	NBT	NBR	SBL	SBT
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	15	8	654	14	6	602
Traffic Volume (vph)	15	8	654	14	6	602
Future Volume (vph)	15	8	654	14	6	602
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.951		0.997			
Flt Protected	0.969					0.999
Satd. Flow (prot)	1683	0	1762	0	0	1834
Flt Permitted	0.969					0.999
Satd. Flow (perm)	1683	0	1762	0	0	1834
Link Speed (mph)	25		35			35
Link Distance (ft)	907		372			396
Travel Time (s)	24.7		7.2			7.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	4%	0%	5%	0%
Adj. Flow (vph)	16	9	711	15	7	654
Shared Lane Traffic (%)						
Lane Group Flow (vph)	25	0	726	0	0	661
Sign Control	Stop	Free	Free	Free	Free	Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization:	46.5%					
Analysis Period (min):	15					
	ICU Level of Service A					

East Mitchell Ave
HCM 6th TWSC

Background Conditions
AM Peak

Intersection	WBL	WBR	NBT	NBR	SBL	SBT
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	15	8	654	14	6	602
Traffic Vol, veh/h	15	8	654	14	6	602
Future Vol, veh/h	15	8	654	14	6	602
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	4	0	5	0
Mvmt Flow	16	9	711	15	7	654
Major/Minor	Minor1	Major1	Major1	Major2		
Conflicting Flow All	1387	719	0	0	726	0
Stage 1	719	-	-	-	-	-
Stage 2	668	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.15	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.245	-
Pot Cap-1 Maneuver	159	432	-	-	863	-
Stage 1	486	-	-	-	-	-
Stage 2	513	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	157	432	-	-	863	-
Mov Cap-2 Maneuver	157	-	-	-	-	-
Stage 1	486	-	-	-	-	-
Stage 2	506	-	-	-	-	-
Approach	WB	NB	SB	SB		
HCM Control Delay, s	25.3	0	0	0.1		
HCM LOS	D					
Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT		
Capacity (veh/h)	-	-	202	863	-	-
HCM Lane V/C Ratio	-	-	0.124	0.008	-	-
HCM Control Delay (s)	-	-	25.3	9.2	0	0
HCM Lane LOS	-	-	D	A	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0	-	-

East Mitchell Ave
Lanes, Volumes, Timings

Background Conditions
All Peak

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	1	31	7	2	8	23	646	12	10	595	12
Future Volume (vph)	14	1	31	7	2	8	23	646	12	10	595	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	100	0	0	0	0	190	0	0	65	0	0
Storage Lanes	0	1	0	0	0	0	1	0	0	1	0	0
Taper Length (ft)	50		50				50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ft		0.850		0.936			0.997			0.997		
Flt Protected		0.955		0.979			0.950			0.950		
Satd. Flow (prot)	0	1754	1561	0	1683	0	1745	1762	0	1745	1762	0
Flt Permitted		0.842		0.856			0.313			0.390		
Satd. Flow (perm)	0	1546	1561	0	1472	0	575	1762	0	716	1762	0
Right Turn on Red			No		9	Yes	2		Yes		No	
Satd. Flow (RTOR)												
Link Speed (mph)	25		25				35			35		
Link Distance (ft)	705		701				756			372		
Travel Time (s)	19.2		19.1				14.7			7.2		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	4%	0%	4%	0%	4%	0%
Adj. Flow (vph)	15	1	34	8	2	9	25	710	13	11	654	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	16	34	0	19	0	25	723	0	11	667	0
Number of Detectors	1	1	1	1	1	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Left	Thru	Left	Thru	Left	Thru	
Leading Detector (ft)	60	60	60	60	60	60	60	60	60	60	60	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0	
Detector 1 Size (ft)	60	60	60	60	60	60	60	60	60	60	60	
Detector 1 Type	Ch+Ex											
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm	NA	Perm	Perm	NA	D.P+P	NA	Perm	NA	Perm	NA	
Protected Phases	4	4	4	4	4	1	1	2	2	2	2	
Permitted Phases	4	4	4	4	4	1	1	2	2	2	2	
Detector Phase												
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	5.0	5.0	15.0	15.0	15.0	15.0	
Minimum Split (s)	11.7	11.7	11.7	11.7	11.7	9.0	9.0	21.5	21.5	21.5	21.5	
Total Split (%)	15.0	15.0	15.0	15.0	15.0	9.5%	9.5%	63.2%	63.2%	63.2%	63.2%	
Total Split (s)	15.8%	15.8%	15.8%	15.8%	15.8%	3.0	3.0	4.0	4.0	4.0	4.0	
Maximum Green (s)	10.3	10.3	10.3	10.3	10.3	5.0	5.0	53.5	53.5	53.5	53.5	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	1.7	1.7	1.7	1.7	1.7	1.0	1.0	2.5	2.5	2.5	2.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.7	4.7	4.7	4.7	4.7	4.0	4.0	6.5	6.5	6.5	6.5	
Lead/Lag	Lead	Lag	Lag	Lag	Lag							

