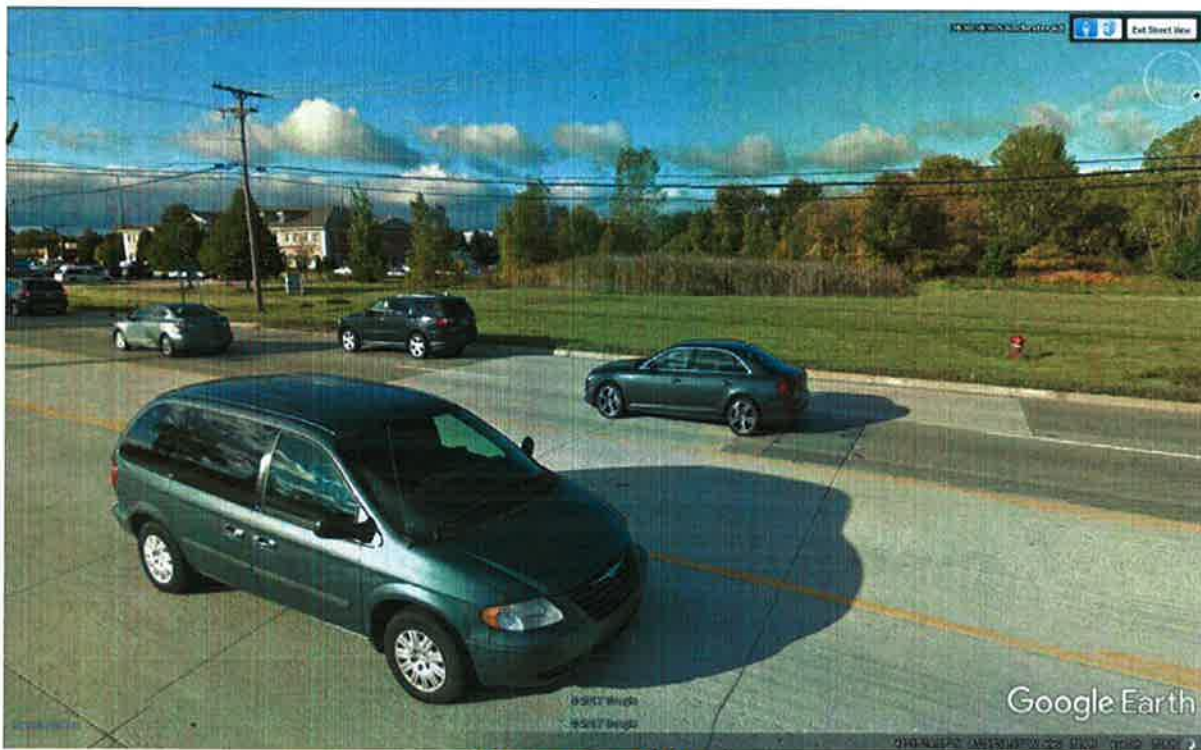


**Traffic Impact Study
For
Gateway of Rochester Hills
Rochester Road & South Blvd
City of Rochester Hills
Oakland County, Michigan**



**Prepared by:
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January 25, 2018

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Introduction

This report presents the finding of a Traffic Impact Study (TIS) for a proposed development containing a **Hotel, Retail, Office, High-Turnover (Sit-Down) Restaurant**, and an existing **Medical building** in city of Rochester Hills, Michigan. The project is located on the northwest quadrant of the Rochester Road and South Blvd intersection, as shown on Figure 1. The proposed development includes 11,037 S.F. of Retail, 11,856 S.F. Office Building, (108) rooms of Hotel, 6,047 S.F. High-Turnover (Sit-Down) Restaurant, and 43,520 S.F. of an existing Medical Building. The proposed development access plan includes two existing full movement driveways and one proposed access on Rochester Road north of an existing drive, as shown in figure 2.

The purpose of this study is to conduct a comprehensive review and analysis to quantify the current traffic impacts of the new development on the adjacent road and intersection. In addition, the study included the identification of road and traffic control mitigation improvements needed to accommodate the traffic generated by this development.

The specific objectives of the study were to:

- Quantify existing traffic flow and safety condition.
- Identify future traffic impacts due the traffic generated by the new developments.
- Determine currently planned road and intersection improvements that will be in place when the developments are completed.
- Identify any additional road mitigation needed to provide a safe and acceptable level of service.

This study was developed based on Traffic Engineering Consultants. Inc. knowledge of the study area, understanding of the development program, accepted traffic engineering practice, and information published by the Institute of Transportation Engineers (ITE). The study analysis were completed using Synchro and Sim-Traffic Version 10 traffic analysis software.

The study intersections analyzed for this includes:

- Rochester Road & South Blvd
- Rochester Road & EB M-59 off Ramp
- Rochester Road & WB M-59 off Ramp

Gateway of Rochester Hills City of Rochester Hills, Michigan



Figure 1

Area Roadways

Existing Road Network

The roadway system most directly impacted by the site development includes Rochester Road between South Blvd & WB M-59 off Ramp. These roadways are described below in detail. The lane uses and traffic control at the study intersection are shown in Figure 3.

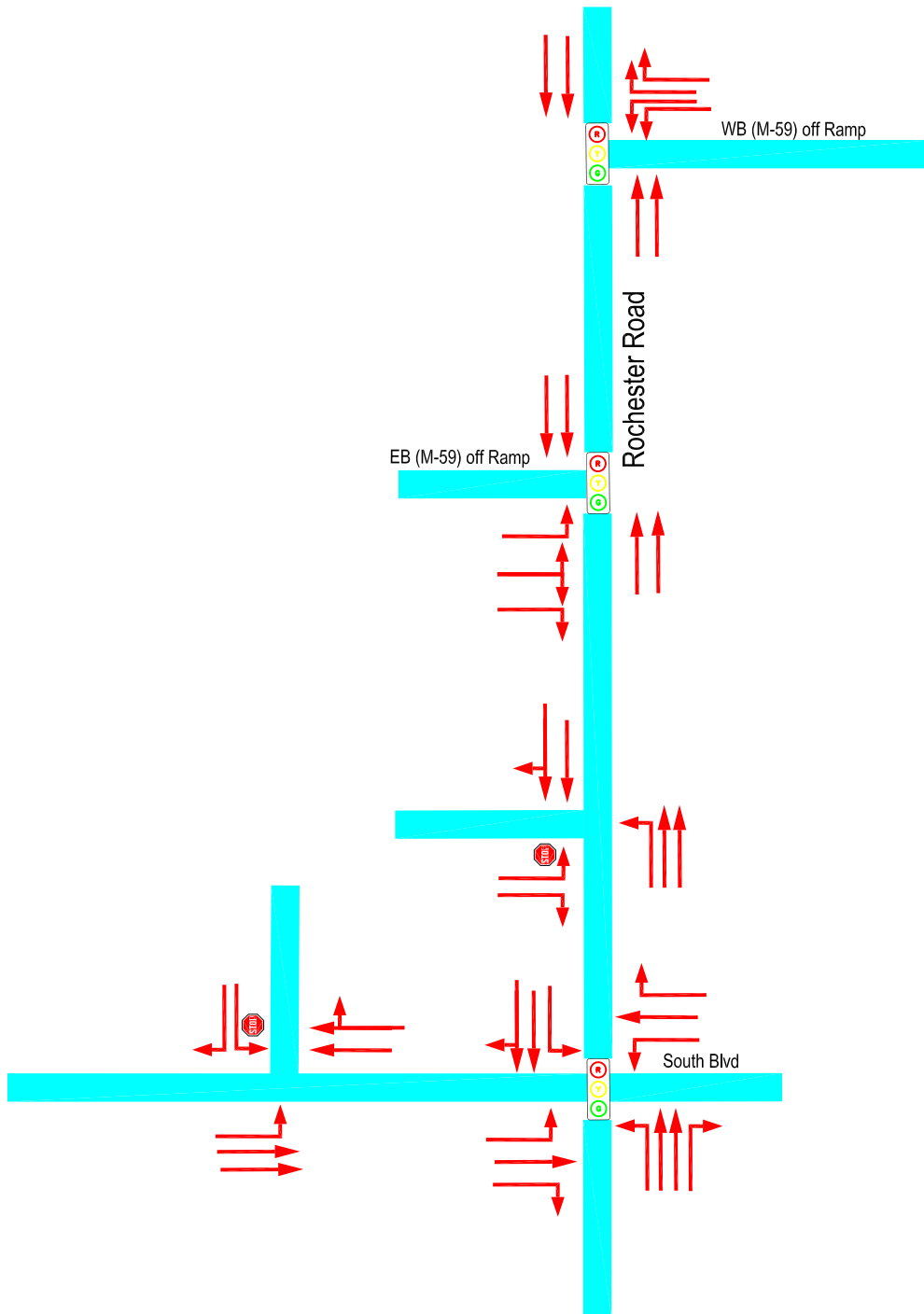
Rochester Road runs in the north-south directions with a posted speed limit of 50 miles per hour (MPH). Rochester Road is under the jurisdiction of Road Commission for Oakland County and classified as an Urban Principal Arterial with an average daily traffic (ADT) volume of approximately 48,500 vehicles per day. The study section of Rochester Road has a typical 5 lanes cross section with two lanes in each direction and center left turn lane.

South Blvd runs in an east-west direction with a posted speed limit of 45 MPH. The study section of South Blvd Road is under the jurisdictions of Road Commission for Oakland County with average daily traffic (ADT) volumes of approximately 10,800. The study section of South Blvd Road has a typical 3 lane cross section with one lane in each direction and center left turn lane.

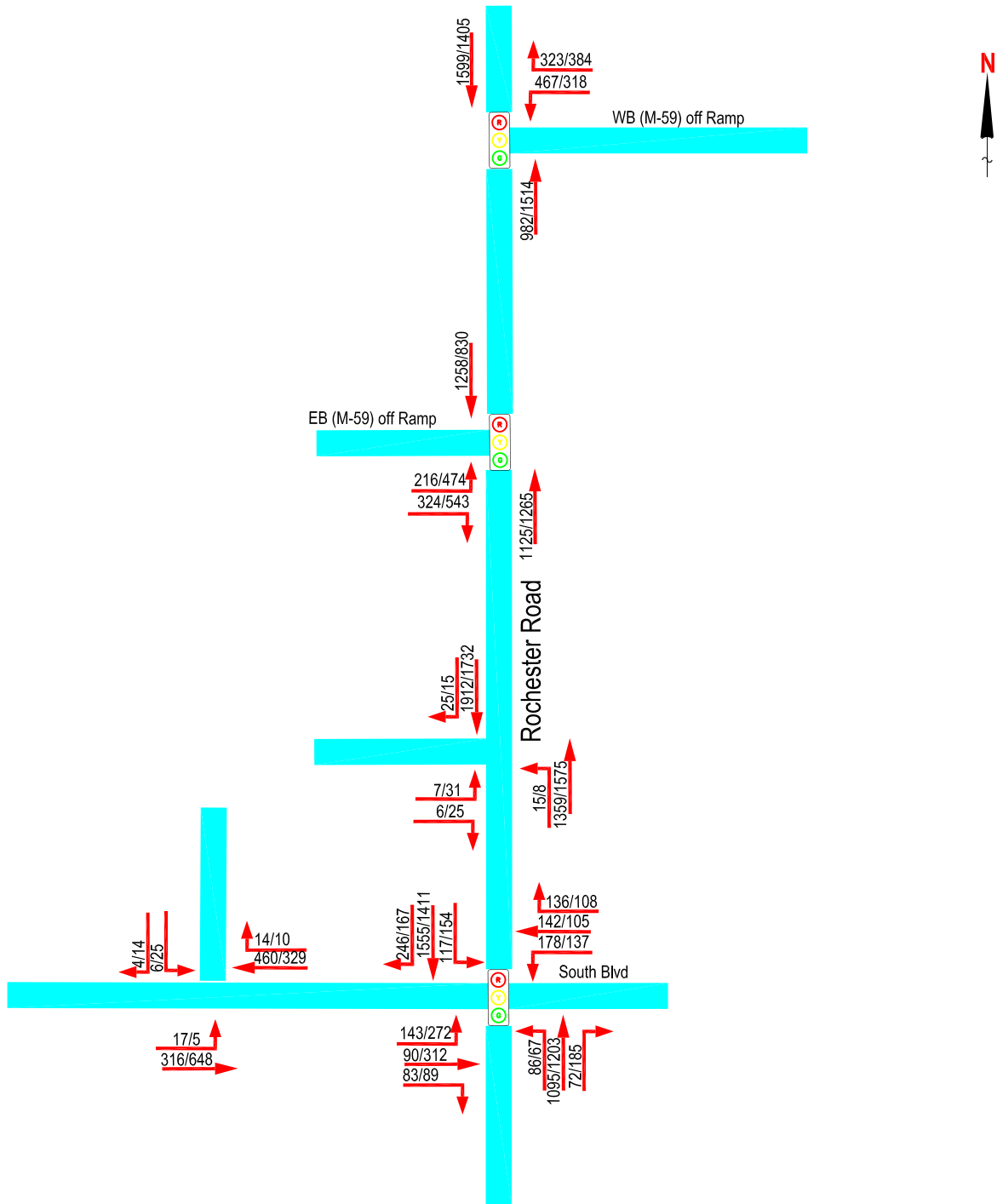
Existing Traffic Counts

In September 19, 2017, Traffic Engineering Consultants, Inc. performed traffic counts at each study intersection during the a.m. peak periods (7:00 to 9:00 a.m.) and p.m. peak period (4:00 to 6:00 p.m.). At the time of the counts, the schools were in session under a normal schedule. The existing traffic volume data are included in Appendix A and the existing AM & PM peak hour volumes are summarized on Figure 4. The AM and PM peak hour volumes for each intersection were utilized for this study and the volumes were balanced upward through the study network. No pedestrians observed during the studies period.

The result indicates that the heaviest hour during AM peak occurred between 7:30 and 8:30 PM and PM peak occurred between 4:30 & 5:30 PM. See Appendix A.



XXAM /XXPM



XXAM /XXPM

ANALYSIS

Existing Conditions

Existing peak hour vehicle delays and Levels of Service (LOS) were calculated at the study intersections using Synchro (Version 10) traffic analysis software. The results of the analysis of existing conditions were based on the existing lane use and traffic control shown on Figure 3, the existing traffic volumes shown on Figure 4. SYNCHRO/SIM TRAFFIC software (Version10) was utilized to model the study area roadway network and to perform intersection capacity analysis which, conforms to the methodologies published in the 2010 Highway Capacity Manual. The analysis was performed for Existing and Build traffic-volume conditions.

The procedures for analysis and criteria are those outlined in the 2010 Highway Capacity Manual (HCM) published by the Transportation Research Board. This manual defines level of service for signalized intersections in terms of control delay. Delay may be measured in the field, or it may be estimated. Delay is a complex measure, and is dependent on a number of variables, including the quality of progression, the cycle length, the green ratio, and the volume to capacity ratio for the lane group or approach in question. Table 1 shows the control delay that corresponds with each level of service.

Table 1: Level of Service Criteria for Signalized Intersections

Level of Service	Control Delay per Vehicle (Seconds)
A	≤ 10
B	>10 to ≤ 20
C	>20 to ≤ 35
D	>35 to ≤ 55
E	>55 to ≤ 80
F	>80

Level of Service A describes operations with very low control delay up to 10.0 sec per vehicle. This occurs when progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.

Level of Service B describes operations with control delay in the range of 10.1 to 20.0 sec per vehicle. This generally occurs with good progression and/or short cycle lengths. More vehicles stop than for Level of Service A, causing higher levels of average delay.

Level of Service C describes operations with control delay in the range of 20.1 to 35.0 sec per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.

Level of Service D describes operations with control delay in the range of 35.1 to 55.0 sec per vehicle. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, and high volume to capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

Level of Service E describes operations with control delay in the range of 55.1 to 80.0 sec per vehicle. This is considered to be above the limit of acceptable delay for an urban roadway in the study area. These high delay values generally indicate poor progression, long cycle lengths, and high volume to capacity ratios. Individual cycle failures are frequent occurrences.

Level of Service F describes operations with control delay in excess of 80.1 sec per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with over saturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high volume to capacity ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

Un-Signalized Intersection

At an un-signalized intersection with stop control on the minor approach, LOS F occurs when there are not enough gaps of suitable size to allow a minor-street demand to safely cross through traffic on the major street. This is typically evident from extremely long control delays experienced by minor street traffic and by queuing on the minor approaches. LOS F may also appear in the form of drivers on the minor street selecting smaller than usual gaps. In such cases, safety may be a problem and some disruption to the major traffic stream may result. Note that LOS F may not always result in long queues, but in adjustments to normal gap acceptance behavior. For example, this may occur when a left-turning vehicle uses a shorter than normal gap in traffic to complete a left-turn. **Table 2** indicates the control delay criteria used for determining the LOS for un-signalized intersections.

Table 2: LOS Criteria for Un-Signalized Intersections

LOS	Control Delay per Vehicle (seconds)
A	< 10
B	> 10 to ≤ 15
C	> 15 to ≤ 25
D	> 25 to ≤ 35
E	> 35 to ≤ 50
F	> 50

A capacity analysis was conducted for the road network during the AM and PM peak hours for existing, and future conditions. The results of the analysis of existing conditions are presented in Appendix B. LOS C is considered by many traffic safety professionals to be the minimum acceptable condition in rural areas and LOS D is the minimum for urban/suburban areas. Given the location of this site within the urbanized boundary, LOS D was utilized as the study's minimum goal. The results of the analysis of existing conditions are presented in Appendix B and are summarized in Table3.

Table 3 Capacity Analysis Results for Existing Condition

Intersection		Approach Direction									
		AM Peak Hour					PM Peak Hour				
		EB	WB	NB	SB	Overall Intersection	EB	WB	NB	SB	Overall Intersection
Rochester Rd & South Blvd	LOS	D	D	C	D	D	E	D	C	D	D
	Delay (Sec)	52.9	49.1	21.1	49.3	40.5	76.2	43.1	30.1	35.1	41.1
Rochester Rd & EB M-59 off Ramp	LOS	D	-	A	A	B	D	-	B	B	C
	Delay (Sec)	47.7	-	4.0	4.0	13.0	40.8	-	16.5	10.0	22.6
Rochester Rd & WB M-59 off Ramp	LOS	-	D	A	B	B	-	D	A	A	B
	Delay (Sec)	-	44.3	6.1	14.1	19.2	-	48.6	10.4	9.6	17.6
South Blvd & Site Drive	LOS	A	A	-	B	A	A	A	-	C	A
	Delay (Sec)	0.5	0.0	-	14.3	0.4	0.1	0.0	-	18.6	0.8
Rochester Rd & Site Drive	LOS	E	-	A	A	A	F	-	A	A	A
	Delay (Sec)	47.0	-	0.2	0.0	0.3	62.4	-	0.1	0.0	1.3

The results of the existing conditions analysis for the study intersection indicate that all study intersections and approaches currently operate at acceptable LOS D or better, with the exception of the intersection of Rochester Road & South Blvd, eastbound South Blvd Road operate at level of service E.

Background Conditions

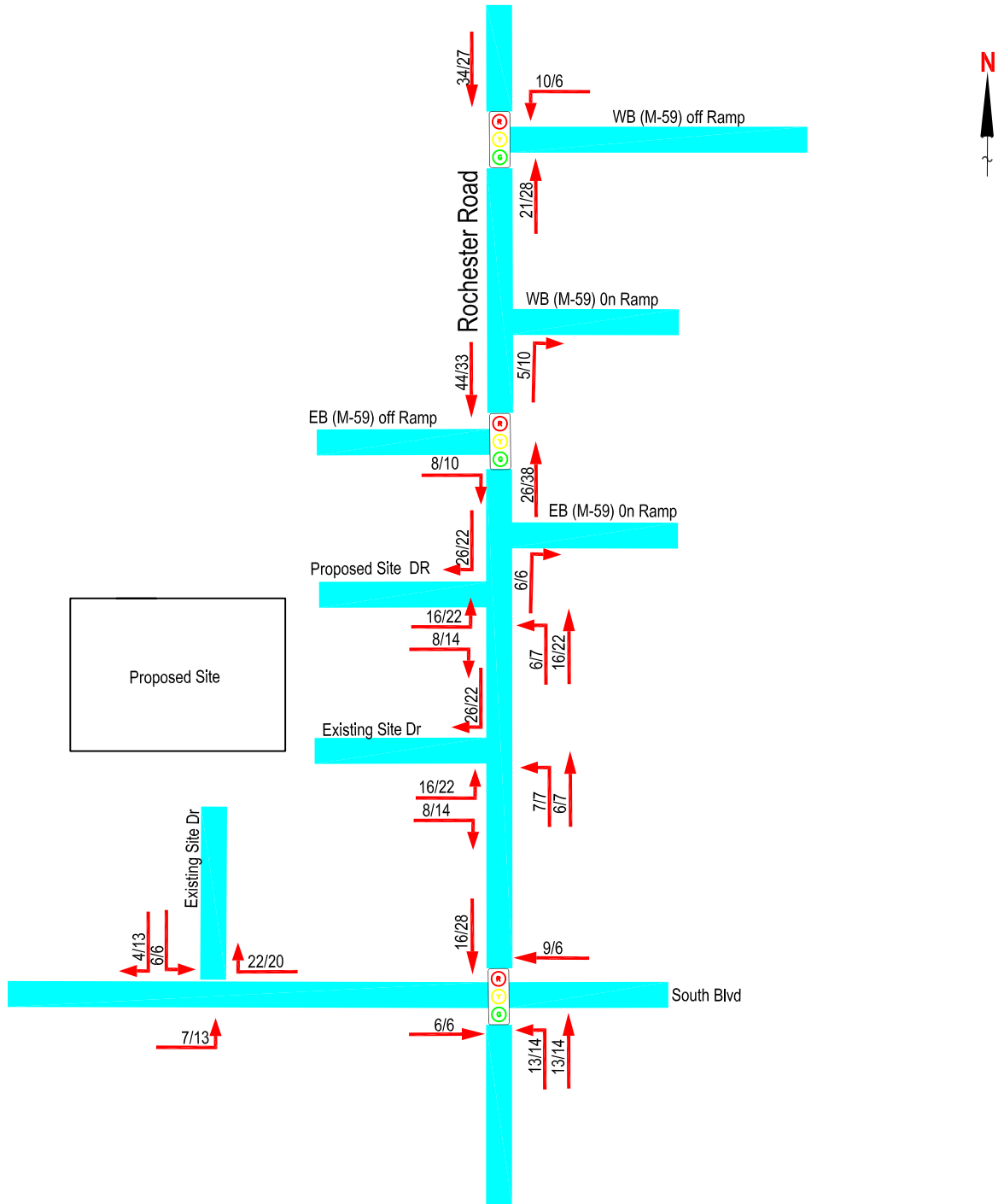
To determine the applicable growth rate for the existing traffic volumes to projected build-out, historical traffic count data and population forecasts published by SEMCOG were referenced. These data indicated that traffic volume in study area have remained consistent or declined in recent years. Therefore, traffic volume growth is expected to be stagnant consistent with current traffic growth pattern throughout southeast Michigan. Based on this data, the background without the proposed development is assumed to be equal to existing condition.

Future Site Trip Generation

The number of AM and PM peak hour trips that would be generated by the proposed developments was forecast based on data published by ITE in the “Trip Generation Manual”, 9th Edition. The number of trips expected to be generated by the proposed project during the weekday AM peak and PM peak were calculated. The trip generation shown represents the trip generation using ITE Land use code 310, 710, 820, & 932. As shown in table 4. The development is estimated to generate 152 trips in the AM Peak and 183 trips in the PM peak.