East Mitchell Ave
Lanes, Volumes, Timings

Background Conditions
All Peak

Lane Group	03											
Lane Configurations												
Traffic Volume (vph)												
Future Volume (vph)												
Ideal Flow (vphpl)												
Storage Length (ft)												
Storage Lanes												
Taper Length (ft)												
Lane Util. Factor												
Ft												
Flt Protected												
Satd. Flow (prot)												
Flt Permitted												
Satd. Flow (perm)												
Right Turn on Red												
Satd. Flow (RTOR)												
Link Speed (mph)												
Link Distance (ft)												
Travel Time (s)												
Peak Hour Factor												
Heavy Vehicles (%)												
Adj. Flow (vph)												
Shared Lane Traffic (%)												
Lane Group Flow (vph)												
Number of Detectors												
Detector Template												
Leading Detector (ft)												
Trailing Detector (ft)												
Detector 1 Position (ft)												
Detector 1 Size (ft)												
Detector 1 Type												
Detector 1 Channel												
Detector 1 Extend (s)												
Detector 1 Queue (s)												
Detector 1 Delay (s)												
Turn Type												
Protected Phases												
Permitted Phases												
Detector Phase												
Switch Phase												
Minimum Initial (s)												
Minimum Split (s)												
Total Split (%)												
Total Split (s)												
Maximum Green (s)												
Yellow Time (s)												
All-Red Time (s)												
Lost Time Adjust (s)												
Total Lost Time (s)												
Lead/Lag												

East Mitchell Ave
Lanes, Volumes, Timings

East Mitchell Ave
Lanes, Volumes, Timings

Background Conditions
AM Peak

Background Conditions
AM Peak

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead-Lag Optimize?	Yes	Yes	Yes									
Vehicle Extension (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	C-Max								
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	7.4	7.4	7.4	7.4	7.4	7.4	77.1	82.7	82.7	64.8	64.8	64.8
Actuated g/C Ratio	0.08	0.08	0.08	0.08	0.08	0.08	0.81	0.87	0.87	0.68	0.68	0.68
v/c Ratio	0.13	0.28	0.16	0.16	0.04	0.47	0.04	0.47	0.02	0.56	0.56	0.56
Control Delay	43.2	47.3	31.6	31.6	3.1	4.6	3.1	4.6	9.0	12.7	12.7	12.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.2	47.3	31.6	31.6	3.1	4.6	3.1	4.6	9.0	12.7	12.7	12.7
LOS	D	D	D	C	C	A	A	A	A	A	B	B
Approach Delay	46.0			31.6			4.6				12.7	
Approach LOS	D			C			A				B	
Queue Length 50th (ft)	9	20	6	6	2	82	2	82	2	231	231	231
Queue Length 95th (ft)	29	50	28	28	12	304	11	392	11	392	392	392
Internal Link Dist (ft)	625			621			676				292	
Turn Bay Length (ft)	100			190			190			65	65	65
Base Capacity (vph)	167	169	167	567	1534	488	1201	488	1201	488	1201	1201
Stantion Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.20	0.11	0.04	0.47	0.02	0.56	0.02	0.56	0.02	0.56	0.56

Splits and Phases: 2: Highland (Rte 10) & Maplecroft Plaza (N)/Province Mortgage



Lane Group	03
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	10.0
Pedestrian Calls (#/hr)	4
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Stantion Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W					
Traffic Volume (vph)	16	10	686	12	5	738
Future Volume (vph)	16	10	686	12	5	738
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.950		0.988			
Flt Protected	0.969					
Satd. Flow (prot)	1691	0	1764	0	0	1836
Flt Permitted	0.969					
Satd. Flow (perm)	1691	0	1764	0	0	1836
Link Speed (mph)	25		35			35
Link Distance (ft)	907		372			396
Travel Time (s)	24.7		7.2			7.7
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	4%	0%	5%	0%
Adj. Flow (vph)	17	10	715	13	5	769
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	0	728	0	0	774
Sign Control	Stop	Free	Free	Free	Free	Free

Intersection Summary
Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 52.8%
Analysis Period (min) 15
ICU Level of Service A

Intersection	WBL	WBR	NBT	NBR	SBL	SBT
Int Delay, s/veh	0.5					
Movement	W					
Lane Configurations	W					
Traffic Vol. veh/h	16	10	686	12	5	738
Future Vol. veh/h	16	10	686	12	5	738
Conflicting Peds. #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	0	0	4	0	5	0
Mvmt Flow	17	10	715	13	5	769

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1501	722	0
Stage 1	722	-	-
Stage 2	779	-	-
Critical Hdwy	6.4	6.2	-
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	136	430	-
Stage 1	485	-	-
Stage 2	456	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	135	430	-
Mov Cap-2 Maneuver	135	-	-
Stage 1	485	-	-
Stage 2	451	-	-

Approach	WB	NB	SB
HCM Control Delay, s	28.1	0	0.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	183	862
HCM Lane V/C Ratio	-	-	0.148	0.006
HCM Control Delay (s)	-	-	28.1	9.2
HCM Lane LOS	-	-	D	A
HCM 95th %tile Q(veh)	-	-	0.5	0

East Mitchell Ave
Lanes, Volumes, Timings

East Mitchell Ave
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Background Conditions
PM Peak

Background Conditions
PM Peak

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	42	1	82	16	3	16	110	640	18	17	711	27
Traffic Volume (vph)	42	1	82	16	3	16	110	640	18	17	711	27
Future Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpb)	0	100	0	0	0	190	0	0	0	65	0	0
Storage Length (ft)	0	1	0	0	0	1	0	0	0	1	0	0
Storage Lanes	50	50	50	50	50	50	50	50	50	50	50	50
Taper Length (ft)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor		0.850		0.938		0.996		0.996		0.994		0.994
Ft												
Flt Protected	0.953		0.978		0.950		0.950		0.950		0.950	
Satd. Flow (prot)	0	1750	1561	0	1685	0	1745	1761	0	1745	1758	0
Flt Permitted	0.705		0.832		0.251		0.251		0.407		0.407	
Satd. Flow (perm)	0	1295	1561	0	1433	0	461	1761	0	748	1758	0
Right Turn on Red		No		Yes		Yes		Yes		Yes		No
Satd. Flow (RTOR)				16		3		3		35		35
Link Speed (mph)	25		25		701		756		756		372	
Link Distance (ft)	705		705		701		756		756		372	
Travel Time (s)	19.2		19.2		19.1		14.7		14.7		7.2	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	4%	0%	0%	4%	0%
Adj. Flow (vph)	43	1	85	16	3	16	113	660	19	18	733	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	44	85	0	35	0	113	679	0	18	761	0
Number of Detectors	1	1	1	1	1	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Left	Thru	Left	Thru	Left	Thru	Left
Leading Detector (ft)	60	60	60	60	60	60	60	60	60	60	60	60
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	60	60	60	60	60	60	60	60	60	60	60	60
Detector 1 Type	Cl+Ex											
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	D.P+P	NA	NA	Perm	NA	Perm	NA
Protected Phases	4	4	4	4	4	4	1	1	2	2	2	2
Permitted Phases	4	4	4	4	4	4	1	1	2	2	2	2
Detector Phase	4	4	4	4	4	4	1	1	2	2	2	2
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	5.0	5.0	15.0	15.0	15.0	15.0
Minimum Split (s)	11.7	11.7	11.7	11.7	11.7	11.7	9.0	9.0	21.5	21.5	21.5	21.5
Total Split (%)	15.0	15.0	15.0	15.0	15.0	15.0	10.0	10.5	62.1%	62.1%	62.1%	62.1%
Total Split (%)	15.8%	15.8%	15.8%	15.8%	15.8%	15.8%	10.5%	10.5%	62.1%	62.1%	62.1%	62.1%
Maximum Green (s)	10.3	10.3	10.3	10.3	10.3	10.3	6.0	6.0	52.5	52.5	52.5	52.5
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.7	1.7	1.7	1.7	1.7	1.7	1.0	1.0	2.5	2.5	2.5	2.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.7	4.7	4.7	4.7	4.7	4.7	4.0	4.0	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lag	Lag	Lag							