Table 4

Land Use	Land Use Code	Unit	AM Peak Hour			PM Peak Hour			24 Hour Two-Way Volume
			In	Out	Total	In	Out	Total	
Shopping Center	820	11,037 Sq.Ft GFA	7	4	11	20	21	41	471
High Turn Over (Sit Down) Restaurants	932	6,047 Sq.Ft GFA	36	29	65	35	24	59	768
Hotel	310	108 Rooms	34	23	57	33	32	65	882
Office Building	710	11,856 Sq.Ft GFA	17	2	19	3	15	18	131
Total Trips-Developments			94	58	152	91	92	183	2,252



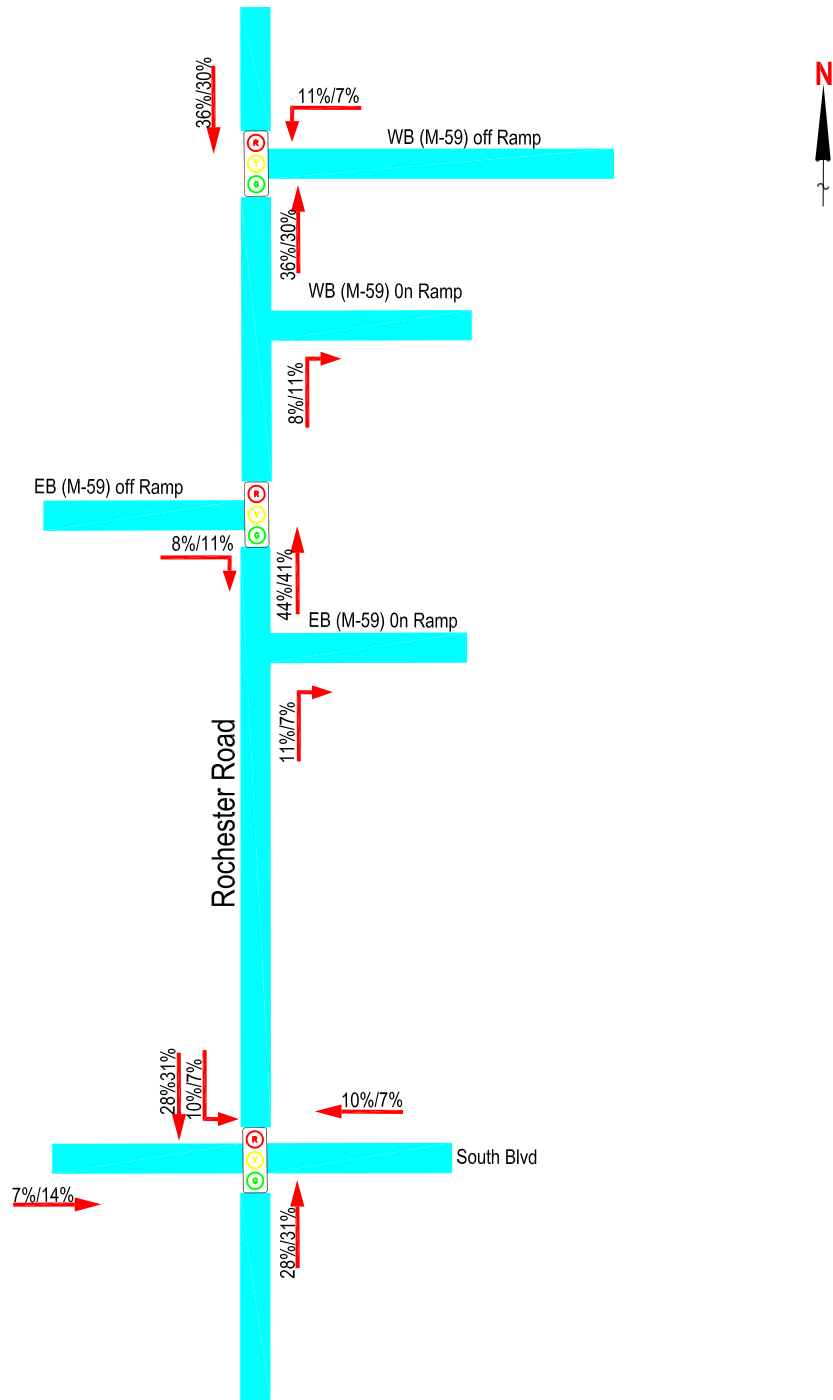
XXAM /XXPM

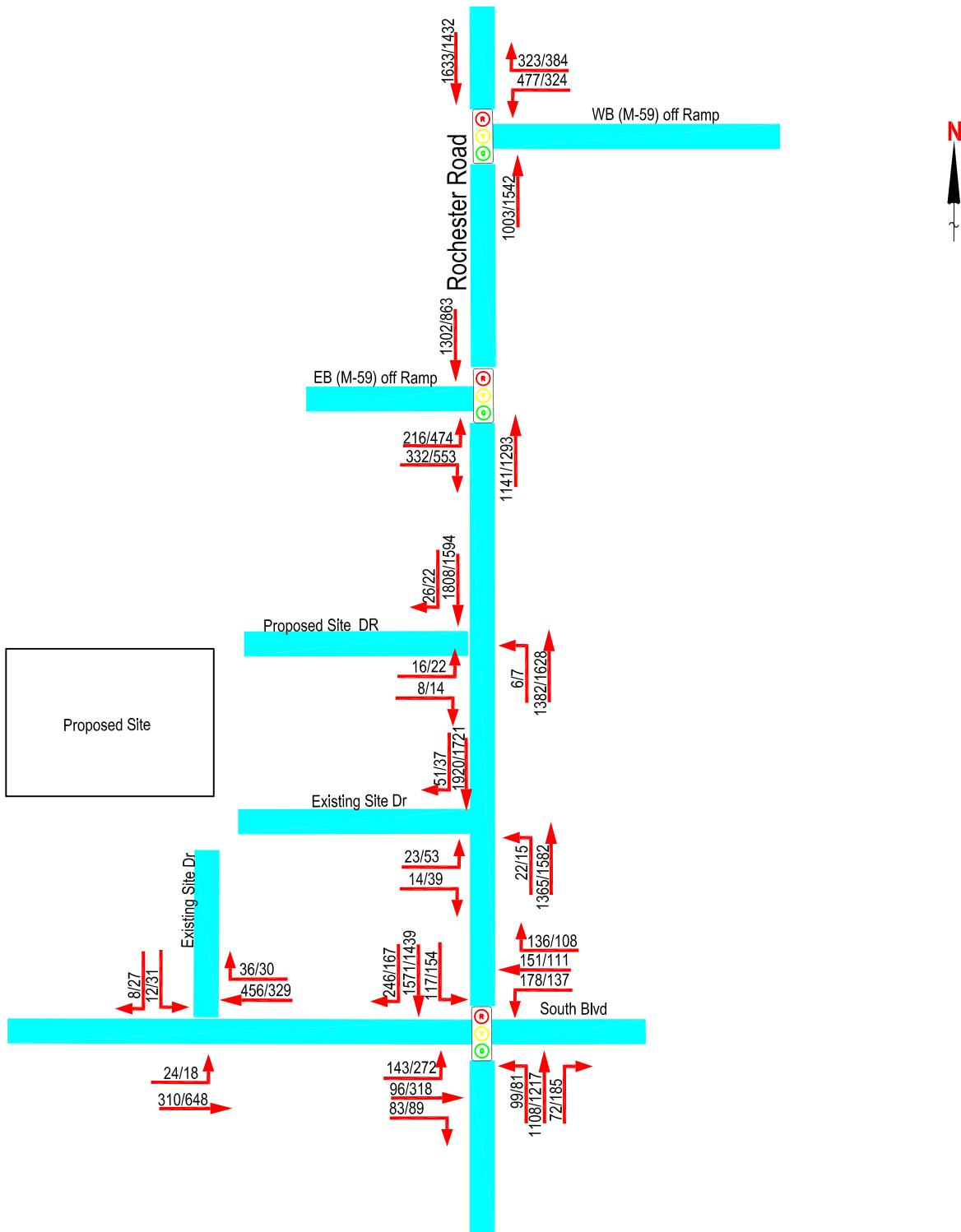
Site Traffic Assignment

The vehicle trips that would be generated by the development were assigned to the study road network based on existing peak hour traffic patterns and the methodologies published by ITE. The existing traffic patterns indicate the distribution of site-generated traffic shown in Figure 5. The site-generated vehicle trips were assigned to the study road network based on this trip distribution model as shown on Figure 6. The site-generated trips were added to the existing traffic volumes shown on Figure 4 to calculate the future AM and PM peak hour traffic volumes, as shown on Figure 7.

Future Conditions

Future peak hour vehicle delays and LOS *with the proposed development* were calculated based on the existing lane use and traffic control shown on Figure 3, the proposed site access plan, the future traffic volumes shown on Figure 7, and the methodologies presented in the HCM. Additionally, SimTraffic simulations were utilized to evaluate network operations and vehicle queues. The results of the analysis of future conditions are presented in Appendix C and are summarized in Table 5.





XXAM /XXPM

Table 5 Capacity Analysis Results for Future Traffic Condition-Build

Intersection		Approach Direction									
		AM Peak Hour					PM Peak Hour				
		EB	WB	NB	SB	Overall Intersection	EB	WB	NB	SB	Overall Intersection
Rochester Rd & South Blvd	LOS	E	D	C	D	D	D	D	C	D	D
	Delay (Sec)	55.4	51.3	22.1	53.3	43.0	62.2	52.7	31.5	52.3	47.0
Rochester Rd & EB M-59 off Ramp	LOS	D	-	A	A	B	D	-	A	B	B
	Delay (Sec)	48.6	-	4.2	9.2	14.6	41.9	-	9.0	10.1	19.8
Rochester Rd & WB M-59 off Ramp	LOS	-	D	A	B	C	-	D	B	A	B
	Delay (Sec)	-	45.0	9.9	14.5	20.7	-	49.5	10.6	9.7	17.8
South Blvd & Site Drive	LOS	A	A	-	B	A	A	A	-	C	A
	Delay (Sec)	0.7	0.0	-	14.9	0.8	0.3	0.0	-	118.9	1.3
Rochester Rd & Site Drive	LOS	F	-	A	A	A	F	-	A	A	A
	Delay (Sec)	63.8	-	1.2	0.0	1.2	195.2	-	0.2	0.0	8.3
Rochester Rd & Proposed Drive	LOS	F	-	A	A	A	E	-	A	A	A
	Delay (Sec)	53.6	-	0.1	0.0	0.4	48.4	-	0.1	0.0	0.7

The results of the future conditions analysis for the study intersection indicate that all study intersections and approaches currently operate at acceptable LOS D or better, except for the intersection of Rochester Road & South Blvd, eastbound South Blvd Road operate at level of E. Therefore, there were very slight differences between existing operation and future operation. Adjusting signal timing could improve LOS.

Crash Data

Traffic crash data for the years 2015-2017 were obtained from the Transportation Improvement Association (TIA). The total number of recorded accidents on Rochester Road and South Blvd Road within the site location was 115. See Table 6 for a traffic crash summary by type and appendix F for crash data.

Table 6 Crash data for years 2015-2017

Crash Type	YR2015	YR2016	YR2017
Rear End	27	17	23
Left Turn	4	5	3
Sideswipe	2	1	3
Angle	1	1	1
Area Private Drives	10	6	10
Pedestrian	0	0	1
Total	44	30	41

Traffic crash data revealed that rear end type crashes were the most common accidents followed by angle accidents (such as left-turns). Mixtures of sideswipe, head/left and single vehicles were the third most common accidents. Rear-end crashes are an indicator of congestion on the road, while angle accidents are common when there are insufficient gaps in traffic to allow a left turn to be made safely. There were 6 accidents (in the 3 years studied) attempting to make left turns from the existing drive on Rochester Road and there weren't any on South Blvd Drive. Therefore, there were insufficient of crashes occurring to warrant a counter measure to improve safety at site driveways. Even though no formal gap study was conducted along the site study area, observations during the AM and PM peak hours indicate adequate gaps to accommodate vehicles to turn left or right from the proposed development with minimum delay.

Proposed Site Access

The proposed site layout includes two existing access drives to the site and one proposed drive one Rochester Road north of an existing drive. The exiting driveway would be shared with the existing Medical Building. All existing and proposed driveways would be the sole entrances for all staff, members' guests, delivery vehicles, and emergency vehicles. Those arriving via

eastbound South Blvd. and northbound Rochester Road would have a center turn-lane to take refuge while waiting for gaps to complete the left-turn into the site.

Sight Distance Evaluation

Sight distance measurements were performed at the project driveway intersections with Road in accordance with American Association of State Highway (AASHTO) latest Edition requirements. These measurements indicate that the available line sight for motorists traveling along Rochester Road and South Blvd Road approaching the project driveway and for motorists exiting the project site exceed the recommended minimum sight distance requirements for a 50MPH and 45 MPH approach speed.

Conclusion

The analysis results under existing conditions show that the all study intersections and roadway Segments currently operate at acceptable levels of service (LOS D or better), and are forecast to continue operating at acceptable LOS with the addition of project-generated traffic to existing traffic volumes. Therefore, the proposed development will have minimum impact on the road adjacent to the site. The site driveways were reviewed with the Road Commission for Oakland County will be designed to meet their design criteria. Also as a result of the review staff indicated that right turn deceleration lanes are not required for the site driveways on Rochester Road due to the fact that their standards do not require it on five lane road cross-sections.

Appendix A – Existing Traffic Volumes

Traffic Engineering Consultants, Inc.

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 Clinton Township, Michigan 48035
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Rochester Road & South Blvd Road
 Weather Condition: Clear
 Count By: H othman
 Board #: 1

File Name : South blvd & rochester
 Site Code : 00000000
 Start Date : 9/19/2017
 Page No : 1

Groups Printed- Unshifted - Bank 1

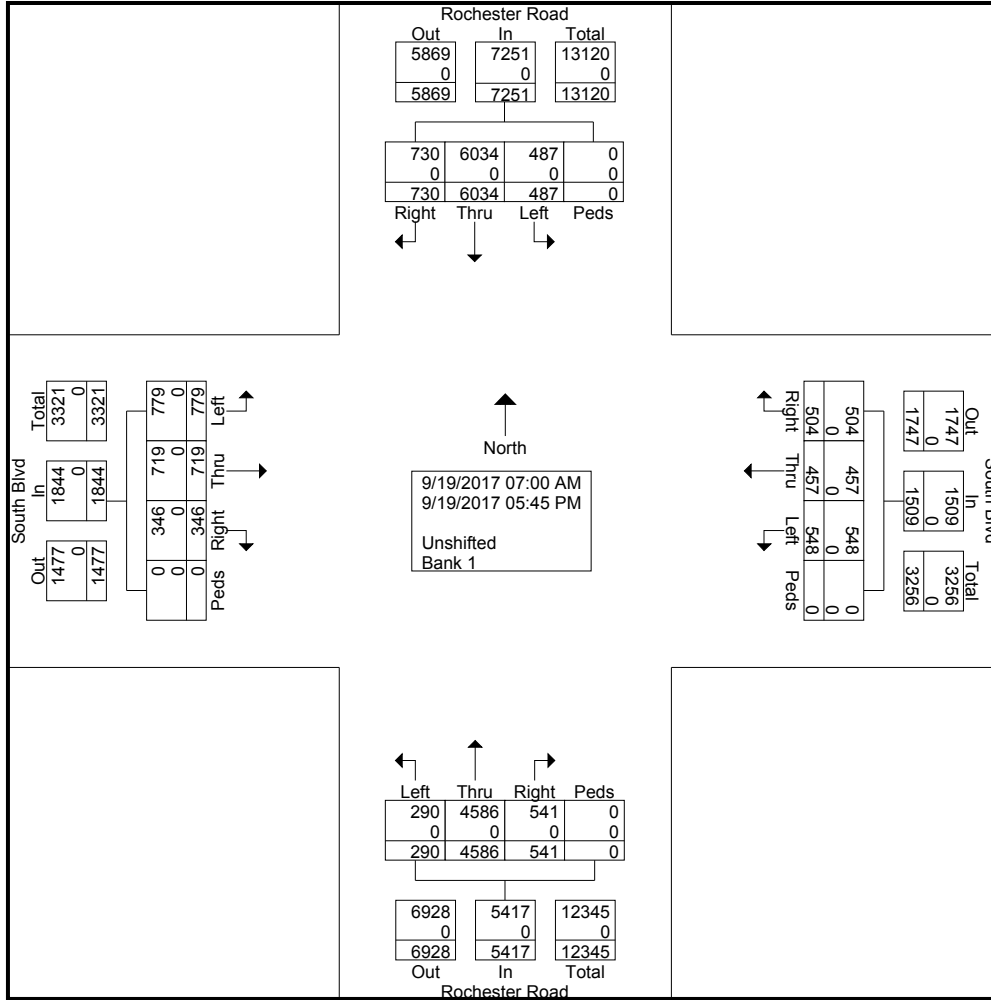
Start Time	Rochester Road Southbound				South Blvd Westbound				Rochester Road Northbound				South Blvd Eastbound				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	56	430	19	0	25	27	34	0	17	193	14	0	18	12	19	0	864
07:15 AM	67	433	28	0	32	40	48	0	9	289	21	0	21	15	24	0	1027
07:30 AM	68	376	30	0	29	31	48	0	13	257	23	0	24	23	36	0	958
07:45 AM	58	386	29	0	38	37	36	0	23	315	20	0	19	29	39	0	1029
Total	249	1625	106	0	124	135	166	0	62	1054	78	0	82	79	118	0	3878
08:00 AM	53	360	30	0	37	34	46	0	27	234	22	0	19	23	44	0	929
08:15 AM	47	389	26	0	43	26	40	0	22	243	20	0	18	16	24	0	914
08:30 AM	62	399	21	0	46	42	31	0	16	304	18	0	20	24	40	0	1023
08:45 AM	55	396	23	0	40	24	31	0	37	316	21	0	14	21	42	0	1020
Total	217	1544	100	0	166	126	148	0	102	1097	81	0	71	84	150	0	3886
*** BREAK ***																	
04:00 PM	23	340	29	0	35	19	24	0	54	322	15	0	20	53	59	0	993
04:15 PM	26	363	32	0	30	20	23	0	49	356	21	0	37	51	54	0	1062
04:30 PM	21	388	36	0	22	28	29	0	53	330	14	0	24	48	59	0	1052
04:45 PM	44	367	36	0	31	33	37	0	54	287	18	0	25	75	75	0	1082
Total	114	1458	133	0	118	100	113	0	210	1295	68	0	106	227	247	0	4189
05:00 PM	47	343	33	0	27	19	33	0	38	315	19	0	18	67	54	0	1013
05:15 PM	33	345	39	0	24	29	40	0	41	283	17	0	19	81	80	0	1031
05:30 PM	43	356	46	0	26	24	27	0	52	318	13	0	27	89	63	0	1084
05:45 PM	27	363	30	0	19	24	21	0	36	224	14	0	23	92	67	0	940
Total	150	1407	148	0	96	96	121	0	167	1140	63	0	87	329	264	0	4068
Grand Total	730	6034	487	0	504	457	548	0	541	4586	290	0	346	719	779	0	16021
Apprch %	10.1	83.2	6.7	0	33.4	30.3	36.3	0	10	84.7	5.4	0	18.8	39	42.2	0	
Total %	4.6	37.7	3	0	3.1	2.9	3.4	0	3.4	28.6	1.8	0	2.2	4.5	4.9	0	
Unshifted	730	6034	487	0	504	457	548	0	541	4586	290	0	346	719	779	0	16021
% Unshifted	100	100	100	0	100	100	100	0	100	100	100	0	100	100	100	0	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Rochester Road & South Blvd Road
 Weather Condition: Clear
 Count By: H othman
 Board #: 1

File Name : South blvd & rochester
 Site Code : 00000000
 Start Date : 9/19/2017
 Page No : 2

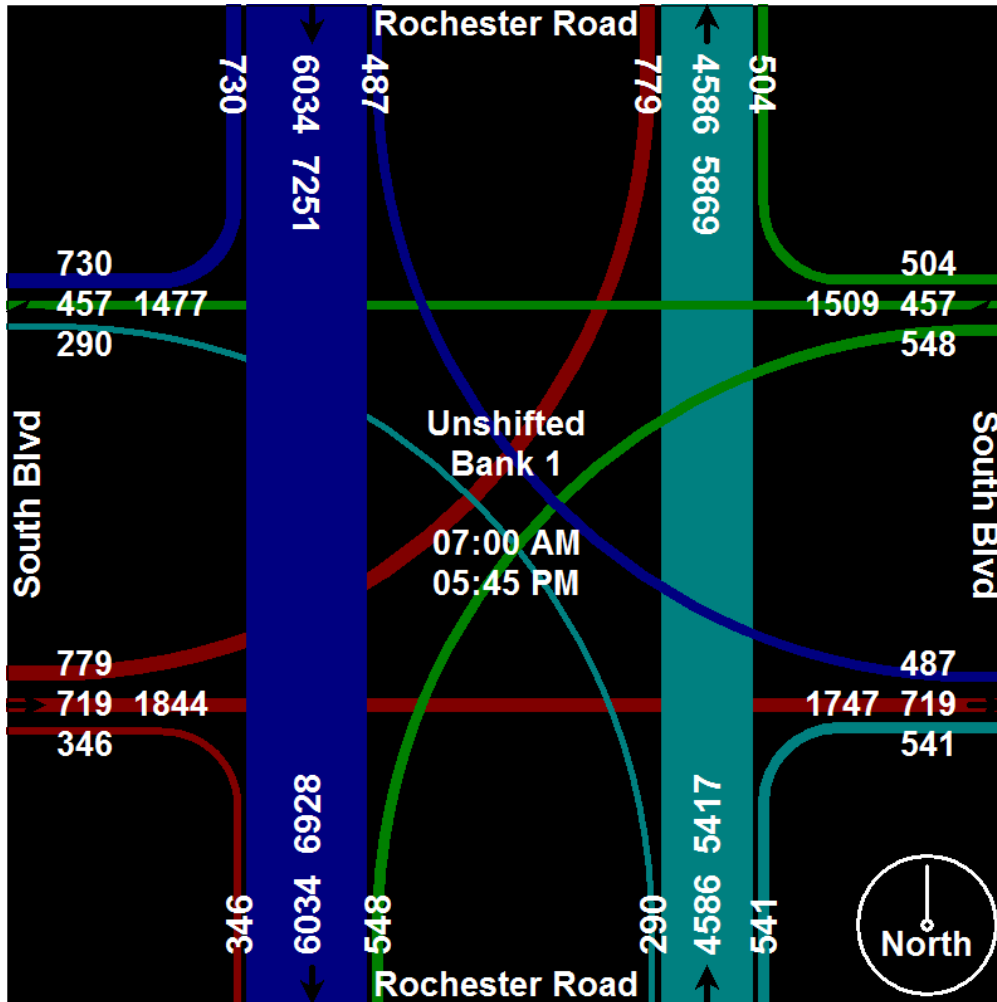


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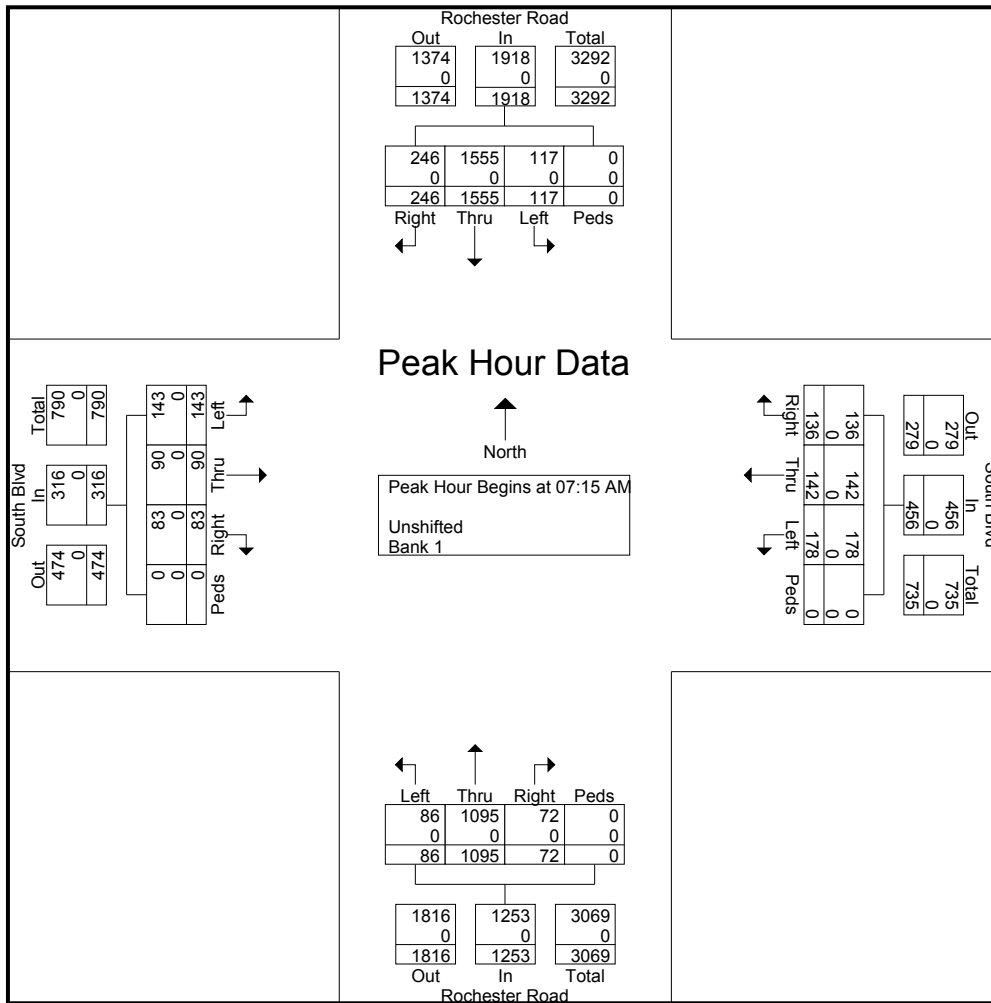
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Rochester Road & South Blvd Road
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File Name : South blvd & rochester
 Site Code : 00000000
 Start Date : 9/19/2017
 Page No : 4

Start Time	Rochester Road Southbound					South Blvd Westbound					Rochester Road Northbound					South Blvd Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. 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	67	433	28	0	528	32	40	48	0	120	9	289	21	0	319	21	15	24	0	60	1027
07:30 AM	68	376	30	0	474	29	31	48	0	108	13	257	23	0	293	24	23	36	0	83	958
07:45 AM	58	386	29	0	473	38	37	36	0	111	23	315	20	0	358	19	29	39	0	87	1029
08:00 AM	53	360	30	0	443	37	34	46	0	117	27	234	22	0	283	19	23	44	0	86	929
Total Volume	246	1555	117	0	1918	136	142	178	0	456	72	1095	86	0	1253	83	90	143	0	316	3943
% App. Total	.904	.898	.975	.000	.908	.895	.888	.927	.000	.950	.667	.869	.935	.000	.875	.865	.776	.813	.000	.908	.958
PHF	.904	.898	.975	.000	.908	.895	.888	.927	.000	.950	.667	.869	.935	.000	.875	.865	.776	.813	.000	.908	.958
Unshifted	246	1555	117	0	1918	136	142	178	0	456	72	1095	86	0	1253	83	90	143	0	316	3943
% Unshifted	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