East Mitchell Ave
Lanes, Volumes, Timings

East Mitchell Ave
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Background Conditions
PM Peak

Background Conditions
PM Peak

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead-Lag Optimize?	Yes	Yes	Yes									
Vehicle Extension (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	C-Max								
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	8.8	8.8	8.8	8.8	8.8	8.8	75.9	80.7	80.7	60.1	60.1	60.1
Actuated g/C Ratio	0.09	0.09	0.09	0.09	0.09	0.09	0.80	0.85	0.85	0.63	0.63	0.63
v/c Ratio	0.37	0.59	0.24	0.21	0.45	0.04	0.63	0.68	0.68	0.04	0.68	0.68
Control Delay	49.0	58.0	29.7	2.8	3.6	9.8	2.8	3.6	3.6	9.8	18.0	18.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.0	58.0	29.7	2.8	3.6	9.8	2.8	3.6	3.6	9.8	18.0	18.0
LOS	D	E	C	A	A	A	A	A	A	A	B	B
Approach Delay	55.0		29.7		3.5						17.8	
Approach LOS	D		C		A						B	
Queue Length 50th (ft)	25	50	11	10	89	4	310					
Queue Length 95th (ft)	59	97	40	20	147	15	508					
Internal Link Dist (ft)	625		621		676		292					
Turn Bay Length (ft)	100		190		65							
Base Capacity (vph)	140	169	169	550	1483	472	1111					
Stantion Cap Reducth	0	0	0	0	0	0	0					
Spillback Cap Reducth	0	0	0	0	0	0	0					
Storage Cap Reducth	0	0	0	0	0	0	0					
Reduced v/c Ratio	0.31	0.50	0.21	0.21	0.46	0.04	0.68					
Intersection Summary												
Area Type: Other												
Cycle Length: 95												
Actuated Cycle Length: 95												
Offset: 0 (0%), Referenced to phase 2:NBSB, Start of Yellow												
Natural Cycle: 90												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.68												
Intersection Signal Delay: 14.3												
Intersection Capacity Utilization 68.6%												
ICU Level of Service C												
Analysis Period (min) 15												



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W					4
Traffic Volume (vph)	21	18	654	16	9	602
Future Volume (vph)	21	18	654	16	9	602
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.937		0.997			
Flt Protected	0.974					0.999
Satd. Flow (prot)	1676	0	1762	0	0	1833
Flt Permitted	0.974					0.999
Satd. Flow (perm)	1676	0	1762	0	0	1833
Link Speed (mph)	25		35			35
Link Distance (ft)	907		372			396
Travel Time (s)	24.7		7.2			7.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	4%	0%	5%	0%
Adj. Flow (vph)	23	20	711	17	10	654
Shared Lane Traffic (%)						
Lane Group Flow (vph)	43	0	728	0	0	664
Sign Control	Stop	Free	Free	Free	Free	Free

Intersection Summary
 Area Type: Other
 Control Type: Unsignalized
 Intersection Capacity Utilization: 48.9%
 Analysis Period (min): 15
 ICU Level of Service: A

Intersection	WBL	WBR	NBT	NBR	SBL	SBT
Int Delay, s/veh	0.8					
Movement	W					4
Lane Configurations	W					4
Traffic Vol. veh/h	21	18	654	16	9	602
Future Vol. veh/h	21	18	654	16	9	602
Conflicting Peds. #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	4	0	5	0
Mvmt Flow	23	20	711	17	10	654

Major/Minor
 Minor1 Major1 Major2
 Conflicting Flow All 1394 720 0 0 728 0
 Stage 1 720 - - - - -
 Stage 2 674 - - - - -
 Critical Hdwy 6.4 6.2 - - 4.15 -
 Critical Hdwy Stg 1 5.4 - - - - -
 Critical Hdwy Stg 2 5.4 - - - - -
 Follow-up Hdwy 3.5 3.3 - - 2.245 -
 Pct Cap-1 Maneuver 158 431 - - 862 -
 Stage 1 486 - - - - -
 Stage 2 510 - - - - -
 Platoon blocked, % - - - - -
 Mov Cap-1 Maneuver 155 431 - - 862 -
 Mov Cap-2 Maneuver 155 - - - - -
 Stage 1 486 - - - - -
 Stage 2 501 - - - - -

Approach WB NB SB
 HCM Control Delay, s 25.2 0 0.1
 HCM LOS D

Minor Lane/Major Mvmt NBT NBRWBLn1 SBL SBT
 Capacity (veh/h) - - 220 862 -
 HCM Lane V/C Ratio - - 0.193 0.011 -
 HCM Control Delay (s) - - 25.2 9.2 0
 HCM Lane LOS - - D A A
 HCM 95th %tile Q(veh) - - 0.7 0 -

East Mitchell Ave
Lanes, Volumes, Timings

Combined Conditions
AM Peak

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	1	31	7	2	8	23	648	12	10	601	12
Future Volume (vph)	14	1	31	7	2	8	23	648	12	10	601	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	100	0	0	0	0	190	0	0	65	0	0
Storage Lanes	0	1	0	0	0	0	1	0	0	1	0	0
Taper Length (ft)	50		50				50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ft		0.850		0.936			0.997			0.997		
Flt Protected		0.955		0.979			0.950			0.950		
Satd. Flow (prot)	0	1754	1561	0	1683	0	1745	1762	0	1745	1762	0
Flt Permitted		0.842		0.856			0.309			0.390		
Satd. Flow (perm)	0	1546	1561	0	1472	0	588	1762	0	716	1762	0
Right Turn on Red			No		Yes		Yes		Yes		No	
Satd. Flow (RTOR)				9			2					
Link Speed (mph)	25		25				35			35		
Link Distance (ft)	705		701				756			372		
Travel Time (s)	19.2		19.1				14.7			7.2		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	4%	0%	4%	0%	4%	0%
Adj. Flow (vph)	15	1	34	8	2	9	25	712	13	11	660	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	16	34	0	19	0	25	725	0	11	673	0
Number of Detectors	1	1	1	1	1	1	1	1	1	1	1	1
Detector Template	Left	Thru	Right	Left	Thru	Left	Thru	Left	Thru	Left	Thru	
Leading Detector (ft)	60	60	60	60	60	60	60	60	60	60	60	60
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size (ft)	60	60	60	60	60	60	60	60	60	60	60	60
Detector 1 Type	Cl+Ex											
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA	Perm	Perm	NA	D.P+P	NA	Perm	NA	Perm	NA	
Protected Phases	4	4	4	4	4	4	1	1	2	2	2	
Permitted Phases	4	4	4	4	4	4	1	1	2	2	2	
Detector Phase												
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	5.0	7.0	5.0	15.0	15.0	
Minimum Split (s)	11.7	11.7	11.7	11.7	11.7	11.7	9.0	11.7	9.0	21.5	21.5	
Total Split (%)	15.0	15.0	15.0	15.0	15.0	15.0	9.0	15.0	9.0	60.0	60.0	
Total Split (%)	15.8%	15.8%	15.8%	15.8%	15.8%	15.8%	9.5%	15.8%	9.5%	63.2%	63.2%	
Maximum Green (s)	10.3	10.3	10.3	10.3	10.3	10.3	5.0	10.3	5.0	53.5	53.5	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	
All-Red Time (s)	1.7	1.7	1.7	1.7	1.7	1.7	1.0	1.7	1.0	2.5	2.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.7	4.7	4.7	4.7	4.7	4.7	4.0	4.7	4.0	6.5	6.5	
Lead/Lag	Lead	Lag	Lag	Lag								