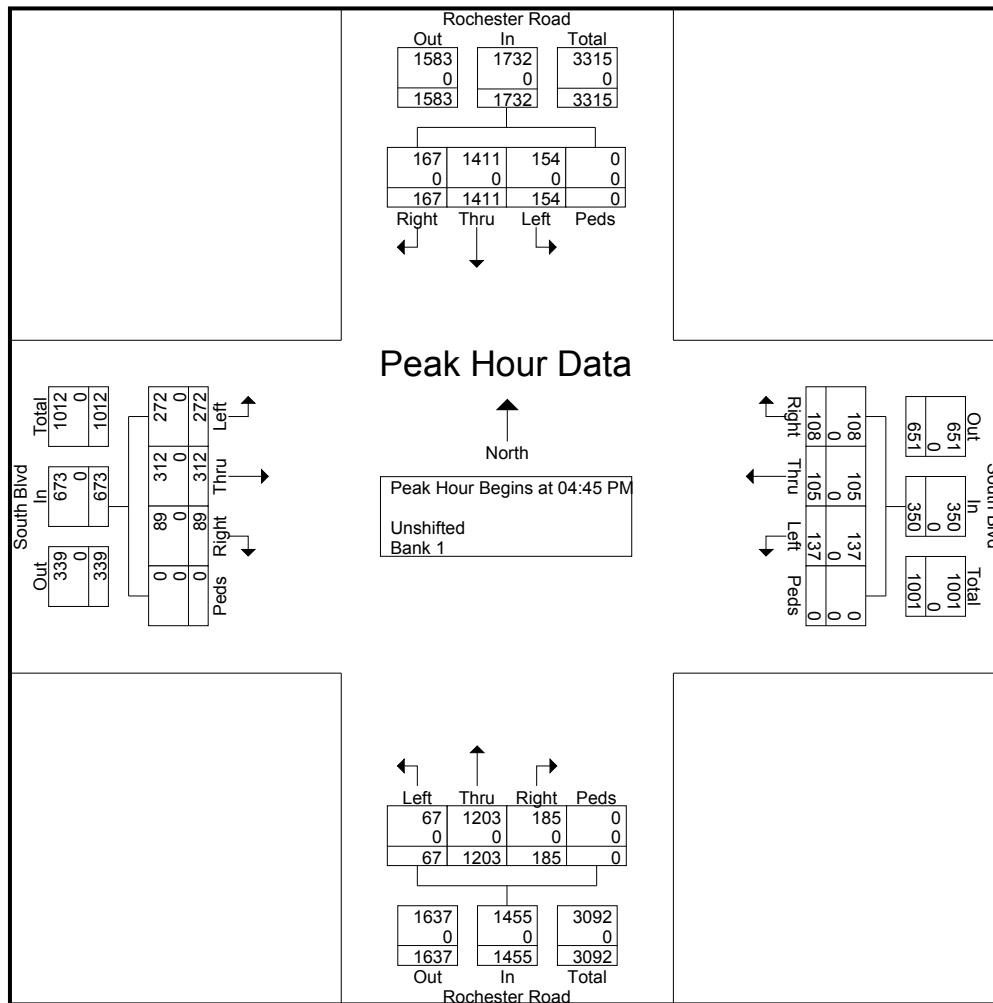
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 Site Code : 00000000
 Start Date : 9/19/2017
 Page No : 5

Start Time	Rochester Road Southbound					South Blvd Westbound					Rochester Road Northbound					South Blvd Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	44	367	36	0	447	31	33	37	0	101	54	287	18	0	359	25	75	75	0	175	1082
05:00 PM	47	343	33	0	423	27	19	33	0	79	38	315	19	0	372	18	67	54	0	139	1013
05:15 PM	33	345	39	0	417	24	29	40	0	93	41	283	17	0	341	19	81	80	0	180	1031
05:30 PM	43	356	46	0	445	26	24	27	0	77	52	318	13	0	383	27	89	63	0	179	1084
Total Volume	167	1411	154	0	1732	108	105	137	0	350	185	1203	67	0	1455	89	312	272	0	673	4210
% App. Total	.888	.961	.837	.000	.969	.871	.795	.856	.000	.866	.856	.946	.882	.000	.950	.824	.876	.850	.000	.935	.971
PHF	.167	.1411	.154	0	.1732	.108	.105	.137	0	.350	.185	.1203	.067	0	.1455	.089	.312	.272	0	.673	4210
Unshifted	167	1411	154	0	1732	108	105	137	0	350	185	1203	67	0	1455	89	312	272	0	673	4210
% Unshifted	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

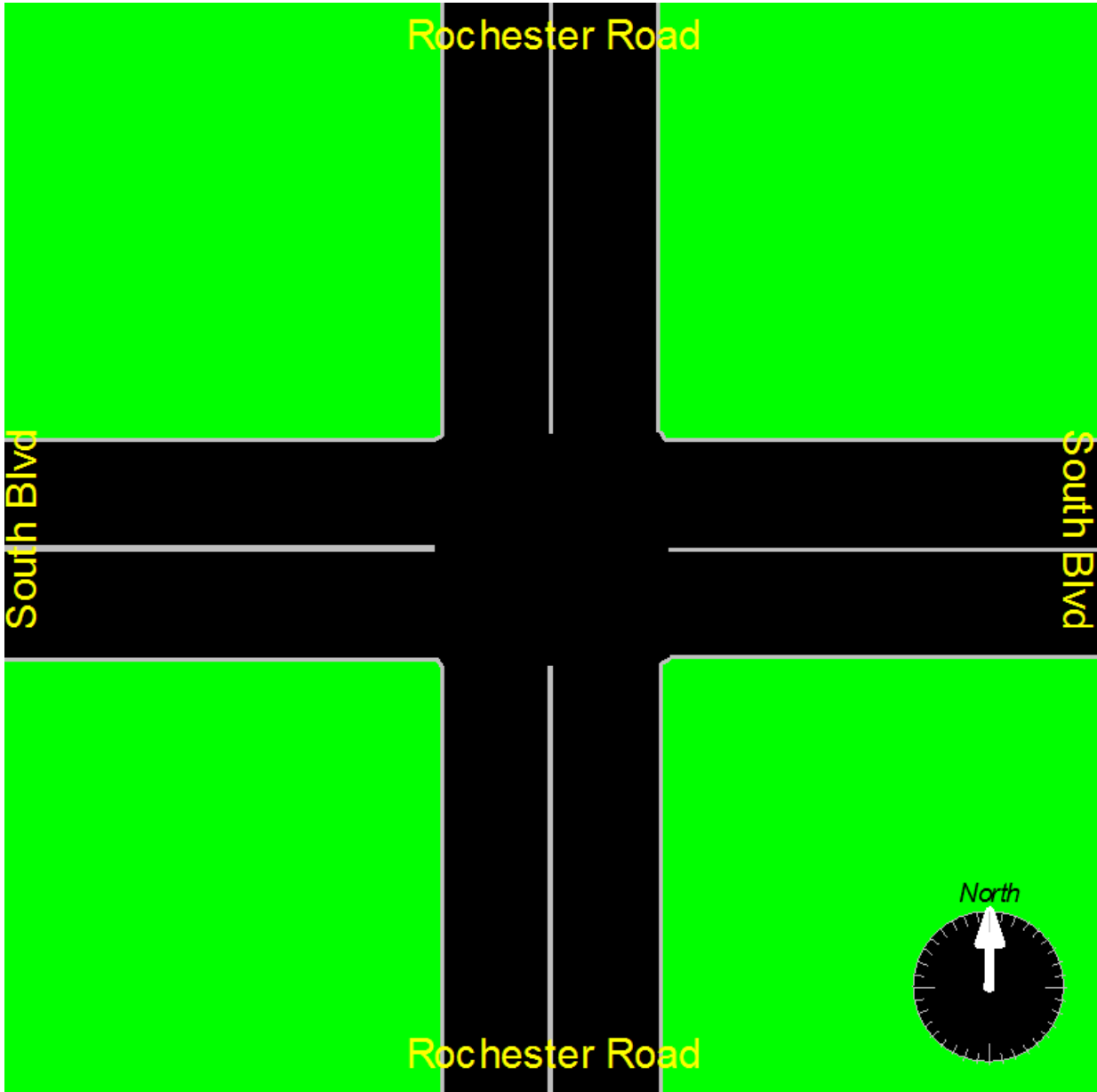


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35890 Monterey Dr
Clinton Township, Michigan 48035
(586) 615-4120

Rochester Road & South Blvd Road
Weather Condition: Clear
Count By: H othman
Board #: 1

File Name : South blvd & rochester
Site Code : 00000000
Start Date : 9/19/2017
Page No : 6



Traffic Engineering Consultants, Inc.

35890 Monterey Dr
 Clinton Township, Michigan 48035
 (586) 615-4120

Rochest Road & WB M-59 off Ramp
 Weather Condition: Clear
 Count By: S.Naser
 Board #: 1

File Name : WB M 59 & rochester
 Site Code : 00000000
 Start Date : 9/19/2017
 Page No : 1

Groups Printed- Unshifted - Bank 1

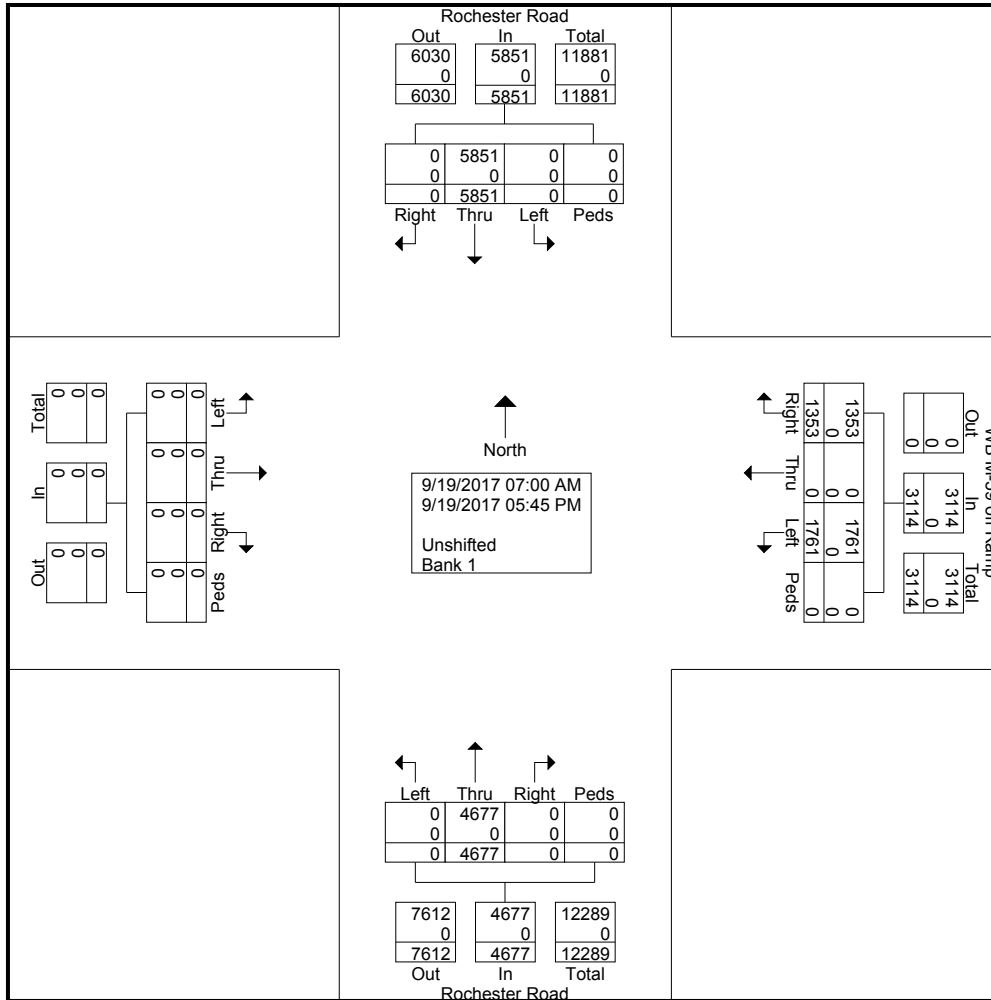
Start Time	Rochester Road Southbound				WB M-59 off Ramp Westbound				Rochester Road Northbound				Eastbound				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	0	379	0	0	66	0	157	0	0	139	0	0	0	0	0	0	741
07:15 AM	0	377	0	0	78	0	209	0	0	160	0	0	0	0	0	0	824
07:30 AM	0	407	0	0	67	0	193	0	0	214	0	0	0	0	0	0	881
07:45 AM	0	410	0	0	59	0	121	0	0	221	0	0	0	0	0	0	811
Total	0	1573	0	0	270	0	680	0	0	734	0	0	0	0	0	0	3257
08:00 AM	0	364	0	0	64	0	116	0	0	195	0	0	0	0	0	0	739
08:15 AM	0	449	0	0	58	0	95	0	0	228	0	0	0	0	0	0	830
08:30 AM	0	407	0	0	79	0	132	0	0	250	0	0	0	0	0	0	868
08:45 AM	0	379	0	0	122	0	124	0	0	309	0	0	0	0	0	0	934
Total	0	1599	0	0	323	0	467	0	0	982	0	0	0	0	0	0	3371
*** BREAK ***																	
04:00 PM	0	334	0	0	75	0	70	0	0	363	0	0	0	0	0	0	842
04:15 PM	0	334	0	0	100	0	85	0	0	335	0	0	0	0	0	0	854
04:30 PM	0	377	0	0	99	0	81	0	0	395	0	0	0	0	0	0	952
04:45 PM	0	350	0	0	103	0	73	0	0	353	0	0	0	0	0	0	879
Total	0	1395	0	0	377	0	309	0	0	1446	0	0	0	0	0	0	3527
05:00 PM	0	339	0	0	93	0	76	0	0	359	0	0	0	0	0	0	867
05:15 PM	0	339	0	0	89	0	88	0	0	407	0	0	0	0	0	0	923
05:30 PM	0	311	0	0	103	0	79	0	0	393	0	0	0	0	0	0	886
05:45 PM	0	295	0	0	98	0	62	0	0	356	0	0	0	0	0	0	811
Total	0	1284	0	0	383	0	305	0	0	1515	0	0	0	0	0	0	3487
Grand Total	0	5851	0	0	1353	0	1761	0	0	4677	0	0	0	0	0	0	13642
Apprch %	0	100	0	0	43.4	0	56.6	0	0	100	0	0	0	0	0	0	
Total %	0	42.9	0	0	9.9	0	12.9	0	0	34.3	0	0	0	0	0	0	
Unshifted	0	5851	0	0	1353	0	1761	0	0	4677	0	0	0	0	0	0	13642
% Unshifted	0	100	0	0	100	0	100	0	0	100	0	0	0	0	0	0	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Rochest Road & WB M-59 off Ramp
 Weather Condition: Clear
 Count By: S.Naser
 Board #: 1

File Name : WB M 59 & rochester
 Site Code : 00000000
 Start Date : 9/19/2017
 Page No : 2

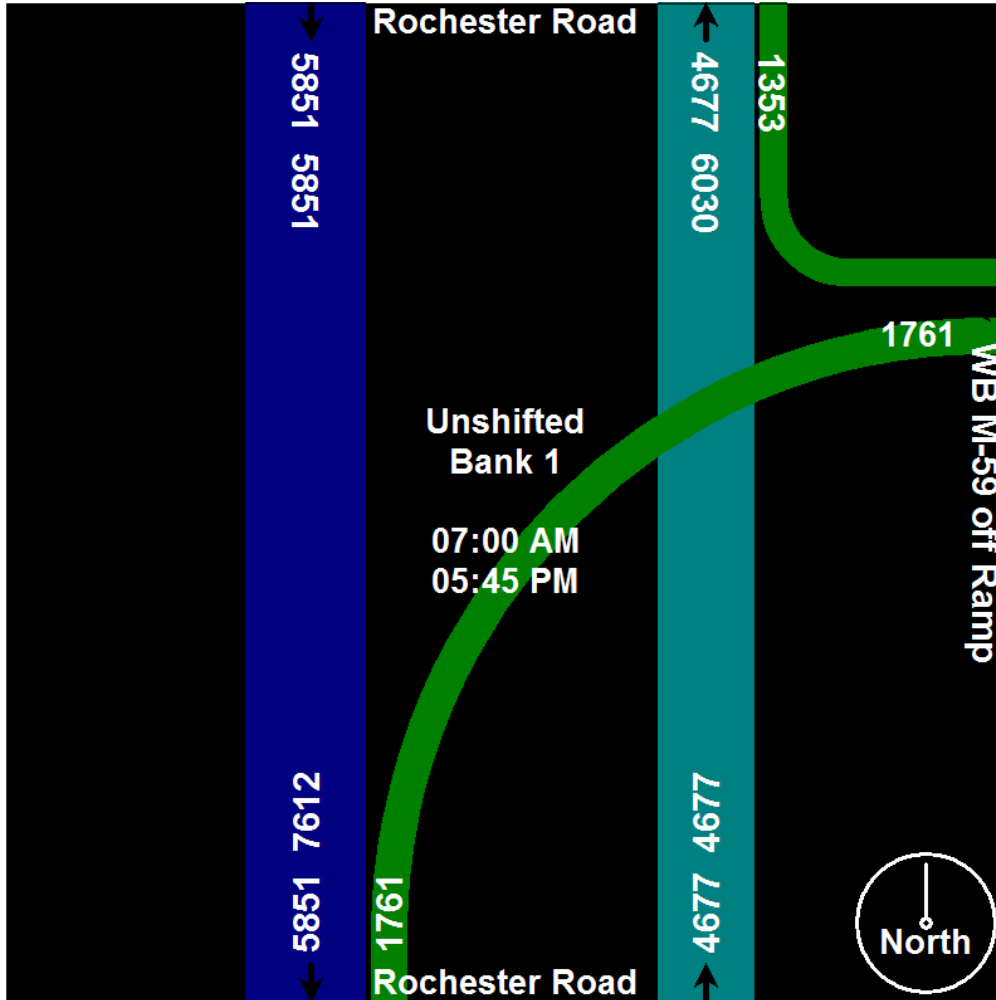


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Rochest Road & WB M-59 off Ramp
Weather Condition: Clear
Count By: S.Naser
Board #: 1

File Name : WB M 59 & rochester
Site Code : 00000000
Start Date : 9/19/2017
Page No : 3



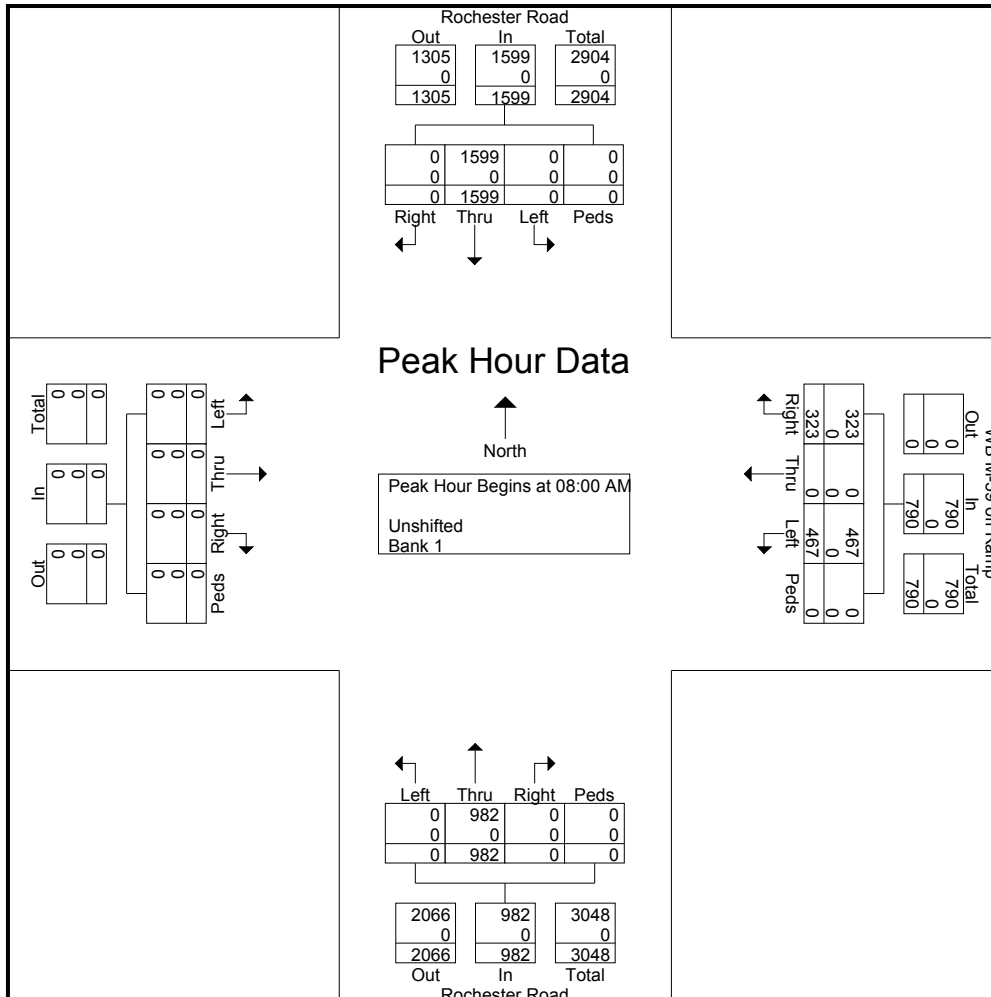
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 Clinton Township, Michigan 48035
 (586) 615-4120

Rochest Road & WB M-59 off Ramp
 Weather Condition: Clear
 Count By: S.Naser
 Board #: 1

File Name : WB M 59 & rochester
 Site Code : 00000000
 Start Date : 9/19/2017
 Page No : 4

Start Time	Rochester Road Southbound					WB M-59 off Ramp Westbound					Rochester Road Northbound					Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	364	0	0	364	64	0	116	0	180	0	195	0	0	195	0	0	0	0	0	739
08:15 AM	0	449	0	0	449	58	0	95	0	153	0	228	0	0	228	0	0	0	0	0	830
08:30 AM	0	407	0	0	407	79	0	132	0	211	0	250	0	0	250	0	0	0	0	0	868
08:45 AM	0	379	0	0	379	122	0	124	0	246	0	309	0	0	309	0	0	0	0	0	934
Total Volume	0	1599	0	0	1599	323	0	467	0	790	0	982	0	0	982	0	0	0	0	0	3371
% App. Total	0	100	0	0	100	40.9	0	59.1	0	100	0	100	0	0	100	0	0	0	0	0	100
PHF	.000	.890	.000	.000	.890	.662	.000	.884	.000	.803	.000	.794	.000	.000	.794	.000	.000	.000	.000	.000	.902
Unshifted	0	1599	0	0	1599	323	0	467	0	790	0	982	0	0	982	0	0	0	0	0	3371
% Unshifted	0	100	0	0	100	100	0	100	0	100	0	100	0	0	100	0	0	0	0	0	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



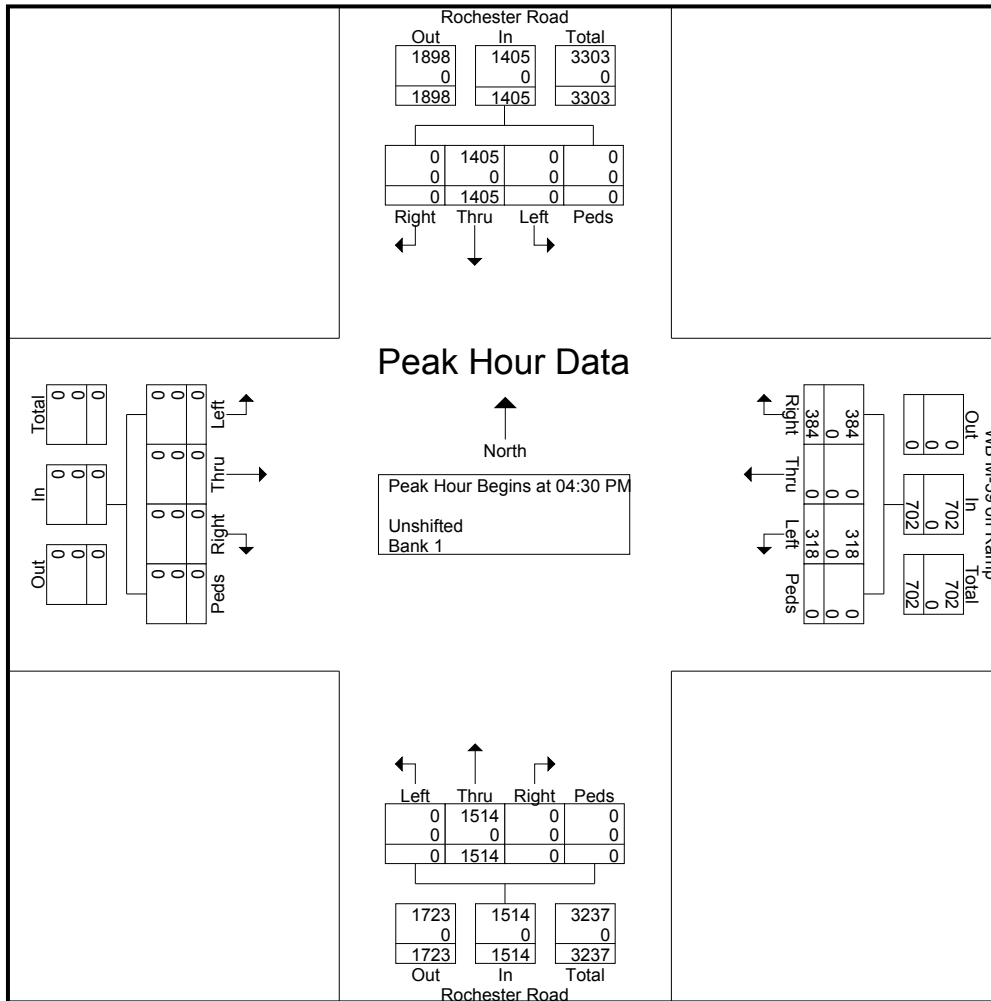
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Rochest Road & WB M-59 off Ramp
 Weather Condition: Clear
 Count By: S.Naser
 Board #: 1

File Name : WB M 59 & rochester
 Site Code : 00000000
 Start Date : 9/19/2017
 Page No : 5

Start Time	Rochester Road Southbound					WB M-59 off Ramp Westbound					Rochester Road Northbound					Eastbound					Int. Total	
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. 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	377	0	0	377	99	0	81	0	180	0	395	0	0	395	0	0	0	0	0	0	952
04:45 PM	0	350	0	0	350	103	0	73	0	176	0	353	0	0	353	0	0	0	0	0	0	879
05:00 PM	0	339	0	0	339	93	0	76	0	169	0	359	0	0	359	0	0	0	0	0	0	867
05:15 PM	0	339	0	0	339	89	0	88	0	177	0	407	0	0	407	0	0	0	0	0	0	923
Total Volume	0	1405	0	0	1405	384	0	318	0	702	0	1514	0	0	1514	0	0	0	0	0	0	3621
% App. Total																						
PHF	.000	.932	.000	.000	.932	.932	.000	.903	.000	.975	.000	.930	.000	.000	.930	.000	.000	.000	.000	.000	.000	.951
Unshifted	0	1405	0	0	1405	384	0	318	0	702	0	1514	0	0	1514	0	0	0	0	0	0	3621
% Unshifted																						
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

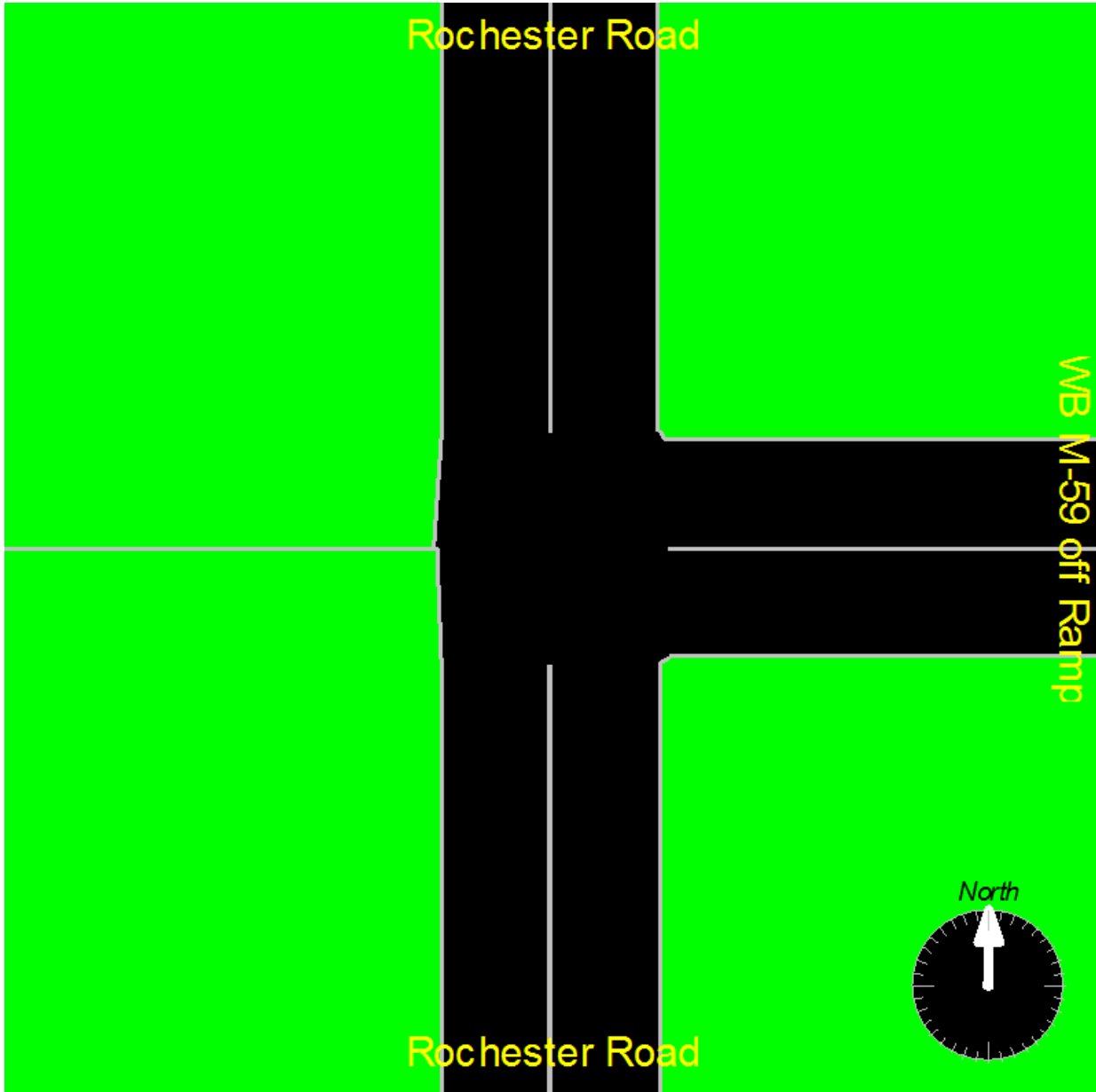


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Rochester Road & WB M-59 off Ramp
Weather Condition: Clear
Count By: S.Naser
Board #: 1

File Name : WB M 59 & rochester
Site Code : 00000000
Start Date : 9/19/2017
Page No : 6



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Rochester Road & EB M-59 off Ramp
 Weather Condition: Clear
 Count By: L. Othman
 Board #: 1

File Name : eb m59 & rochester
 Site Code : 00000000
 Start Date : 9/19/2017
 Page No : 1

Groups Printed- Unshifted - Bank 1

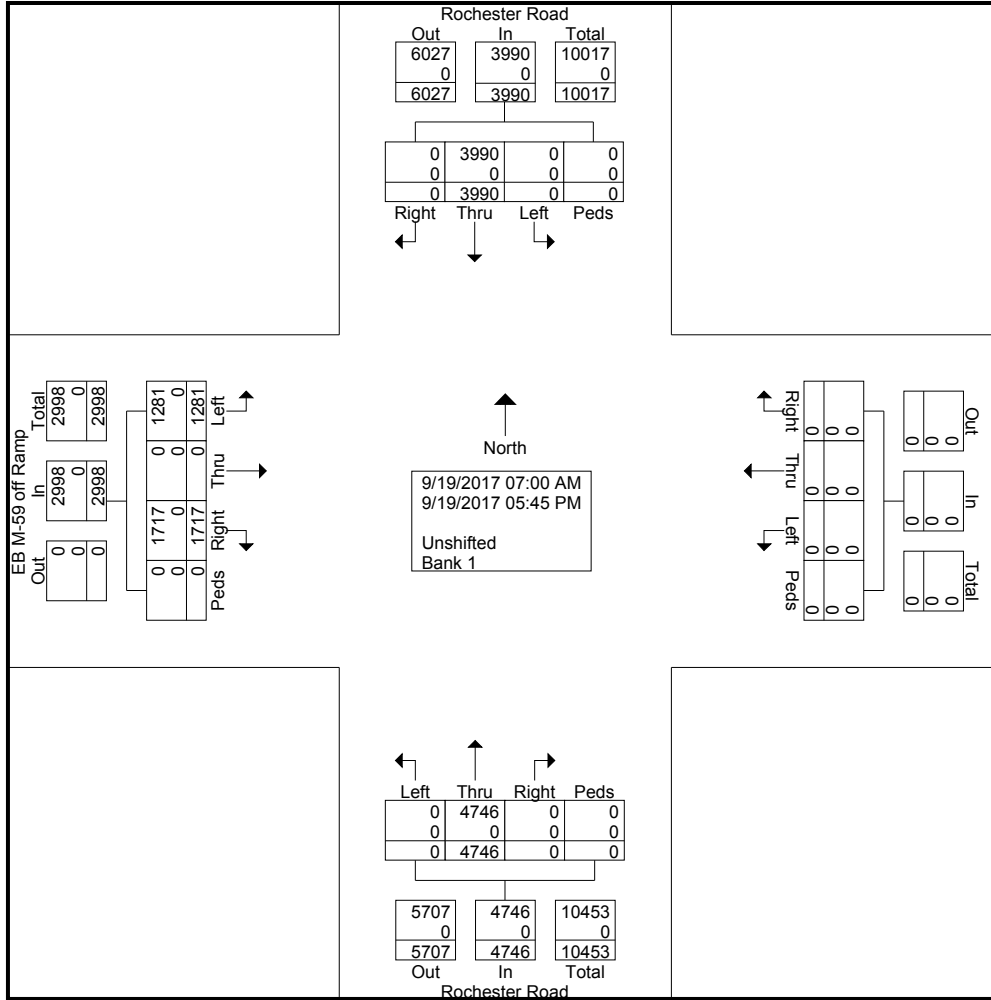
Start Time	Rochester Road Southbound				Westbound				Rochester Road Northbound				EB M-59 off Ramp Eastbound				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	0	294	0	0	0	0	0	0	0	195	0	0	68	0	30	0	587
07:15 AM	0	361	0	0	0	0	0	0	0	262	0	0	83	0	45	0	751
07:30 AM	0	334	0	0	0	0	0	0	0	295	0	0	70	0	57	0	756
07:45 AM	0	315	0	0	0	0	0	0	0	309	0	0	93	0	53	0	770
Total	0	1304	0	0	0	0	0	0	0	1061	0	0	314	0	185	0	2864
08:00 AM	0	248	0	0	0	0	0	0	0	259	0	0	78	0	61	0	646
08:15 AM	0	293	0	0	0	0	0	0	0	248	0	0	93	0	63	0	697
08:30 AM	0	296	0	0	0	0	0	0	0	302	0	0	98	0	79	0	775
08:45 AM	0	259	0	0	0	0	0	0	0	321	0	0	116	0	82	0	778
Total	0	1096	0	0	0	0	0	0	0	1130	0	0	385	0	285	0	2896
*** BREAK ***																	
04:00 PM	0	203	0	0	0	0	0	0	0	339	0	0	103	0	73	0	718
04:15 PM	0	212	0	0	0	0	0	0	0	343	0	0	136	0	85	0	776
04:30 PM	0	223	0	0	0	0	0	0	0	318	0	0	128	0	82	0	751
04:45 PM	0	169	0	0	0	0	0	0	0	304	0	0	144	0	110	0	727
Total	0	807	0	0	0	0	0	0	0	1304	0	0	511	0	350	0	2972
05:00 PM	0	203	0	0	0	0	0	0	0	330	0	0	141	0	112	0	786
05:15 PM	0	220	0	0	0	0	0	0	0	345	0	0	130	0	117	0	812
05:30 PM	0	238	0	0	0	0	0	0	0	286	0	0	128	0	135	0	787
05:45 PM	0	122	0	0	0	0	0	0	0	290	0	0	108	0	97	0	617
Total	0	783	0	0	0	0	0	0	0	1251	0	0	507	0	461	0	3002
Grand Total	0	3990	0	0	0	0	0	0	0	4746	0	0	1717	0	1281	0	11734
Apprch %	0	100	0	0	0	0	0	0	0	100	0	0	57.3	0	42.7	0	
Total %	0	34	0	0	0	0	0	0	0	40.4	0	0	14.6	0	10.9	0	
Unshifted	0	3990	0	0	0	0	0	0	0	4746	0	0	1717	0	1281	0	11734
% Unshifted	0	100	0	0	0	0	0	0	0	100	0	0	100	0	100	0	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Rochester Road & EB M-59 off Ramp
 Weather Condition: Clear
 Count By: L. Othman
 Board #: 1

File Name : eb m59 & rochester
 Site Code : 00000000
 Start Date : 9/19/2017
 Page No : 2

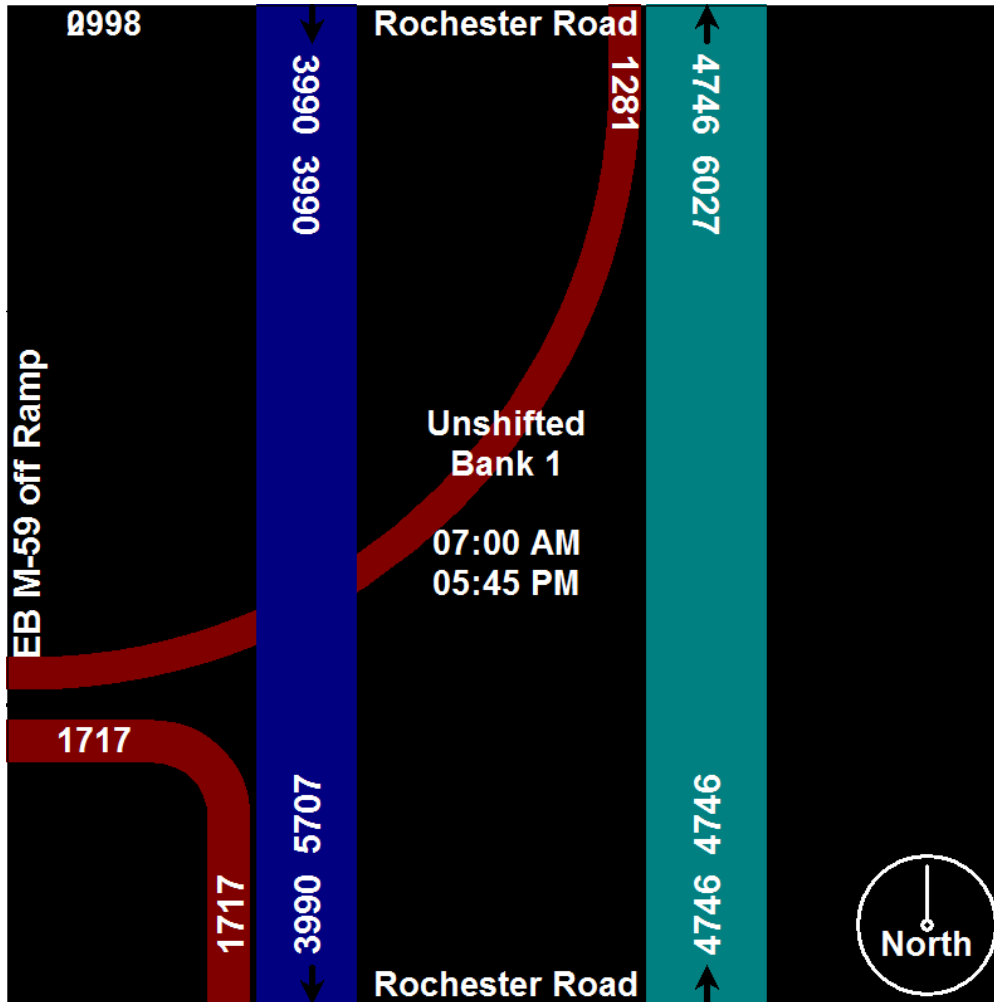


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Rochester Road & EB M-59 off Ramp
Weather Condition: Clear
Count By: L. Othman
Board #: 1

File Name : eb m59 & rochester
Site Code : 00000000
Start Date : 9/19/2017
Page No : 3



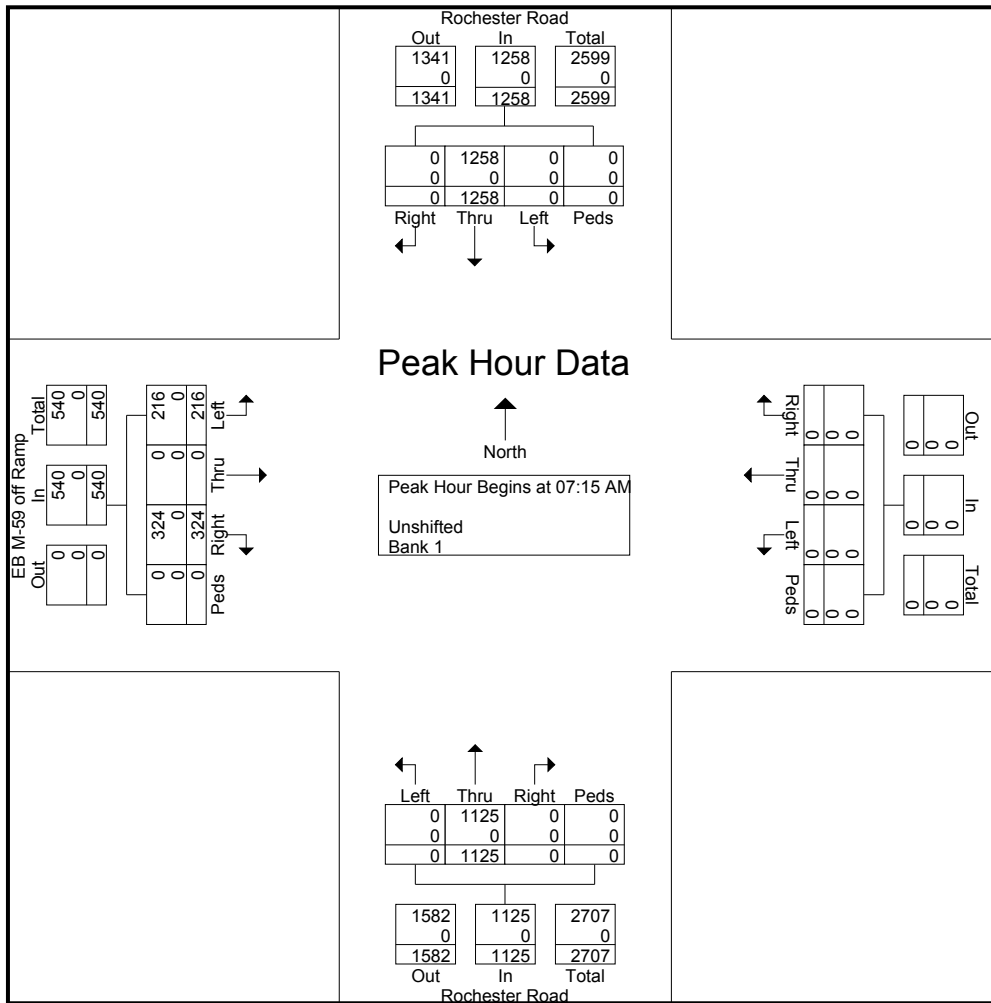
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Rochester Road & EB M-59 off Ramp
 Weather Condition: Clear
 Count By: L. Othman
 Board #: 1

File Name : eb m59 & rochester
 Site Code : 00000000
 Start Date : 9/19/2017
 Page No : 4

Start Time	Rochester Road Southbound					Westbound					Rochester Road Northbound					EB M-59 off Ramp Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. 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	361	0	0	361	0	0	0	0	0	0	262	0	0	262	83	0	45	0	128	751
07:30 AM	0	334	0	0	334	0	0	0	0	0	0	295	0	0	295	70	0	57	0	127	756
07:45 AM	0	315	0	0	315	0	0	0	0	0	0	309	0	0	309	93	0	53	0	146	770
08:00 AM	0	248	0	0	248	0	0	0	0	0	0	259	0	0	259	78	0	61	0	139	646
Total Volume	0	1258	0	0	1258	0	0	0	0	0	0	1125	0	0	1125	324	0	216	0	540	2923
% App. Total	.000	.871	.000	.000	.871	.000	.000	.000	.000	.000	.000	.910	.000	.000	.910	.871	.000	.885	.000	.925	.949
PHF	.000	.871	.000	.000	.871	.000	.000	.000	.000	.000	.000	.910	.000	.000	.910	.871	.000	.885	.000	.925	.949
Unshifted	0	1258	0	0	1258	0	0	0	0	0	0	1125	0	0	1125	324	0	216	0	540	2923
% Unshifted	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

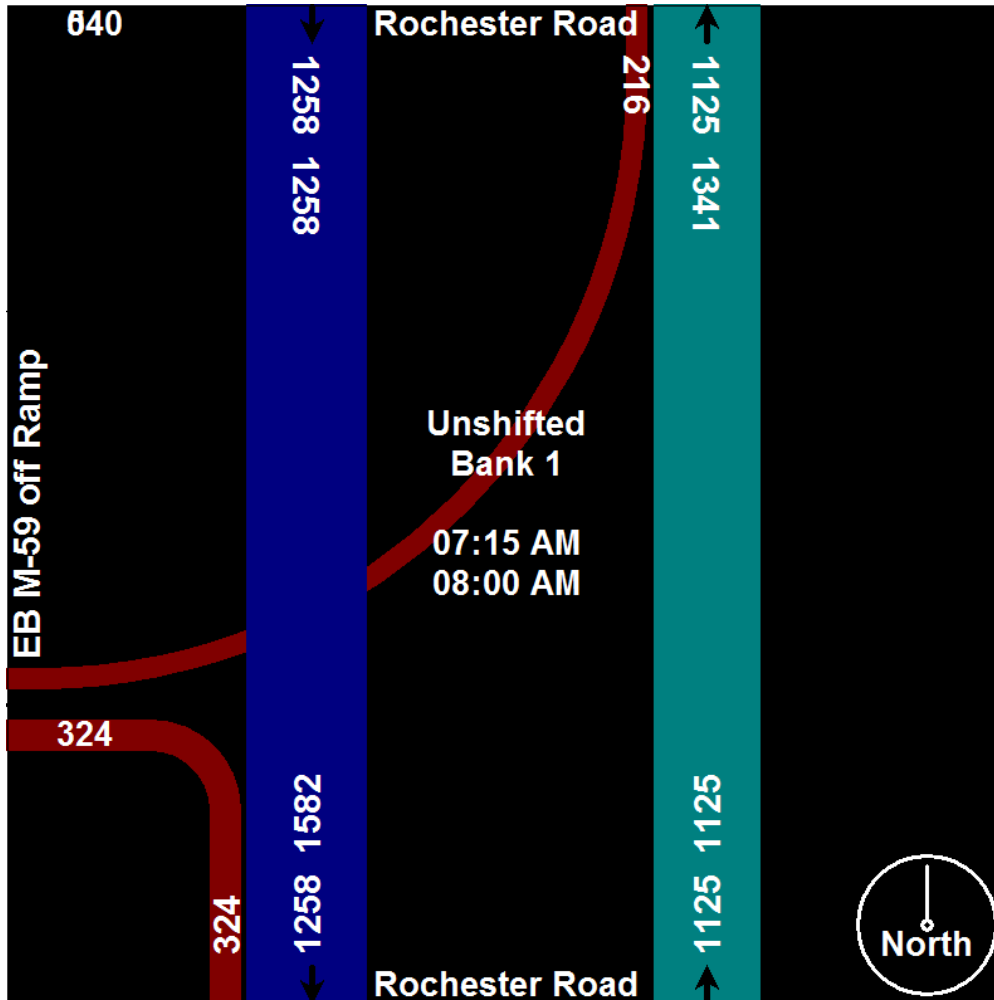


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Rochester Road & EB M-59 off Ramp
Weather Condition: Clear
Count By: L. Othman
Board #: 1

File Name : eb m59 & rochester
Site Code : 00000000
Start Date : 9/19/2017
Page No : 5



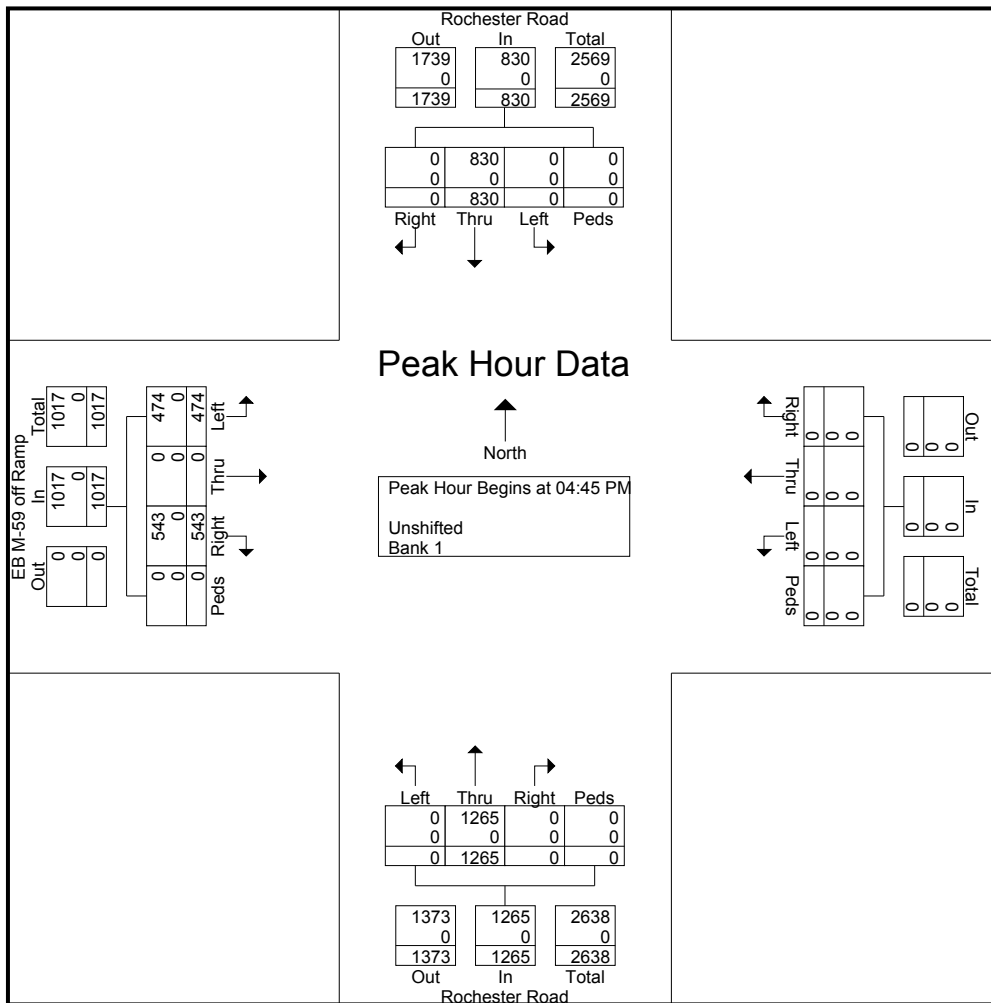
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Rochester Road & EB M-59 off Ramp
 Weather Condition: Clear
 Count By: L. Othman
 Board #: 1