Lanes, Volumes, Timings
SLR

Synchro 11 Report
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East Mitchell Ave
Lanes, Volumes, Timings

Combined Conditions
AM Peak

Lane Group	03
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Ft	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position (ft)	
Detector 1 Size (ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	21.0
Total Split (%)	11.0
Total Split (%)	12%
Maximum Green (s)	7.0
Yellow Time (s)	4.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag

Lanes, Volumes, Timings
SLR

Synchro 11 Report
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East Mitchell Ave
Lanes, Volumes, Timings

East Mitchell Ave
Lanes, Volumes, Timings

Combined Conditions
AM Peak

Combined Conditions
AM Peak

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead-Lag Optimize?	Yes	Yes	Yes									
Vehicle Extension (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	C-Max								
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	7.4	7.4	7.4	7.4	7.4	7.4	77.1	82.7	82.7	64.8	64.8	64.8
Actuated g/C Ratio	0.08	0.08	0.08	0.08	0.08	0.08	0.81	0.87	0.87	0.68	0.68	0.68
v/c Ratio	0.13	0.28	0.16	0.04	0.04	0.04	0.04	0.47	0.47	0.02	0.02	0.02
Control Delay	43.2	47.3	31.6	3.1	3.1	3.1	3.1	4.6	4.6	9.0	9.0	12.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.2	47.3	31.6	3.1	3.1	3.1	3.1	4.6	4.6	9.0	9.0	12.9
LOS	D	D	D	C	C	C	A	A	A	A	A	B
Approach Delay	46.0			31.6			4.6					12.8
Approach LOS	D			C			A					B
Queue Length 50th (ft)	9	20	6	2	6	2	8.3			2	2	235
Queue Length 95th (ft)	29	50	28	12	305	11	398			11	398	
Internal Link Dist (ft)	625			621			676					292
Turn Bay Length (ft)	100			190			190			65		65
Base Capacity (vph)	167	169	167	582	1534	488	1201			488	1201	
Stantion Cap Reducth	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reducth	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reducth	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.20	0.11	0.04	0.47	0.02	0.56			0.02	0.56	

Intersection Summary

Area Type: Other

Cycle Length: 95

Actuated Cycle Length: 95

Offset: 63 (56%), Referenced to phase 2:NBSB, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.56

Intersection Signal Delay: 10.0

Intersection Capacity Utilization 57.3%

Analysis Period (min) 15

Intersection LOS: B

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 2: Highland (Rte 10) & Maplecroft Plaza (N)/Province Mortgage