File Name : eb m59 & rochester
 Site Code : 00000000
 Start Date : 9/19/2017
 Page No : 6

Start Time	Rochester Road Southbound					Westbound					Rochester Road Northbound					EB M-59 off Ramp Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	169	0	0	169	0	0	0	0	0	0	304	0	0	304	144	0	110	0	254	727
05:00 PM	0	203	0	0	203	0	0	0	0	0	0	330	0	0	330	141	0	112	0	253	786
05:15 PM	0	220	0	0	220	0	0	0	0	0	0	345	0	0	345	130	0	117	0	247	812
05:30 PM	0	238	0	0	238	0	0	0	0	0	0	286	0	0	286	128	0	135	0	263	787
Total Volume	0	830	0	0	830	0	0	0	0	0	0	1265	0	0	1265	543	0	474	0	1017	3112
% App. Total																					
PHF	.000	.872	.000	.000	.872	.000	.000	.000	.000	.000	.000	.917	.000	.000	.917	.943	.000	.878	.000	.967	.958
Unshifted	0	830	0	0	830	0	0	0	0	0	0	1265	0	0	1265	543	0	474	0	1017	3112
% Unshifted																					
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

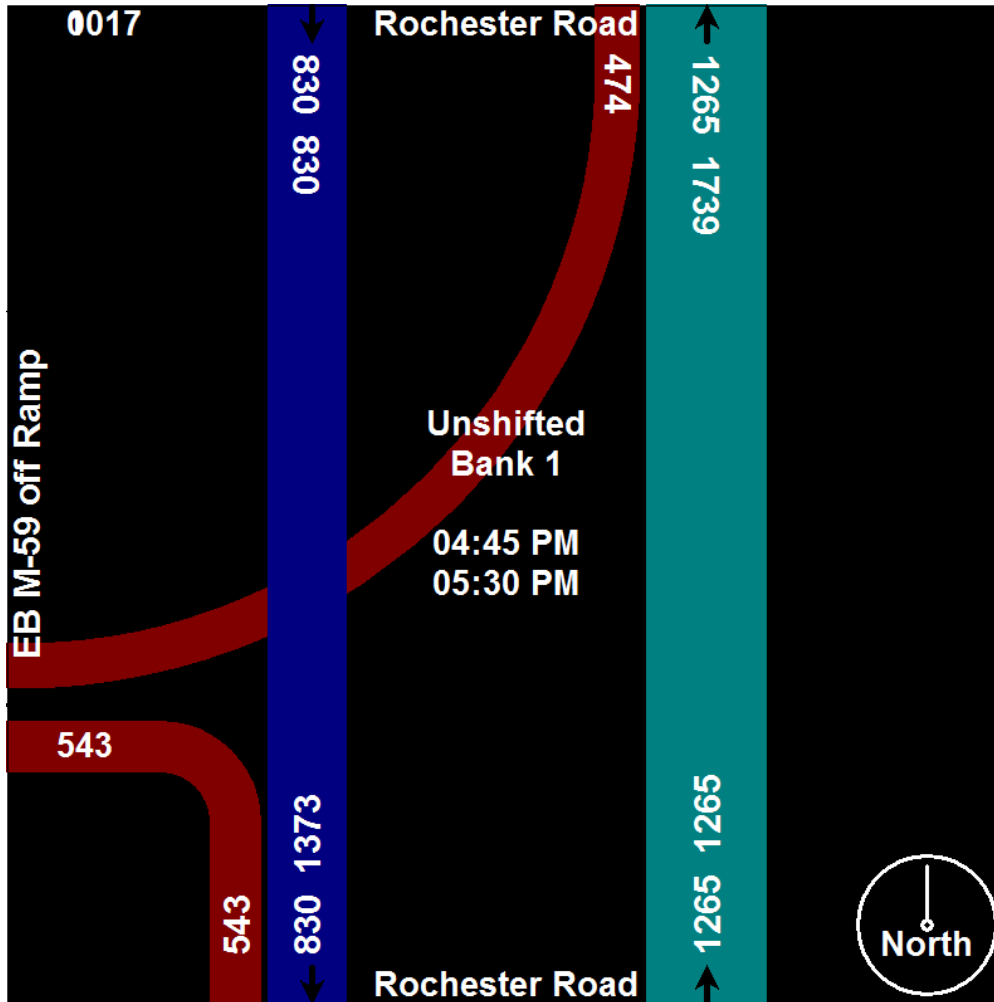


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Rochester Road & EB M-59 off Ramp
Weather Condition: Clear
Count By: L. Othman
Board #: 1

File Name : eb m59 & rochester
Site Code : 00000000
Start Date : 9/19/2017
Page No : 7

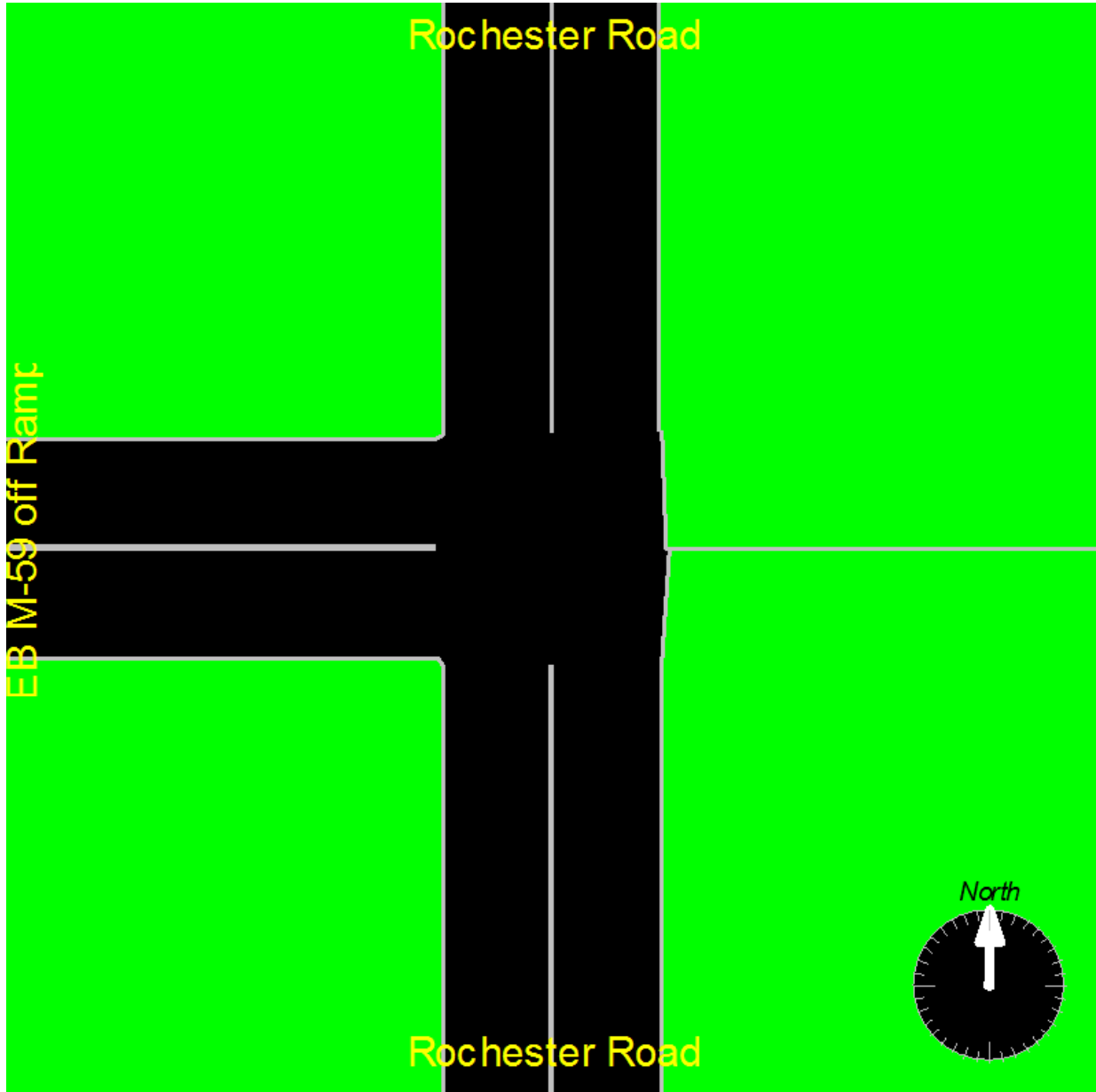


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Rochester Road & EB M-59 off Ramp
Weather Condition: Clear
Count By: L. Othman
Board #: 1

File Name : eb m59 & rochester
Site Code : 00000000
Start Date : 9/19/2017
Page No : 8



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Rochester Road & Site Drive
 Weather Condition: Clear
 Count By; RS
 Then Click the Comments Tab

File Name : rochester & Site Dr
 Site Code : 0005_____
 Start Date : 9/19/2017
 Page No : 1

Groups Printed- Class 1

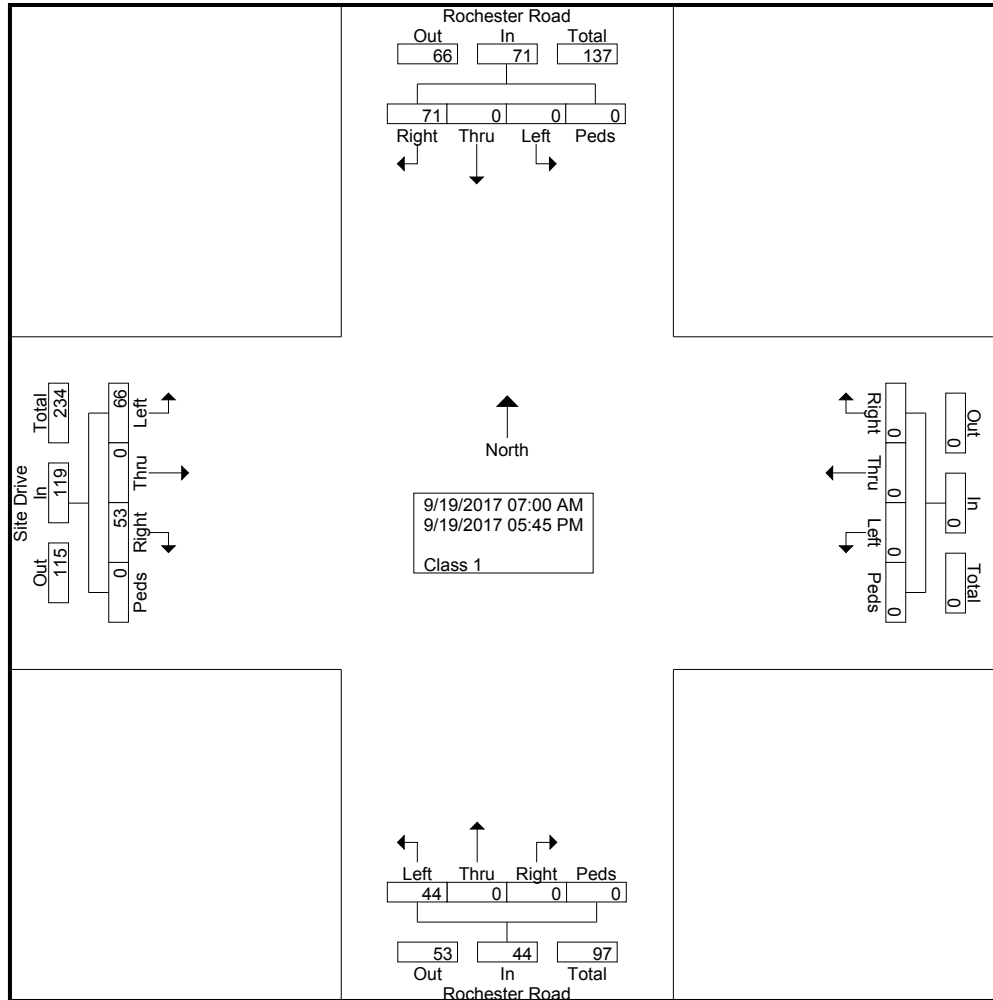
Start Time	Rochester Road Southbound				Westbound				Rochester Road Northbound				Site Drive Eastbound				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	5	0	0	0	0	0	0	0	0	0	2	0	1	0	1	0	9
07:15 AM	4	0	0	0	0	0	0	0	0	0	3	0	1	0	2	0	10
07:30 AM	6	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	10
07:45 AM	6	0	0	0	0	0	0	0	0	0	4	0	1	0	1	0	12
Total	21	0	0	0	0	0	0	0	0	0	11	0	3	0	6	0	41
08:00 AM	5	0	0	0	0	0	0	0	0	0	3	0	1	0	1	0	10
08:15 AM	7	0	0	0	0	0	0	0	0	0	5	0	1	0	2	0	15
08:30 AM	5	0	0	0	0	0	0	0	0	0	3	0	2	0	2	0	12
08:45 AM	8	0	0	0	0	0	0	0	0	0	4	0	2	0	2	0	16
Total	25	0	0	0	0	0	0	0	0	0	15	0	6	0	7	0	53
*** BREAK ***																	
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
*** BREAK ***																	
Total	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
*** BREAK ***																	
04:00 PM	3	0	0	0	0	0	0	0	0	0	2	0	4	0	6	0	15
04:15 PM	4	0	0	0	0	0	0	0	0	0	3	0	5	0	8	0	20
04:30 PM	5	0	0	0	0	0	0	0	0	0	2	0	4	0	8	0	19
04:45 PM	3	0	0	0	0	0	0	0	0	0	1	0	6	0	10	0	20
Total	15	0	0	0	0	0	0	0	0	0	8	0	19	0	32	0	74
05:00 PM	3	0	0	0	0	0	0	0	0	0	2	0	7	0	6	0	18
05:15 PM	4	0	0	0	0	0	0	0	0	0	3	0	8	0	7	0	22
05:30 PM	2	0	0	0	0	0	0	0	0	0	2	0	5	0	4	0	13
05:45 PM	1	0	0	0	0	0	0	0	0	0	3	0	4	0	4	0	12
Total	10	0	0	0	0	0	0	0	0	0	10	0	24	0	21	0	65
Grand Total	71	0	0	0	0	0	0	0	0	0	44	0	53	0	66	0	234
Apprch %	100	0	0	0	0	0	0	0	0	0	100	0	44.5	0	55.5	0	
Total %	30.3	0	0	0	0	0	0	0	0	0	18.8	0	22.6	0	28.2	0	

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Rochester Road & Site Drive
 Weather Condition: Clear
 Count By; RS
 Then Click the Comments Tab

File Name : rochester & Site Dr
 Site Code : 0005____
 Start Date : 9/19/2017
 Page No : 2

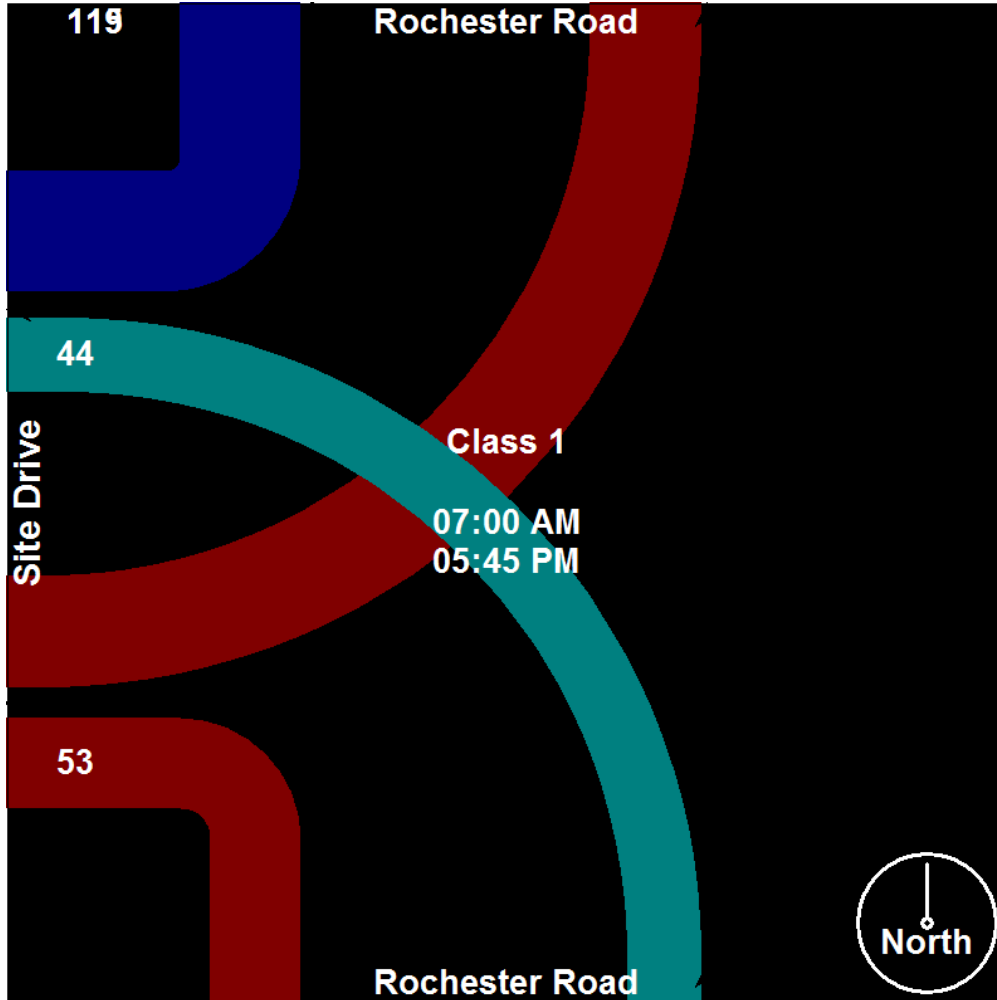


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Rochester Road & Site Drive
Weather Condition: Clear
Count By; RS
Then Click the Comments Tab

File Name : rochester & Site Dr
Site Code : 0005____
Start Date : 9/19/2017
Page No : 3



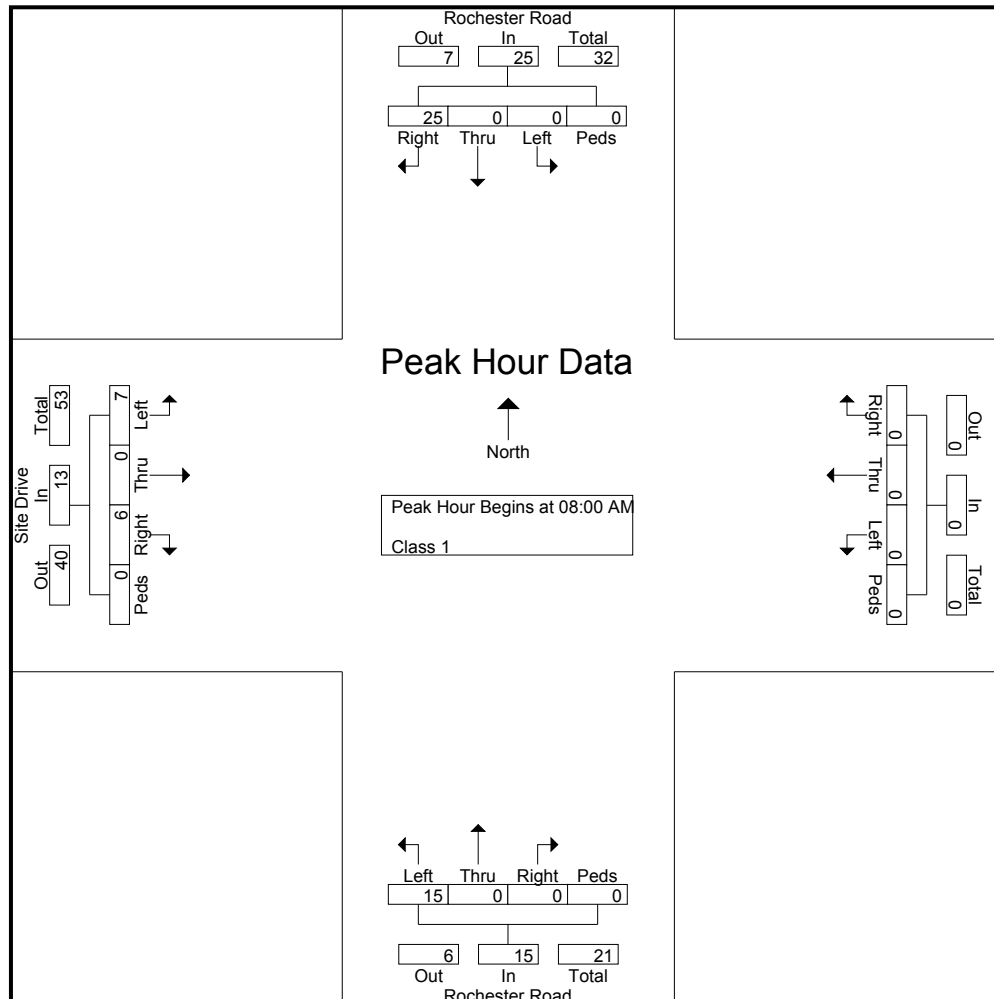
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Rochester Road & Site Drive
 Weather Condition: Clear
 Count By; RS
 Then Click the Comments Tab

File Name : rochester & Site Dr
 Site Code : 0005____
 Start Date : 9/19/2017
 Page No : 4

Start Time	Rochester Road Southbound					Westbound					Rochester Road Northbound					Site Drive Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	5	0	0	0	5	0	0	0	0	0	0	0	3	0	3	1	0	1	0	2	10
08:15 AM	7	0	0	0	7	0	0	0	0	0	0	0	5	0	5	1	0	2	0	3	15
08:30 AM	5	0	0	0	5	0	0	0	0	0	0	0	3	0	3	2	0	2	0	4	12
08:45 AM	8	0	0	0	8	0	0	0	0	0	0	0	4	0	4	2	0	2	0	4	16
Total Volume	25	0	0	0	25	0	0	0	0	0	0	0	15	0	15	6	0	7	0	13	53
% App. Total	100	0	0	0		0	0	0	0		0	0	100	0		46.2	0	53.8	0		
PHF	.781	.000	.000	.000	.781	.000	.000	.000	.000	.000	.000	.000	.750	.000	.750	.750	.000	.875	.000	.813	.828



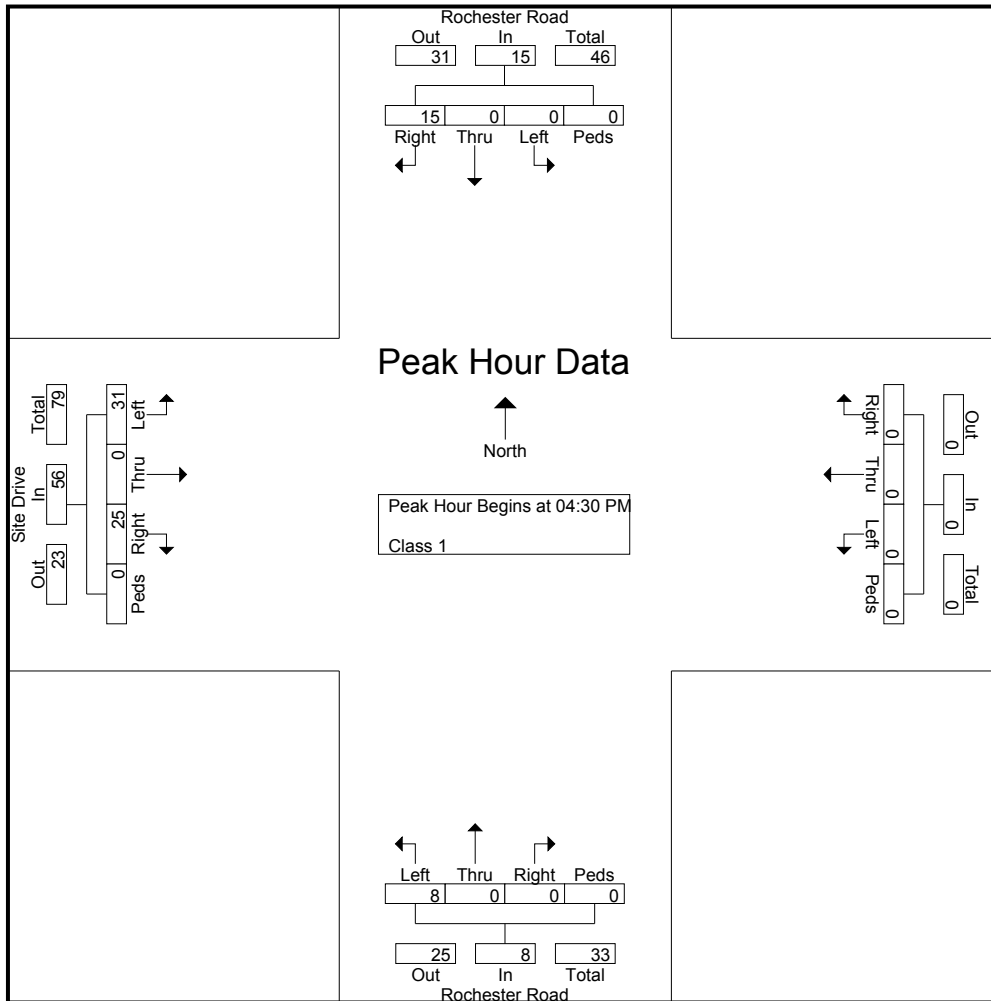
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Rochester Road & Site Drive
 Weather Condition: Clear
 Count By; RS
 Then Click the Comments Tab

File Name : rochester & Site Dr
 Site Code : 0005____
 Start Date : 9/19/2017
 Page No : 5

Start Time	Rochester Road Southbound					Westbound					Rochester Road Northbound					Site Drive Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. 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	5	0	0	0	5	0	0	0	0	0	0	0	2	0	2	4	0	8	0	12	19
04:45 PM	3	0	0	0	3	0	0	0	0	0	0	0	1	0	1	6	0	10	0	16	20
05:00 PM	3	0	0	0	3	0	0	0	0	0	0	0	2	0	2	7	0	6	0	13	18
05:15 PM	4	0	0	0	4	0	0	0	0	0	0	0	3	0	3	8	0	7	0	15	22
Total Volume	15	0	0	0	15	0	0	0	0	0	0	0	8	0	8	25	0	31	0	56	79
% App. Total	100	0	0	0		0	0	0	0		0	0	100	0		44.6	0	55.4	0		
PHF	.750	.000	.000	.000	.750	.000	.000	.000	.000	.000	.000	.000	.667	.000	.667	.781	.000	.775	.000	.875	.898

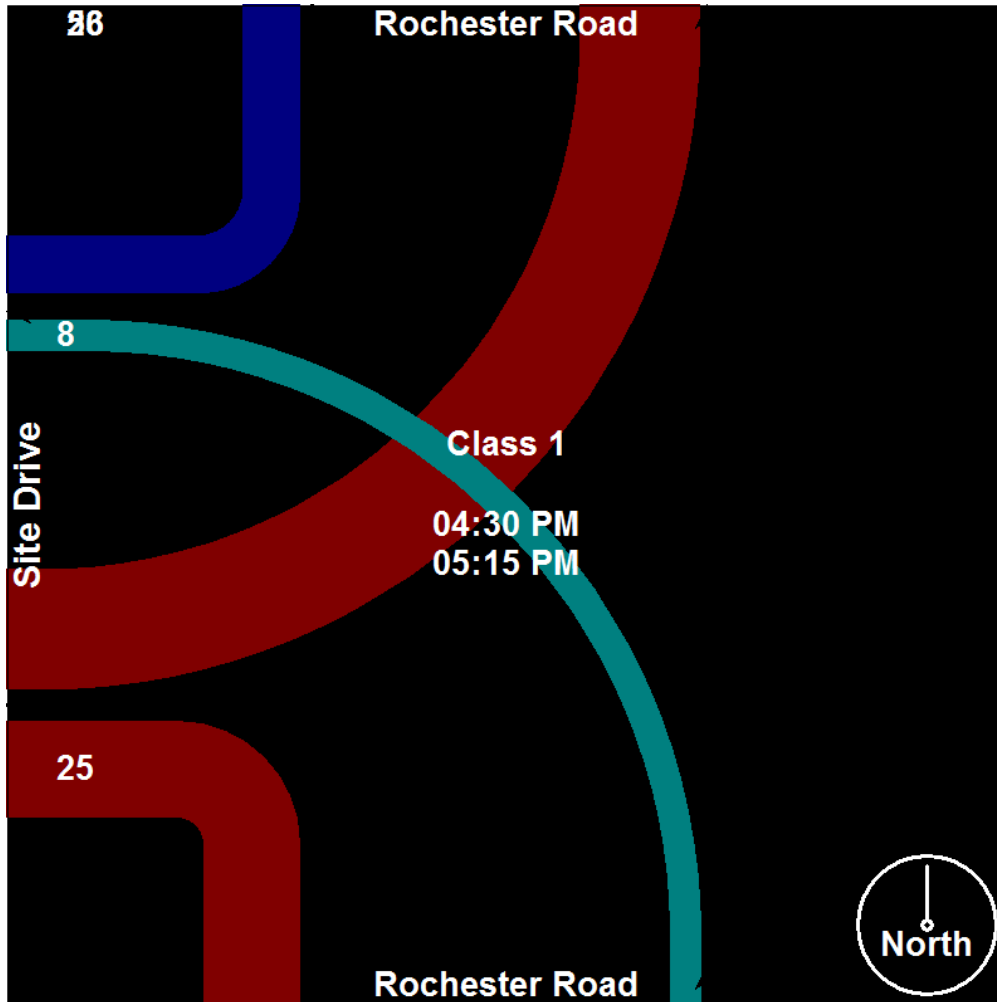


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Rochester Road & Site Drive
Weather Condition: Clear
Count By; RS
Then Click the Comments Tab

File Name : rochester & Site Dr
Site Code : 0005____
Start Date : 9/19/2017
Page No : 6

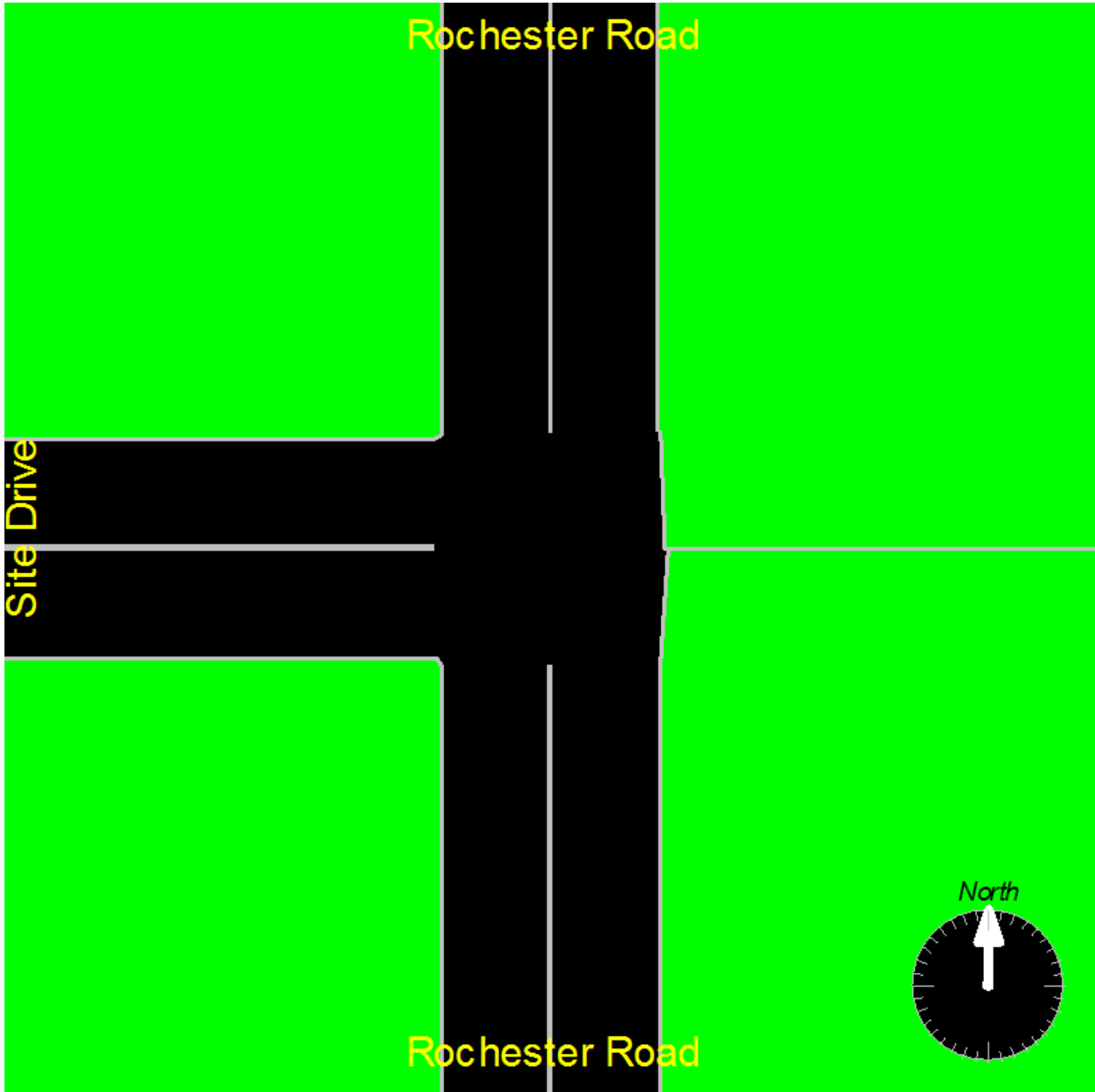


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Rochester Road & Site Drive
Weather Condition: Clear
Count By; RS
Then Click the Comments Tab

File Name : rochester & Site Dr
Site Code : 0005____
Start Date : 9/19/2017
Page No : 7



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South Blvd & Site Drive
 Weather Condition: Clear
 Count By: LL
 Oard # 2

File Name : South blvd & Site Dr
 Site Code : 004
 Start Date : 9/19/2017
 Page No : 1

Groups Printed- Class 1

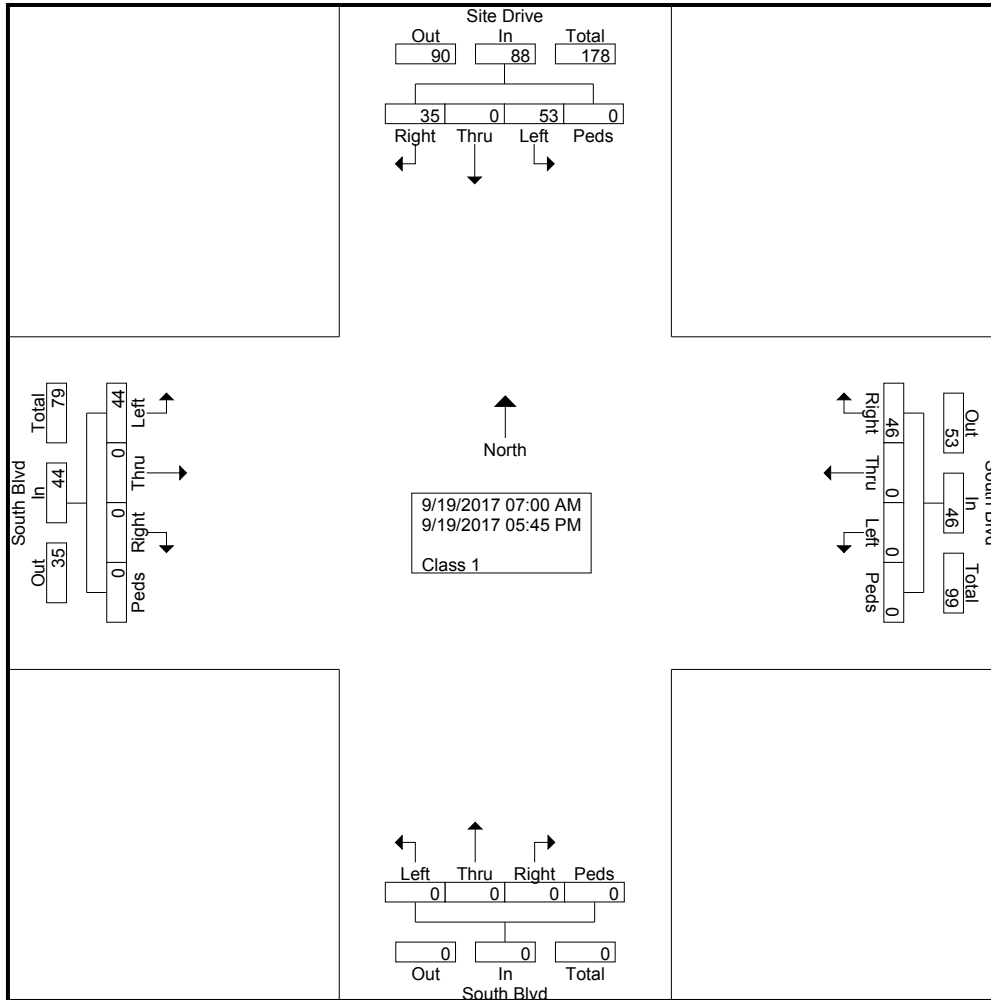
Start Time	Site Drive Southbound				South Blvd Westbound				South Blvd Northbound				South Blvd Eastbound				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	0	0	1	0	2	0	0	0	0	0	0	0	0	0	3	0	6
07:15 AM	1	0	0	0	4	0	0	0	0	0	0	0	0	0	3	0	8
07:30 AM	1	0	0	0	3	0	0	0	0	0	0	0	0	0	4	0	8
07:45 AM	1	0	1	0	2	0	0	0	0	0	0	0	0	0	5	0	9
Total	3	0	2	0	11	0	0	0	0	0	0	0	0	0	15	0	31
08:00 AM	0	0	1	0	4	0	0	0	0	0	0	0	0	0	4	0	9
08:15 AM	2	0	2	0	3	0	0	0	0	0	0	0	0	0	2	0	9
08:30 AM	1	0	2	0	3	0	0	0	0	0	0	0	0	0	5	0	11
08:45 AM	1	0	1	0	4	0	0	0	0	0	0	0	0	0	6	0	12
Total	4	0	6	0	14	0	0	0	0	0	0	0	0	0	17	0	41
09:00 AM	0	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0	5
*** BREAK ***																	
Total	0	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0	5
*** BREAK ***																	
04:00 PM	3	0	4	0	3	0	0	0	0	0	0	0	0	0	1	0	11
04:15 PM	4	0	6	0	2	0	0	0	0	0	0	0	0	0	2	0	14
04:30 PM	4	0	5	0	0	0	0	0	0	0	0	0	0	0	2	0	11
04:45 PM	2	0	7	0	3	0	0	0	0	0	0	0	0	0	1	0	13
Total	13	0	22	0	8	0	0	0	0	0	0	0	0	0	6	0	49
05:00 PM	5	0	4	0	1	0	0	0	0	0	0	0	0	0	1	0	11
05:15 PM	3	0	7	0	2	0	0	0	0	0	0	0	0	0	2	0	14
05:30 PM	4	0	7	0	4	0	0	0	0	0	0	0	0	0	1	0	16
05:45 PM	3	0	4	0	2	0	0	0	0	0	0	0	0	0	2	0	11
Total	15	0	22	0	9	0	0	0	0	0	0	0	0	0	6	0	52
Grand Total	35	0	53	0	46	0	0	0	0	0	0	0	0	0	44	0	178
Apprch %	39.8	0	60.2	0	100	0	0	0	0	0	0	0	0	0	100	0	
Total %	19.7	0	29.8	0	25.8	0	0	0	0	0	0	0	0	0	24.7	0	

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South Blvd & Site Drive
 Weather Condition: Clear
 Count By: LL
 Oard # 2

File Name : South blvd & Site Dr
 Site Code : 004
 Start Date : 9/19/2017
 Page No : 2

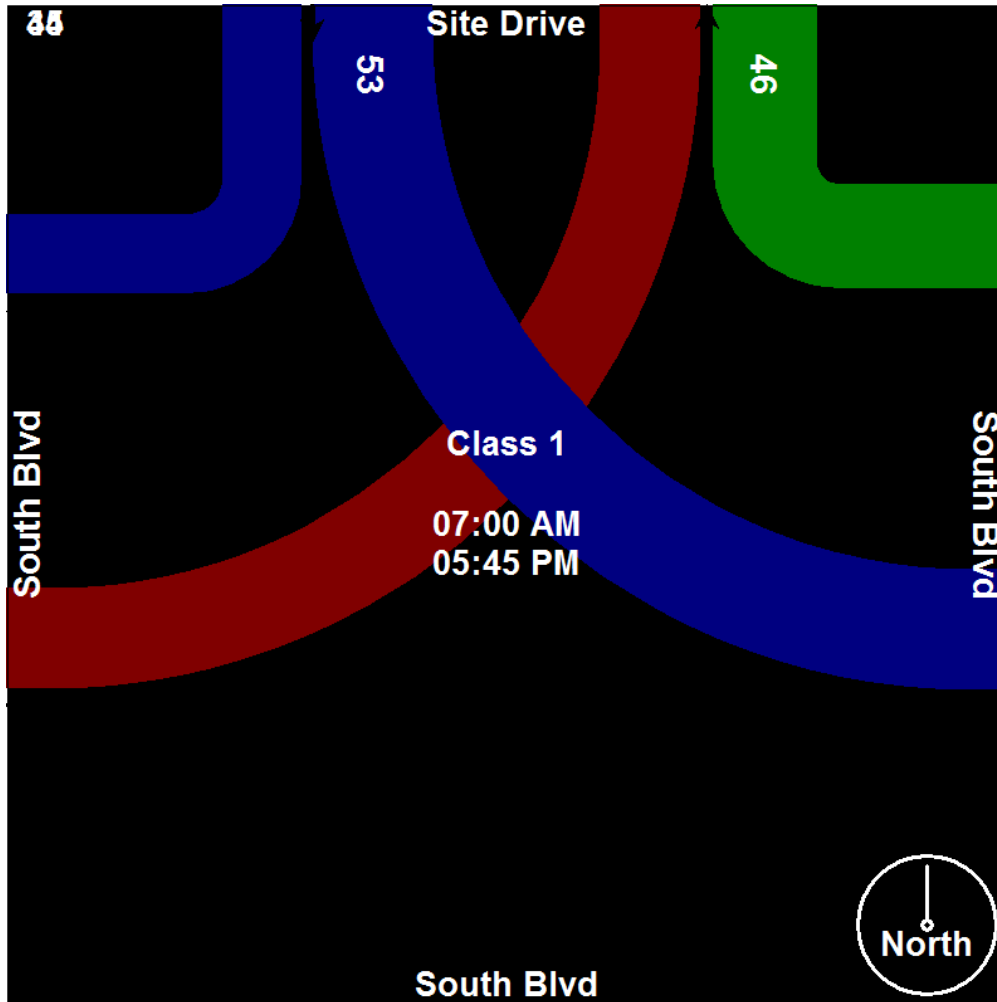


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South Blvd & Site Drive
Weather Condition: Clear
Count By: LL
Oard # 2

File Name : South blvd & Site Dr
Site Code : 004
Start Date : 9/19/2017
Page No : 3



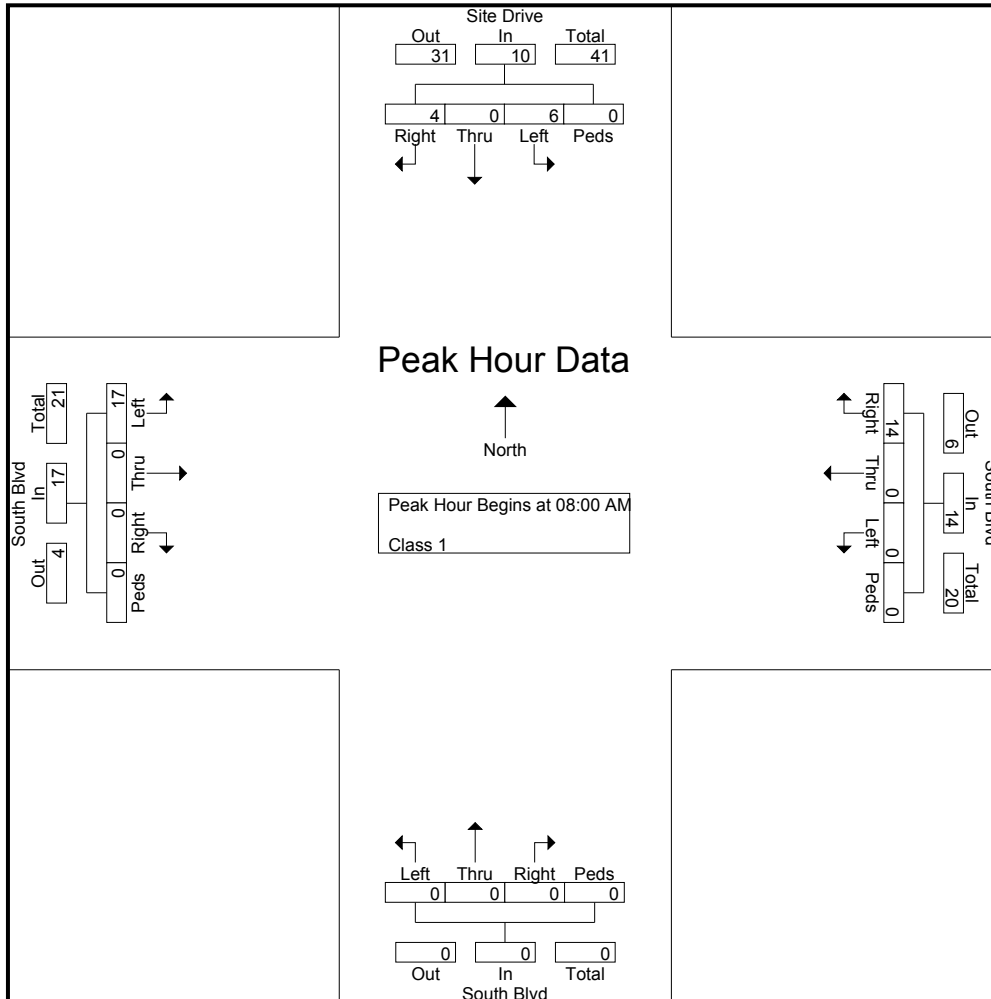
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South Blvd & Site Drive
 Weather Condition: Clear
 Count By: LL
 Oard # 2

File Name : South blvd & Site Dr
 Site Code : 004
 Start Date : 9/19/2017
 Page No : 4

Start Time	Site Drive Southbound					South Blvd Westbound					South Blvd Northbound					South Blvd Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	0	1	0	1	4	0	0	0	4	0	0	0	0	0	0	0	4	0	4	9
08:15 AM	2	0	2	0	4	3	0	0	0	3	0	0	0	0	0	0	0	2	0	2	9
08:30 AM	1	0	2	0	3	3	0	0	0	3	0	0	0	0	0	0	0	5	0	5	11
08:45 AM	1	0	1	0	2	4	0	0	0	4	0	0	0	0	0	0	0	6	0	6	12
Total Volume	4	0	6	0	10	14	0	0	0	14	0	0	0	0	0	0	0	17	0	17	41
% App. Total	40	0	60	0	100	100	0	0	0	100	0	0	0	0	0	0	0	100	0	100	
PHF	.500	.000	.750	.000	.625	.875	.000	.000	.000	.875	.000	.000	.000	.000	.000	.000	.000	.708	.000	.708	.854



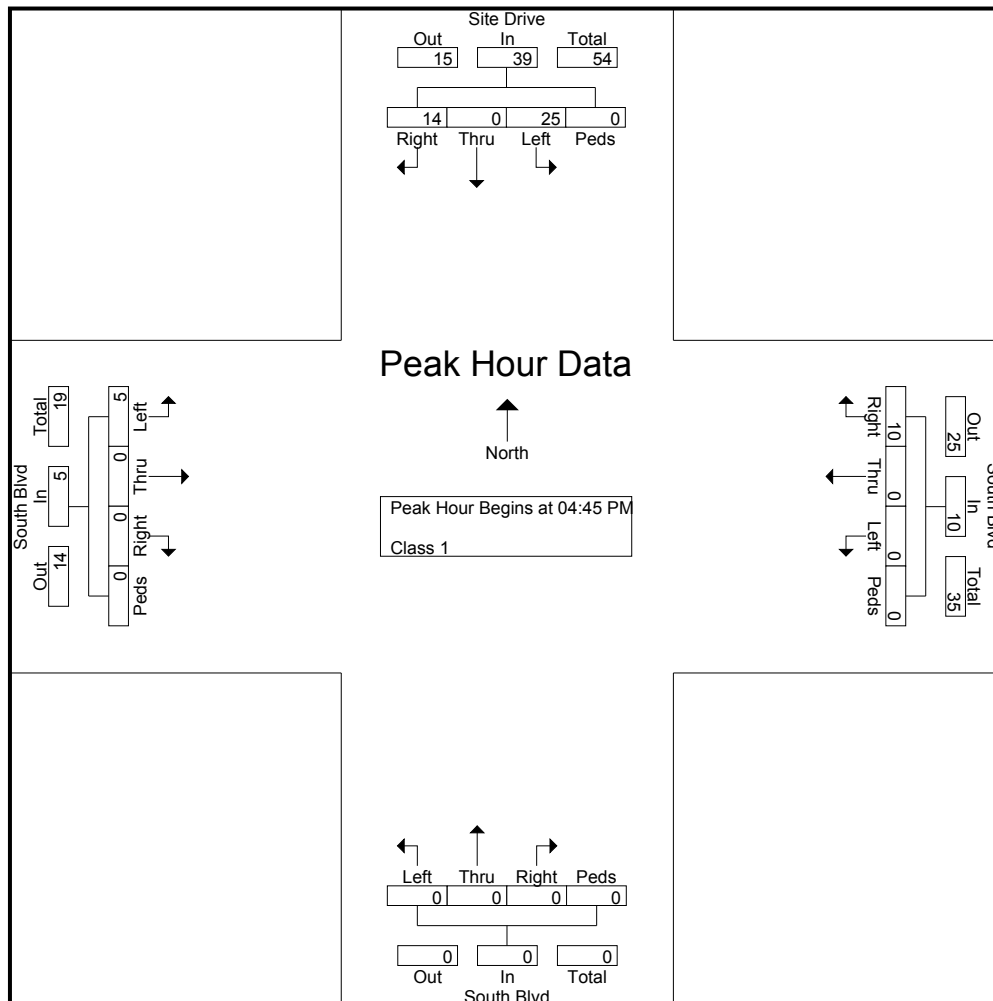
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South Blvd & Site Drive
 Weather Condition: Clear
 Count By: LL
 Oard # 2