	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	20	15	686	17	13	738
Future Volume (vph)	20	15	686	17	13	738
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.942		0.997			
Flt Protected	0.972					0.999
Satd. Flow (prot)	1682	0	1762	0	0	1833
Flt Permitted	0.972					0.999
Satd. Flow (perm)	1682	0	1762	0	0	1833
Link Speed (mph)	25		35			35
Link Distance (ft)	907		372			396
Travel Time (s)	24.7		7.2			7.7
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	0%	4%	0%	5%	0%
Adj. Flow (vph)	21	16	715	18	14	769
Shared Lane Traffic (%)						
Lane Group Flow (vph)	37	0	733	0	0	783
Sign Control	Stop	Free	Free	Free	Free	Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 59.3%

Analysis Period (min) 15

ICU Level of Service B

Intersection	WBL	WBR	NBT	NBR	SBL	SBT
Int Delay, s/veh	0.8					
Movement						
Lane Configurations						
Traffic Vol. veh/h	20	15	686	17	13	738
Future Vol. veh/h	20	15	686	17	13	738
Conflicting Peds. #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	0	0	4	0	5	0
Mvmt Flow	21	16	715	18	14	769

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1521	724	0
Stage 1	724	-	-
Stage 2	797	-	-
Critical Hdwy	6.4	6.2	-
Critical Hdwy Stg 1	5.4	-	-
Critical Hdwy Stg 2	5.4	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	132	429	-
Stage 1	484	-	-
Stage 2	447	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	128	429	-
Mov Cap-2 Maneuver	128	-	-
Stage 1	484	-	-
Stage 2	434	-	-

Approach	WB	NB	SB
HCM Control Delay, s	29.5	0	0.2
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR/WBLn1	SBL	SBT
Capacity (veh/h)	-	-	183	858
HCM Lane V/C Ratio	-	-	0.199	0.016
HCM Control Delay (s)	-	-	29.5	9.3
HCM Lane LOS	-	-	D	A
HCM 95th %tile Q(veh)	-	-	0.7	0

East Mitchell Ave
Lanes, Volumes, Timings

East Mitchell Ave
Lanes, Volumes, Timings

Combined Conditions
PM Peak

Combined Conditions
PM Peak

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lead-Lag Optimize?	Yes	Yes	Yes									
Vehicle Extension (s)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	C-Max								
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)	8.8	8.8	8.8	8.8	8.8	8.8	75.9	80.7	60.0	60.0	60.0	60.0
Actuated g/C Ratio	0.09	0.09	0.09	0.09	0.09	0.09	0.80	0.85	0.63	0.63	0.63	0.63
v/c Ratio	0.37	0.59	0.24	0.21	0.46	0.21	0.46	0.04	0.69	0.04	0.69	0.69
Control Delay	49.0	58.0	29.7	2.8	3.6	2.8	3.6	9.8	18.1	9.8	18.1	18.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.0	58.0	29.7	2.8	3.6	2.8	3.6	9.8	18.1	9.8	18.1	18.1
LOS	D	E	C	A	A	A	A	A	B	A	B	B
Approach Delay	55.0		29.7		3.5				18.0			
Approach LOS	D		C		A				B			
Queue Length 50th (ft)	25	50	11	10	90	4	314					
Queue Length 95th (ft)	59	97	40	20	149	15	513					
Internal Link Dist (ft)	625		621		676		292					
Turn Bay Length (ft)	100		190		65		65					
Base Capacity (vph)	140	169	169	546	1483	470	1111					
Station Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.50	0.21	0.21	0.46	0.04	0.69					
Intersection Summary												
Area Type: Other												
Cycle Length: 95												
Actuated Cycle Length: 95												
Offset: 0 (0%), Referenced to phase 2:NBSB, Start of Yellow												
Natural Cycle: 90												
Control Type: Actuated-Coordinated												
Maximum v/c Ratio: 0.69												
Intersection Signal Delay: 14.3												
Intersection Capacity Utilization 68.9%												
ICU Level of Service C												
Analysis Period (min) 15												



Splits and Phases: 2: Highland (Rte 10) & Maplecroft Plaza (N)/Province Mortgage

Lane Group	03
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	10.0
Pedestrian Calls (#/hr)	0
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Station Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	