File Name : South blvd & Site Dr
 Site Code : 004
 Start Date : 9/19/2017
 Page No : 5

Start Time	Site Drive Southbound					South Blvd Westbound					South Blvd Northbound					South Blvd Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	2	0	7	0	9	3	0	0	0	3	0	0	0	0	0	0	0	1	0	1	13
05:00 PM	5	0	4	0	9	1	0	0	0	1	0	0	0	0	0	0	0	1	0	1	11
05:15 PM	3	0	7	0	10	2	0	0	0	2	0	0	0	0	0	0	0	2	0	2	14
05:30 PM	4	0	7	0	11	4	0	0	0	4	0	0	0	0	0	0	0	1	0	1	16
Total Volume	14	0	25	0	39	10	0	0	0	10	0	0	0	0	0	0	0	5	0	5	54
% App. Total	35.9	0	64.1	0		100	0	0	0		0	0	0	0		0	0	100	0		
PHF	.700	.000	.893	.000	.886	.625	.000	.000	.000	.625	.000	.000	.000	.000	.000	.000	.000	.625	.000	.625	.844

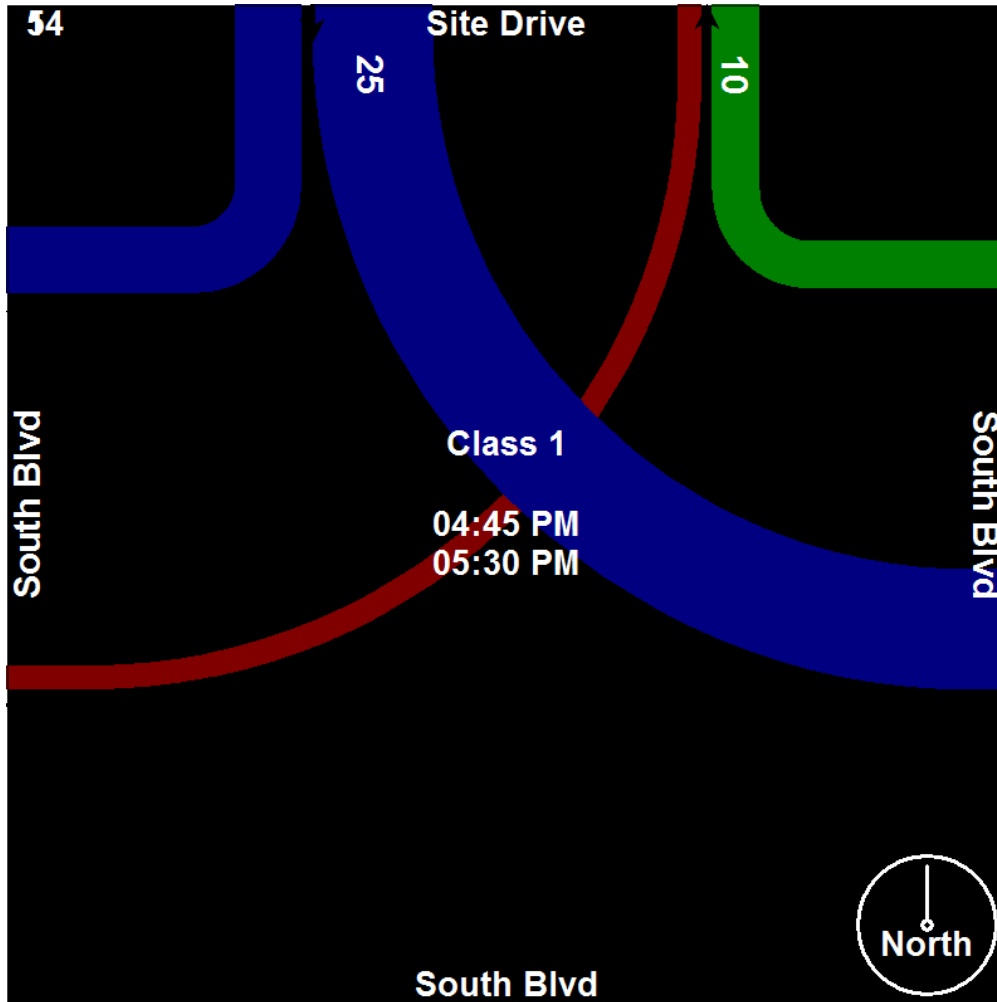


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South Blvd & Site Drive
Weather Condition: Clear
Count By: LL
Oard # 2

File Name : South blvd & Site Dr
Site Code : 004
Start Date : 9/19/2017
Page No : 6

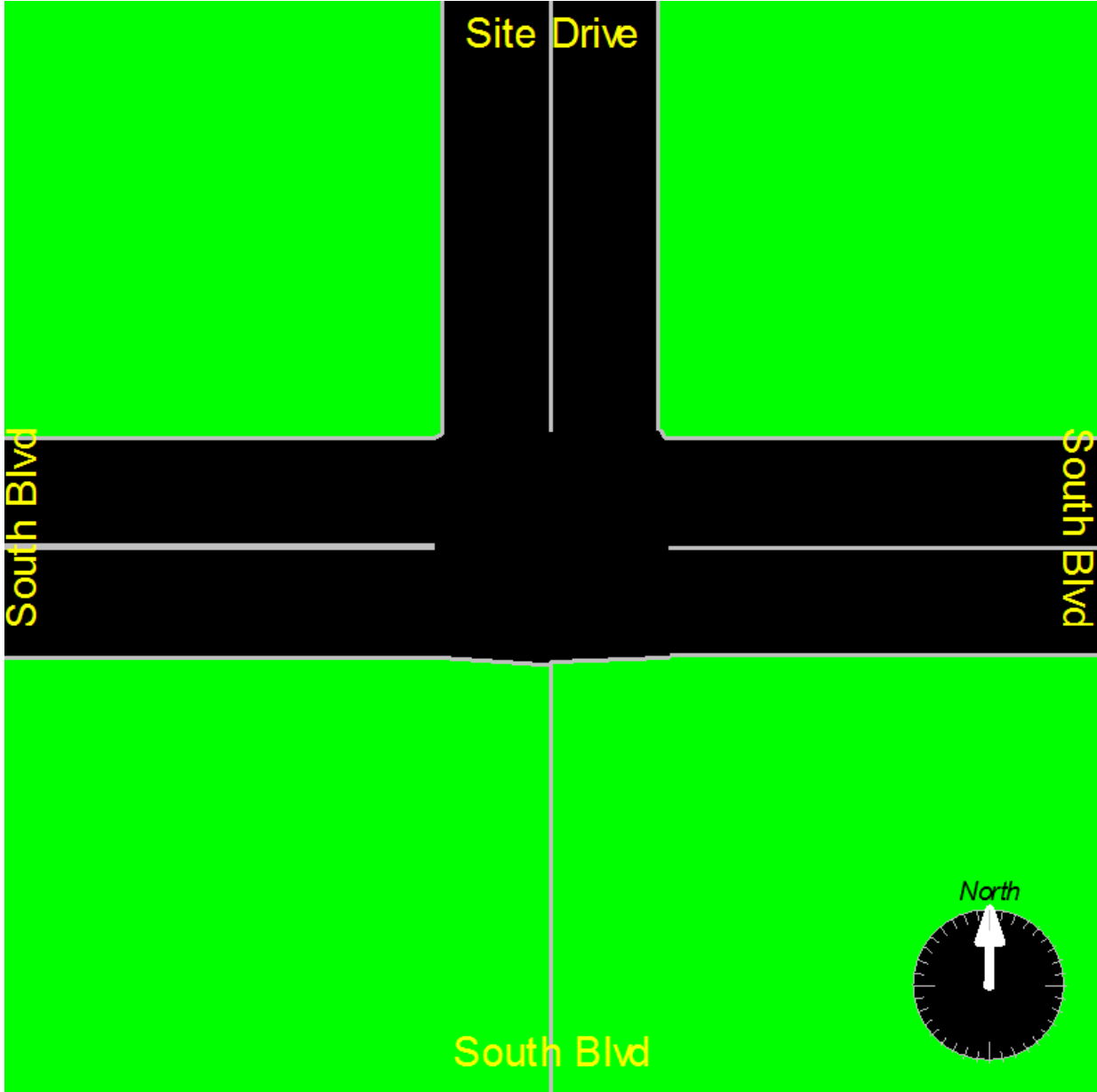


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South Blvd & Site Drive
Weather Condition: Clear
Count By: LL
Oard # 2

File Name : South blvd & Site Dr
Site Code : 004
Start Date : 9/19/2017
Page No : 7



Appendix B – SYNCHRO and Outputs – Existing Conditions

Queues

AM Existing

3: Rochester Road & South Blvd

01/24/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	143	90	83	178	142	136	86	1095	72	117	1555	246
Future Volume (vph)	143	90	83	178	142	136	86	1095	72	117	1555	246
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3468	0
Flt Permitted	0.482			0.643			0.061			0.130		
Satd. Flow (perm)	898	1863	1583	1198	1863	1583	114	3539	1583	242	3468	0
Satd. Flow (RTOR)			139			139			142		23	
Peak Hour Factor	0.81	0.78	0.87	0.93	0.89	0.90	0.94	0.87	0.67	0.95	0.90	0.90
Adj. Flow (vph)	177	115	95	191	160	151	91	1259	107	123	1728	273
Shared Lane Traffic (%)												
Lane Group Flow (vph)	177	115	95	191	160	151	91	1259	107	123	2001	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		
Total Split (s)	12.8	24.4	24.4	12.8	24.4	24.4	11.0	66.8	66.8	16.0	71.8	
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3	6.3	6.0	6.0	6.0	6.0	6.0	
Act Effect Green (s)	21.4	14.9	14.9	21.4	14.9	14.9	71.9	65.6	65.6	76.1	67.7	
Actuated g/C Ratio	0.18	0.12	0.12	0.18	0.12	0.12	0.60	0.55	0.55	0.63	0.56	
v/c Ratio	0.86	0.50	0.30	0.78	0.69	0.47	0.59	0.65	0.12	0.47	1.02	
Control Delay	76.8	55.9	4.6	64.7	65.7	14.6	33.7	21.9	1.3	13.9	51.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	76.8	55.9	4.6	64.7	65.7	14.6	33.7	21.9	1.3	13.9	51.5	
LOS	E	E	A	E	E	B	C	C	A	B	D	
Approach Delay		52.9			49.9			21.1			49.3	
Approach LOS		D			D			C			D	
Queue Length 50th (ft)	117	84	0	127	120	8	23	351	0	32	~883	
Queue Length 95th (ft)	#170	121	14	#202	187	69	#103	436	0	59	#1023	
Internal Link Dist (ft)		327			1151			626			324	
Turn Bay Length (ft)	350			200		250	200		250	200		
Base Capacity (vph)	207	281	356	244	281	356	155	1934	929	284	1966	
Starvation Cap Reductn	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	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.86	0.41	0.27	0.78	0.57	0.42	0.59	0.65	0.12	0.43	1.02	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.02
 Intersection Signal Delay: 40.5
 Intersection LOS: D
 Intersection Capacity Utilization 91.5%
 ICU Level of Service F
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: Rochester Road & South Blvd

 Ø1  Ø2 (R)	 Ø3  Ø4
16 s    66.8 s   	12.8 s   24.4 s   
 Ø5  Ø6 (R)	 Ø7  Ø8
11 s   71.8 s   	12.8 s   24.4 s   

3: Rochester Road & South Blvd
Queues



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↑↑	↗	↖	↑↔		
Traffic Volume (vph)	272	312	89	137	105	108	67	1203	185	154	1411	167	
Future Volume (vph)	272	312	89	137	105	108	67	1203	185	154	1411	167	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95	
Frts			0.850				0.850				0.850		0.983
Flt Protected	0.950			0.950			0.950				0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3479	0	
Flt Permitted	0.464			0.207			0.075				0.075		
Satd. Flow (perm)	864	1863	1583	386	1863	1583	140	3539	1583	140	3479	0	
Satd. Flow (RTOR)			172				172				188		16
Peak Hour Factor	0.85	0.88	0.82	0.86	0.80	0.87	0.88	0.95	0.86	0.84	0.96	0.89	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	320	355	109	159	131	124	76	1266	215	183	1658	0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		
Protected Phases	7	4		3	8		5	2		1	6		
Permitted Phases	4		4	8		8	2		2	6			
Total Split (s)	19.0	31.0	31.0	14.0	26.0	26.0	10.3	58.0	58.0	17.0	64.7		
Total Lost Time (s)	8.5	6.3	6.3	5.5	6.3	6.3	5.2	6.0	6.0	5.2	6.0		
Act Effct Green (s)	32.6	24.3	24.3	28.6	19.3	19.3	59.2	53.1	53.1	70.2	61.1		
Actuated g/C Ratio	0.27	0.20	0.20	0.24	0.16	0.16	0.49	0.44	0.44	0.58	0.51		
v/c Ratio	1.02	0.94	0.24	0.84	0.44	0.31	0.54	0.81	0.27	0.79	0.93		
Control Delay	95.9	81.3	1.9	67.5	50.4	4.1	30.1	34.4	5.2	48.8	33.6		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	95.9	81.3	1.9	67.5	50.4	4.1	30.1	34.4	5.2	48.8	33.6		
LOS	F	F	A	E	D	A	C	C	A	D	C		
Approach Delay		76.2				43.1				30.1		35.1	
Approach LOS		E				D				C		D	
Queue Length 50th (ft)	~213	272	0	90	92	0	24	446	12	87	586		
Queue Length 95th (ft)	#379	#436	0	#169	136	15	55	542	51	#161	#818		
Internal Link Dist (ft)		327				1151				626		324	
Turn Bay Length (ft)	350			200			250	200		250	200		
Base Capacity (vph)	313	383	462	190	305	403	140	1566	805	241	1780		
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	1.02	0.93	0.24	0.84	0.43	0.31	0.54	0.81	0.27	0.76	0.93		

Intersection Summary
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.02
 Intersection Signal Delay: 41.1
 Intersection LOS: D
 Intersection Capacity Utilization 91.7%
 ICU Level of Service F
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Rochester Road & South Blvd



10: Rochester Road & EB M-59 off Ramp

01/24/2018

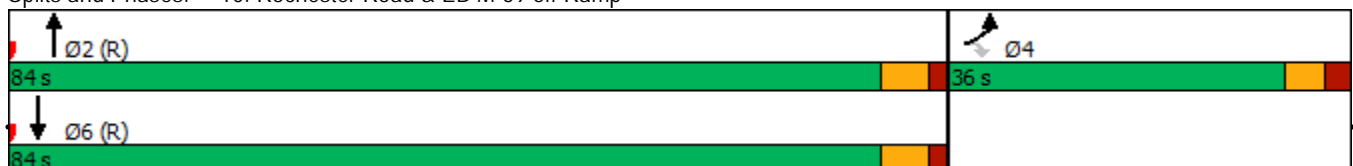


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	216	324	0	1125	1258	0
Future Volume (vph)	216	324	0	1125	1258	0
Satd. Flow (prot)	3291	1441	0	3539	3539	0
Flt Permitted	0.972					
Satd. Flow (perm)	3291	1441	0	3539	3539	0
Satd. Flow (RTOR)	55	55				
Peak Hour Factor	0.89	0.87	1.00	0.91	0.87	1.00
Adj. Flow (vph)	243	372	0	1236	1446	0
Shared Lane Traffic (%)	47%					
Lane Group Flow (vph)	418	197	0	1236	1446	0
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases	4					
Total Split (s)	36.0	36.0		84.0	84.0	
Total Lost Time (s)	6.0	6.0		6.2	6.2	
Act Effect Green (s)	19.5	19.5		88.3	88.3	
Actuated g/C Ratio	0.16	0.16		0.74	0.74	
v/c Ratio	0.72	0.70		0.47	0.56	
Control Delay	48.0	47.1		4.0	5.8	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	48.0	47.1		4.0	5.8	
LOS	D	D		A	A	
Approach Delay	47.7			4.0	5.8	
Approach LOS	D			A	A	
Queue Length 50th (ft)	140	116		88	189	
Queue Length 95th (ft)	177	183		125	237	
Internal Link Dist (ft)	726			854	1191	
Turn Bay Length (ft)						
Base Capacity (vph)	864	401		2603	2603	
Starvation Cap Reductn	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.48	0.49		0.47	0.56	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.72
 Intersection Signal Delay: 13.0
 Intersection LOS: B
 Intersection Capacity Utilization 67.7%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 10: Rochester Road & EB M-59 off Ramp



Queues

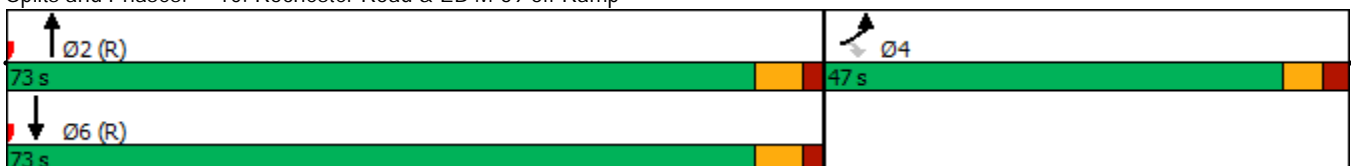


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	474	543	0	1265	830	0
Future Volume (vph)	474	543	0	1265	830	0
Lane Util. Factor	0.97	0.91	1.00	0.95	0.95	1.00
Frt	0.956	0.850				
Flt Protected	0.966					
Satd. Flow (prot)	3337	1441	0	3539	3539	0
Flt Permitted	0.966					
Satd. Flow (perm)	3337	1441	0	3539	3539	0
Satd. Flow (RTOR)	60	113				
Peak Hour Factor	0.87	0.94	1.00	0.92	0.87	1.00
Shared Lane Traffic (%)		39%				
Lane Group Flow (vph)	770	353	0	1375	954	0
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4				
Total Split (s)	47.0	47.0		73.0	73.0	
Total Lost Time (s)	6.0	6.0		6.2	6.2	
Act Effct Green (s)	33.2	33.2		74.6	74.6	
Actuated g/C Ratio	0.28	0.28		0.62	0.62	
v/c Ratio	0.80	0.74		0.62	0.43	
Control Delay	43.3	35.3		16.5	10.0	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	43.3	35.3		16.5	10.0	
LOS	D	D		B	B	
Approach Delay	40.8			16.5	10.0	
Approach LOS	D			B	B	
Queue Length 50th (ft)	265	190		322	163	
Queue Length 95th (ft)	292	287		468	186	
Internal Link Dist (ft)	726			854	1191	
Turn Bay Length (ft)						
Base Capacity (vph)	1179	566		2200	2200	
Starvation Cap Reductn	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.65	0.62		0.63	0.43	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay: 22.6
 Intersection Capacity Utilization 65.5%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service C

Splits and Phases: 10: Rochester Road & EB M-59 off Ramp



Queues

12: Rochester Road & WB M-59 off Ramp



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	467	323	982	0	0	1599
Future Volume (vph)	467	323	982	0	0	1599
Satd. Flow (prot)	3433	2787	3539	0	0	3539
Flt Permitted	0.950					
Satd. Flow (perm)	3433	2787	3539	0	0	3539
Satd. Flow (RTOR)		160				
Peak Hour Factor	0.88	0.66	0.79	1.00	1.00	0.89
Adj. Flow (vph)	531	489	1243	0	0	1797
Shared Lane Traffic (%)						
Lane Group Flow (vph)	531	489	1243	0	0	1797
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8				
Total Split (s)	34.0	34.0	86.0			86.0
Total Lost Time (s)	6.0	6.0	6.2			6.2
Act Effect Green (s)	24.3	24.3	83.5			83.5
Actuated g/C Ratio	0.20	0.20	0.70			0.70
v/c Ratio	0.77	0.71	0.50			0.73
Control Delay	52.7	35.2	6.1			14.1
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	52.7	35.2	6.1			14.1
LOS	D	D	A			B
Approach Delay	44.3		6.1			14.1
Approach LOS	D		A			B
Queue Length 50th (ft)	199	135	134			420
Queue Length 95th (ft)	246	114	131			536
Internal Link Dist (ft)	1165		1191			636
Turn Bay Length (ft)						
Base Capacity (vph)	801	772	2463			2463
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.66	0.63	0.50			0.73

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 19.2

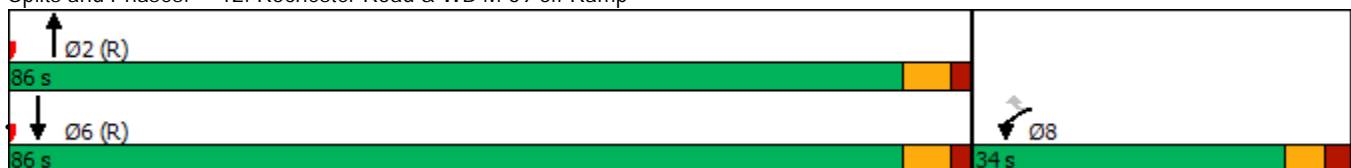
Intersection LOS: B

Intersection Capacity Utilization 67.7%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 12: Rochester Road & WB M-59 off Ramp



12: Rochester Road & WB M-59 off Ramp
Queues

PM EXISTING

01/24/2018

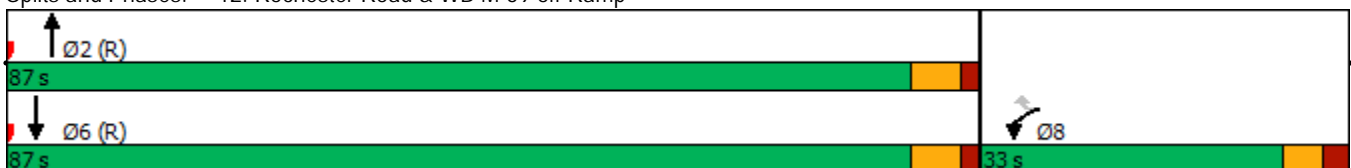


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔↔	↔↔	↑↑			↑↑
Traffic Volume (vph)	318	384	1514	0	0	1405
Future Volume (vph)	318	384	1514	0	0	1405
Lane Util. Factor	0.97	0.88	0.95	1.00	1.00	0.95
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	3433	2787	3539	0	0	3539
Flt Permitted	0.950					
Satd. Flow (perm)	3433	2787	3539	0	0	3539
Satd. Flow (RTOR)		74				
Peak Hour Factor	0.90	0.93	0.93	1.00	1.00	0.93
Shared Lane Traffic (%)						
Lane Group Flow (vph)	353	413	1628	0	0	1511
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8				
Total Split (s)	33.0	33.0	87.0			87.0
Total Lost Time (s)	6.0	6.0	6.2			6.2
Act Effect Green (s)	20.7	20.7	87.1			87.1
Actuated g/C Ratio	0.17	0.17	0.73			0.73
v/c Ratio	0.60	0.76	0.63			0.59
Control Delay	49.5	47.9	10.4			9.6
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	49.5	47.9	10.4			9.6
LOS	D	D	B			A
Approach Delay	48.6		10.4			9.6
Approach LOS	D		B			A
Queue Length 50th (ft)	130	143	301			263
Queue Length 95th (ft)	169	194	441			385
Internal Link Dist (ft)	1165		1191			636
Turn Bay Length (ft)						
Base Capacity (vph)	772	684	2569			2569
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.46	0.60	0.63			0.59

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.76
 Intersection Signal Delay: 17.6
 Intersection LOS: B
 Intersection Capacity Utilization 65.5%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 12: Rochester Road & WB M-59 off Ramp



Intersection

Int Delay, s/veh 0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↙	↑	↑↑		↙	↙
Traffic Vol, veh/h	17	310	460	14	6	4
Future Vol, veh/h	17	310	460	14	6	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	75	87	88	90	75	50
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	356	523	16	8	8

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	539	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.13	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.219	-	-
Pot Cap-1 Maneuver	1027	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1027	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	14.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1027	-	-	-	274	729
HCM Lane V/C Ratio	0.022	-	-	-	0.029	0.011
HCM Control Delay (s)	8.6	-	-	-	18.5	10
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1	0

Intersection

Int Delay, s/veh 0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	31	25	8	1575	1411	15
Future Vol, veh/h	31	25	8	1575	1411	15
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	0	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	76	78	68	91	93	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	41	32	12	1731	1517	19

Major/Minor

	Minor2	Major1	Major2			
Conflicting Flow All	2417	768	1536	0	-	0
Stage 1	1527	-	-	-	-	-
Stage 2	890	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	~ 27	344	429	-	-	-
Stage 1	165	-	-	-	-	-
Stage 2	361	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 26	344	429	-	-	-
Mov Cap-2 Maneuver	110	-	-	-	-	-
Stage 1	160	-	-	-	-	-
Stage 2	361	-	-	-	-	-

Approach

	EB	NB	SB
HCM Control Delay, s	38.6	0.1	0
HCM LOS	E		

Minor Lane/Major Mvmt

	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	429	-	110	344	-	-
HCM Lane V/C Ratio	0.027	-	0.371	0.093	-	-
HCM Control Delay (s)	13.6	-	55.9	16.5	-	-
HCM Lane LOS	B	-	F	C	-	-
HCM 95th %tile Q(veh)	0.1	-	1.5	0.3	-	-

Notes

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

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	6	15	1359	1912	25
Future Vol, veh/h	7	6	15	1359	1912	25
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	0	0	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	92	75	96	75
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	8	16	1812	1992	33

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	2947	1013	2025	0	-	0
Stage 1	2009	-	-	-	-	-
Stage 2	938	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	12	237	277	-	-	-
Stage 1	90	-	-	-	-	-
Stage 2	341	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	11	237	277	-	-	-
Mov Cap-2 Maneuver	65	-	-	-	-	-
Stage 1	85	-	-	-	-	-
Stage 2	341	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	47	0.2	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	277	-	65	237	-	-
HCM Lane V/C Ratio	0.059	-	0.144	0.034	-	-
HCM Control Delay (s)	18.8	-	69.5	20.7	-	-
HCM Lane LOS	C	-	F	C	-	-
HCM 95th %tile Q(veh)	0.2	-	0.5	0.1	-	-

Intersection

Int Delay, s/veh 1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	31	25	8	1575	1732	15
Future Vol, veh/h	31	25	8	1575	1732	15
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	0	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	76	78	68	91	93	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	41	32	12	1731	1862	19

Major/Minor

	Minor2	Major1	Major2			
Conflicting Flow All	2762	941	1881	0	-	0
Stage 1	1872	-	-	-	-	-
Stage 2	890	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	~ 16	264	315	-	-	-
Stage 1	107	-	-	-	-	-
Stage 2	361	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 15	264	315	-	-	-
Mov Cap-2 Maneuver	77	-	-	-	-	-
Stage 1	103	-	-	-	-	-
Stage 2	361	-	-	-	-	-

Approach

	EB	NB	SB
HCM Control Delay, s	62.4	0.1	0
HCM LOS	F		

Minor Lane/Major Mvmt

	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	315	-	77	264	-	-
HCM Lane V/C Ratio	0.037	-	0.53	0.121	-	-
HCM Control Delay (s)	16.9	-	95.4	20.5	-	-
HCM Lane LOS	C	-	F	C	-	-
HCM 95th %tile Q(veh)	0.1	-	2.3	0.4	-	-

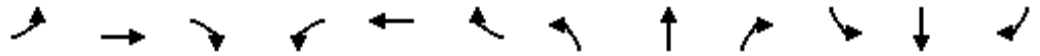
Notes

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

Appendix C– SYNCHRO and Outputs – Future Condition

Queues

3: Rochester Road & South Blvd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	143	96	83	178	151	136	99	1108	72	117	1571	246
Future Volume (vph)	143	96	83	178	151	136	99	1108	72	117	1571	246
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor												
Frt			0.850			0.850			0.850		0.980	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3468	0
Flt Permitted	0.454			0.617			0.061			0.126		
Satd. Flow (perm)	846	1863	1583	1149	1863	1583	114	3539	1583	235	3468	0
Satd. Flow (RTOR)			139			139			142		23	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.81	0.78	0.87	0.93	0.89	0.90	0.94	0.87	0.67	0.95	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	177	123	95	191	170	151	105	1274	107	123	2019	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		
Total Split (s)	12.6	24.4	24.4	12.6	24.4	24.4	11.0	67.0	67.0	16.0	72.0	
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3	6.3	6.0	6.0	6.0	6.0	6.0	
Act Effect Green (s)	21.6	15.3	15.3	21.6	15.3	15.3	71.8	65.4	65.4	75.8	67.4	
Actuated g/C Ratio	0.18	0.13	0.13	0.18	0.13	0.13	0.60	0.54	0.54	0.63	0.56	
v/c Ratio	0.88	0.52	0.29	0.80	0.71	0.47	0.67	0.66	0.12	0.48	1.03	
Control Delay	82.1	56.2	4.5	66.7	66.8	14.3	41.9	22.2	1.3	14.3	55.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	82.1	56.2	4.5	66.7	66.8	14.3	41.9	22.2	1.3	14.3	55.7	
LOS	F	E	A	E	E	B	D	C	A	B	E	
Approach Delay		55.4			51.3			22.1			53.3	
Approach LOS		E			D			C			D	
Queue Length 50th (ft)	116	89	0	127	127	8	29	361	0	32	~896	
Queue Length 95th (ft)	#180	128	14	#212	197	69	#132	443	0	58	#1036	
Internal Link Dist (ft)		327			1151			626			324	
Turn Bay Length (ft)	350			200		250	200		250	200		
Base Capacity (vph)	201	281	356	239	281	356	156	1928	927	279	1957	
Starvation Cap Reductn	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	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.88	0.44	0.27	0.80	0.60	0.42	0.67	0.66	0.12	0.44	1.03	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Queues

3: Rochester Road & South Blvd

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.03

Intersection Signal Delay: 43.0

Intersection LOS: D

Intersection Capacity Utilization 93.1%

ICU Level of Service F

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

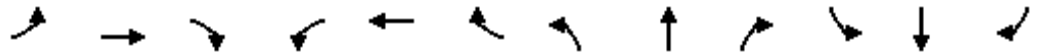
Splits and Phases: 3: Rochester Road & South Blvd

<p>ø1</p>		<p>ø2 (R)</p>		<p>ø3</p>		<p>ø4</p>	
16 s		67 s		12.6 s		24.4 s	
<p>ø5</p>		<p>ø6 (R)</p>		<p>ø7</p>		<p>ø8</p>	
11 s		72 s		12.6 s		24.4 s	

Queues

3: Rochester Road & South Blvd

01/25/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	272	318	89	137	111	108	81	1217	185	154	1439	167
Future Volume (vph)	272	318	89	137	111	108	81	1217	185	154	1439	167
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor												
Frt	0.850			0.850			0.850			0.983		
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3539	1583	1770	3479	0
Flt Permitted	0.442			0.217			0.076			0.069		
Satd. Flow (perm)	823	1863	1583	404	1863	1583	142	3539	1583	129	3479	0
Satd. Flow (RTOR)	139			139			186			16		
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.85	0.88	0.82	0.86	0.80	0.87	0.88	0.95	0.86	0.84	0.96	0.88
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)	0%			0%			0%			0%		
Shared Lane Traffic (%)												
Lane Group Flow (vph)	320	361	109	159	139	124	92	1281	215	183	1689	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		
Total Split (s)	19.9	31.0	31.0	13.8	24.9	24.9	11.0	58.2	58.2	17.0	64.2	
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3	6.3	6.0	6.0	6.0	6.0	6.0	
Act Effect Green (s)	38.1	24.5	24.5	25.9	18.4	18.4	57.9	52.7	52.7	68.9	58.2	
Actuated g/C Ratio	0.32	0.20	0.20	0.22	0.15	0.15	0.48	0.44	0.44	0.57	0.48	
v/c Ratio	0.87	0.95	0.25	0.92	0.49	0.34	0.66	0.82	0.27	0.84	1.00	
Control Delay	59.5	82.9	4.5	87.1	52.9	8.4	40.9	35.2	5.3	56.6	51.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	59.5	82.9	4.5	87.1	52.9	8.4	40.9	35.2	5.3	56.6	51.9	
LOS	E	F	A	F	D	A	D	D	A	E	D	
Approach Delay	62.6			52.7			31.5			52.3		
Approach LOS	E			D			C			D		
Queue Length 50th (ft)	205	278	0	92	100	0	30	454	13	88	662	
Queue Length 95th (ft)	#318	#445	17	#186	145	38	#93	550	52	#180	#851	
Internal Link Dist (ft)	327			1151			626			324		
Turn Bay Length (ft)	350			200			250			200		
Base Capacity (vph)	369	383	436	172	288	362	139	1555	799	224	1695	
Starvation Cap Reductn	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	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.87	0.94	0.25	0.92	0.48	0.34	0.66	0.82	0.27	0.82	1.00	

Intersection Summary
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Queues

3: Rochester Road & South Blvd

01/25/2018

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.00

Intersection Signal Delay: 47.0

Intersection LOS: D

Intersection Capacity Utilization 94.4%

ICU Level of Service F

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Rochester Road & South Blvd



Queues

AM FUTURE

10: Rochester Road & EB M-59 off Ramp

1/24/2018



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	216	332	0	1141	1302	0
Future Volume (vph)	216	332	0	1141	1302	0
Lane Util. Factor	0.97	0.91	1.00	0.95	0.95	1.00
Ped Bike Factor						
Frt	0.936	0.850				
Flt Protected	0.972					
Satd. Flow (prot)	3288	1441	0	3539	3539	0
Flt Permitted	0.972					
Satd. Flow (perm)	3288	1441	0	3539	3539	0
Satd. Flow (RTOR)	49	49				
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.89	0.87	1.00	0.91	0.87	1.00
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)		48%				
Lane Group Flow (vph)	426	199	0	1254	1497	0
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4				
Total Split (s)	36.0	36.0		84.0	84.0	
Total Lost Time (s)	6.0	6.0		6.2	6.2	
Act Effect Green (s)	20.0	20.0		87.8	87.8	
Actuated g/C Ratio	0.17	0.17		0.73	0.73	
v/c Ratio	0.72	0.71		0.48	0.58	
Control Delay	48.6	48.6		4.2	9.2	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	48.6	48.6		4.2	9.2	
LOS	D	D		A	A	
Approach Delay	48.6			4.2	9.2	
Approach LOS	D			A	A	
Queue Length 50th (ft)	145	123		92	242	
Queue Length 95th (ft)	182	191		130	360	
Internal Link Dist (ft)	726			481	1190	
Turn Bay Length (ft)						
Base Capacity (vph)	858	397		2588	2588	
Starvation Cap Reductn	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.50	0.50		0.48	0.58	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 23.0

Intersection LOS: C

Intersection Capacity Utilization 66.7%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 10: Rochester Road & EB M-59 off Ramp



Queues

PM FUTURE

10: Rochester Road & EB M-59 off Ramp

2/15/2018



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	474	553	0	1293	863	0
Future Volume (vph)	474	553	0	1293	863	0
Lane Util. Factor	0.97	0.91	1.00	0.95	0.95	1.00
Ped Bike Factor						
Frt	0.956	0.850				
Flt Protected	0.966					
Satd. Flow (prot)	3337	1441	0	3539	3539	0
Flt Permitted	0.966					
Satd. Flow (perm)	3337	1441	0	3539	3539	0
Satd. Flow (RTOR)	61	107				
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.87	0.94	1.00	0.92	0.87	1.00
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)		39%				
Lane Group Flow (vph)	774	359	0	1405	992	0
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4				
Total Split (s)	46.0	46.0		74.0	74.0	
Total Lost Time (s)	6.0	6.0		6.2	6.2	
Act Effect Green (s)	33.0	33.0		74.8	74.8	
Actuated g/C Ratio	0.28	0.28		0.62	0.62	
v/c Ratio	0.80	0.76		0.64	0.45	
Control Delay	43.7	37.8		9.0	10.1	
Queue Delay	0.0	0.0		0.0	0.0	
Total Delay	43.7	37.8		9.0	10.1	
LOS	D	D		A	B	
Approach Delay	41.9			9.0	10.1	
Approach LOS	D			A	B	
Queue Length 50th (ft)	267	201		154	170	
Queue Length 95th (ft)	298	305		198	193	
Internal Link Dist (ft)	726			481	1190	
Turn Bay Length (ft)						
Base Capacity (vph)	1153	551		2204	2204	
Starvation Cap Reductn	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.67	0.65		0.64	0.45	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 19.8

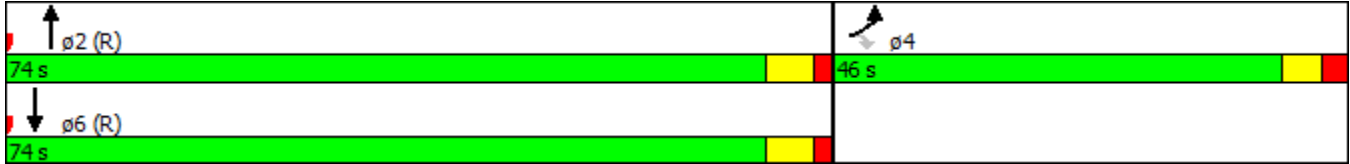
Intersection LOS: B

Intersection Capacity Utilization 66.2%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 10: Rochester Road & EB M-59 off Ramp



Queues

12: Rochester Road & WB M-59 off Ramp

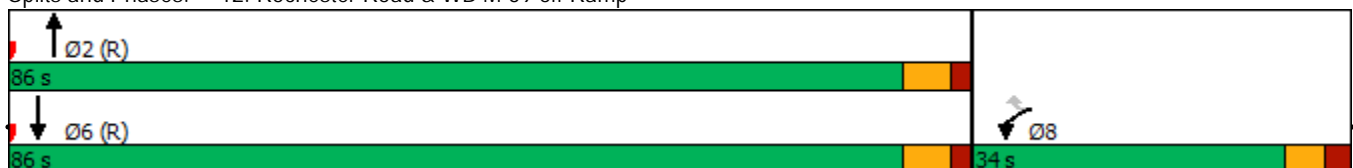


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↖↗	↕			↕
Traffic Volume (vph)	467	323	982	0	0	1599
Future Volume (vph)	467	323	982	0	0	1599
Satd. Flow (prot)	3433	2787	3539	0	0	3539
Flt Permitted	0.950					
Satd. Flow (perm)	3433	2787	3539	0	0	3539
Satd. Flow (RTOR)		160				
Peak Hour Factor	0.88	0.66	0.79	1.00	1.00	0.89
Adj. Flow (vph)	531	489	1243	0	0	1797
Shared Lane Traffic (%)						
Lane Group Flow (vph)	531	489	1243	0	0	1797
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8				
Total Split (s)	34.0	34.0	86.0			86.0
Total Lost Time (s)	6.0	6.0	6.2			6.2
Act Effect Green (s)	24.3	24.3	83.5			83.5
Actuated g/C Ratio	0.20	0.20	0.70			0.70
v/c Ratio	0.77	0.71	0.50			0.73
Control Delay	52.7	35.2	6.1			14.1
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	52.7	35.2	6.1			14.1
LOS	D	D	A			B
Approach Delay	44.3		6.1			14.1
Approach LOS	D		A			B
Queue Length 50th (ft)	199	135	134			420
Queue Length 95th (ft)	246	114	131			536
Internal Link Dist (ft)	1165		1191			636
Turn Bay Length (ft)						
Base Capacity (vph)	801	772	2463			2463
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.66	0.63	0.50			0.73

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 19.2
 Intersection LOS: B
 Intersection Capacity Utilization 67.7%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 12: Rochester Road & WB M-59 off Ramp



Queues

PM FUTURE

12: Rochester Road & WB M-59 off Ramp

01/25/2018



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔↔	↔↔	↑↑			↑↑
Traffic Volume (vph)	324	384	1542	0	0	1432
Future Volume (vph)	324	384	1542	0	0	1432
Lane Util. Factor	0.97	0.88	0.95	1.00	1.00	0.95
Ped Bike Factor						
Frt		0.850				
Flt Protected	0.950					
Satd. Flow (prot)	3433	2787	3539	0	0	3539
Flt Permitted	0.950					
Satd. Flow (perm)	3433	2787	3539	0	0	3539
Satd. Flow (RTOR)		70				
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.93	0.92	1.00	1.00	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	360	413	1676	0	0	1540
Turn Type	Prot	Perm	NA			NA
Protected Phases	8		2			6
Permitted Phases		8				
Total Split (s)	32.0	32.0	88.0			88.0
Total Lost Time (s)	6.0	6.0	6.2			6.2
Act Effect Green (s)	20.5	20.5	87.3			87.3
Actuated g/C Ratio	0.17	0.17	0.73			0.73
v/c Ratio	0.61	0.77	0.65			0.60
Control Delay	50.1	49.0	6.5			9.7
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	50.1	49.0	6.5			9.7
LOS	D	D	A			A
Approach Delay	49.5		6.5			9.7
Approach LOS	D		A			A
Queue Length 50th (ft)	133	145	204			273
Queue Length 95th (ft)	174	198	227			387
Internal Link Dist (ft)	1165		1190			636
Turn Bay Length (ft)						
Base Capacity (vph)	743	658	2573			2573
Starvation Cap Reductn	0	0	0			0
Spillback Cap Reductn	0	0	0			0
Storage Cap Reductn	0	0	0			0
Reduced v/c Ratio	0.48	0.63	0.65			0.60

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 16.1

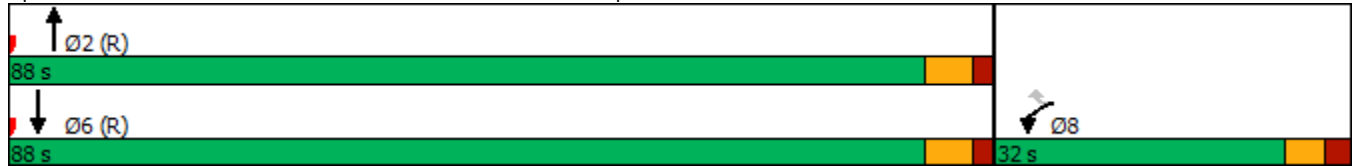
Intersection LOS: B

Intersection Capacity Utilization 66.7%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 12: Rochester Road & WB M-59 off Ramp



Intersection							
Int Delay, s/veh	0.8						
Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Traffic Vol, veh/h	24	310	456	36	12	8	
Future Vol, veh/h	24	310	456	36	12	8	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	None	-	None	
Storage Length	0	-	-	-	0	0	
Veh in Median Storage, #	-	0	0	-	0	-	
Grade, %	-	0	0	-	0	-	
Peak Hour Factor	75	87	88	88	75	50	
Heavy Vehicles, %	2	2	2	2	2	2	
Mvmt Flow	32	356	518	41	16	16	
Major/Minor	Major1		Major2		Minor2		
Conflicting Flow All	559	0	-	0	959	280	
Stage 1	-	-	-	-	539	-	
Stage 2	-	-	-	-	420	-	
Critical Hdwy	4.14	-	-	-	6.63	6.93	
Critical Hdwy Stg 1	-	-	-	-	5.83	-	
Critical Hdwy Stg 2	-	-	-	-	5.43	-	
Follow-up Hdwy	2.22	-	-	-	3.519	3.319	
Pot Cap-1 Maneuver	1008	-	-	-	270	718	
Stage 1	-	-	-	-	550	-	
Stage 2	-	-	-	-	662	-	
Platoon blocked, %	-	-	-	-	-	-	
Mov Cap-1 Maneuver	1008	-	-	-	261	718	
Mov Cap-2 Maneuver	-	-	-	-	261	-	
Stage 1	-	-	-	-	550	-	
Stage 2	-	-	-	-	641	-	
Approach	EB		WB		SB		
HCM Control Delay, s	0.7		0		14.9		
HCM LOS					B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2	
Capacity (veh/h)	1008	-	-	-	261	718	
HCM Lane V/C Ratio	0.032	-	-	-	0.061	0.022	
HCM Control Delay (s)	8.7	-	-	-	19.7	10.1	
HCM Lane LOS	A	-	-	-	C	B	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2	0.1	

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑	↑↑		↖	↖
Traffic Vol, veh/h	18	648	339	30	31	27
Future Vol, veh/h	18	648	339	30	31	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	63	89	86	63	89	70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	29	728	394	48	35	39

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	442	0	-	0	1204 221
Stage 1	-	-	-	-	418 -
Stage 2	-	-	-	-	786 -
Critical Hdwy	4.13	-	-	-	6.63 6.93
Critical Hdwy Stg 1	-	-	-	-	5.83 -
Critical Hdwy Stg 2	-	-	-	-	5.43 -
Follow-up Hdwy	2.219	-	-	-	3.519 3.319
Pot Cap-1 Maneuver	1116	-	-	-	190 783
Stage 1	-	-	-	-	633 -
Stage 2	-	-	-	-	448 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1116	-	-	-	185 783
Mov Cap-2 Maneuver	-	-	-	-	185 -
Stage 1	-	-	-	-	617 -
Stage 2	-	-	-	-	448 -

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	18.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1116	-	-	-	185	783
HCM Lane V/C Ratio	0.026	-	-	-	0.188	0.049
HCM Control Delay (s)	8.3	-	-	-	28.9	9.8
HCM Lane LOS	A	-	-	-	D	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.7	0.2

Intersection

Int Delay, s/veh 1.2

Movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↙	↗	↙	↑↑	↑↑	
Traffic Vol, veh/h	23	14	22	1365	1608	51
Future Vol, veh/h	23	14	22	1365	1608	51
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	0	75	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	54	75	75	75	96	75
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	43	19	29	1820	1675	68

Major/Minor

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	2677	872	1743	0	-	0
Stage 1	1709	-	-	-	-	-
Stage 2	968	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	~ 18	294	357	-	-	-
Stage 1	132	-	-	-	-	-
Stage 2	329	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 17	294	357	-	-	-
Mov Cap-2 Maneuver	85	-	-	-	-	-
Stage 1	121	-	-	-	-	-
Stage 2	329	-	-	-	-	-

Approach

Approach	EB	NB	SB
HCM Control Delay, s	63.8	0.3	0
HCM LOS	F		

Minor Lane/Major Mvmt

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	357	-	85	294	-	-
HCM Lane V/C Ratio	0.082	-	0.501	0.063	-	-
HCM Control Delay (s)	16	-	83.9	18.1	-	-
HCM Lane LOS	C	-	F	C	-	-
HCM 95th %tile Q(veh)	0.3	-	2.1	0.2	-	-

Notes

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

Intersection							
Int Delay, s/veh	8.3						
Movement	EBL	EBR	NBL	NBT	SBT	SBR	
Traffic Vol, veh/h	53	39	15	1582	1721	37	
Future Vol, veh/h	53	39	15	1582	1721	37	
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	0	75	-	-	-	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	50	75	68	91	96	75	
Heavy Vehicles, %	2	2	2	2	2	2	
Mvmt Flow	106	52	22	1738	1793	49	
Major/Minor	Minor2		Major1		Major2		
Conflicting Flow All	2730	921	1842	0	-	0	
Stage 1	1817	-	-	-	-	-	
Stage 2	913	-	-	-	-	-	
Critical Hdwy	6.84	6.94	4.14	-	-	-	
Critical Hdwy Stg 1	5.84	-	-	-	-	-	
Critical Hdwy Stg 2	5.84	-	-	-	-	-	
Follow-up Hdwy	3.52	3.32	2.22	-	-	-	
Pot Cap-1 Maneuver	~ 16	273	326	-	-	-	
Stage 1	115	-	-	-	-	-	
Stage 2	352	-	-	-	-	-	
Platoon blocked, %				-	-	-	
Mov Cap-1 Maneuver	~ 15	273	326	-	-	-	
Mov Cap-2 Maneuver	~ 83	-	-	-	-	-	
Stage 1	115	-	-	-	-	-	
Stage 2	328	-	-	-	-	-	
Approach	EB		NB		SB		
HCM Control Delay, s	195.2		0.2		0		
HCM LOS	F						
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR	
Capacity (veh/h)	326	-	83	273	-	-	
HCM Lane V/C Ratio	0.068	-	1.277	0.19	-	-	
HCM Control Delay (s)	16.8	-	280.5	21.3	-	-	
HCM Lane LOS	C	-	F	C	-	-	
HCM 95th %tile Q(veh)	0.2	-	7.9	0.7	-	-	
Notes							
-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon							

Intersection

Int Delay, s/veh 0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	16	8	6	1382	1808	26
Future Vol, veh/h	16	8	6	1382	1808	26
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	0	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	9	7	1502	1965	28

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	2744	997	1993	0	-	0
Stage 1	1979	-	-	-	-	-
Stage 2	765	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	~ 16	243	285	-	-	-
Stage 1	93	-	-	-	-	-
Stage 2	420	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 16	243	285	-	-	-
Mov Cap-2 Maneuver	72	-	-	-	-	-
Stage 1	91	-	-	-	-	-
Stage 2	420	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	53.6	0.1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	285	-	72	243	-	-
HCM Lane V/C Ratio	0.023	-	0.242	0.036	-	-
HCM Control Delay (s)	17.9	-	70.2	20.4	-	-
HCM Lane LOS	C	-	F	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.8	0.1	-	-

Notes

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

Intersection

Int Delay, s/veh 0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	22	14	7	1628	1594	33
Future Vol, veh/h	22	14	7	1628	1594	33
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	0	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	88	89	90	75
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	29	19	8	1829	1771	44

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	2724	908	1815 0
Stage 1	1793	-	- -
Stage 2	931	-	- -
Critical Hdwy	6.84	6.94	4.14 -
Critical Hdwy Stg 1	5.84	-	- -
Critical Hdwy Stg 2	5.84	-	- -
Follow-up Hdwy	3.52	3.32	2.22 -
Pot Cap-1 Maneuver	~ 17	278	334 -
Stage 1	118	-	- -
Stage 2	344	-	- -
Platoon blocked, %			- -
Mov Cap-1 Maneuver	~ 17	278	334 -
Mov Cap-2 Maneuver	86	-	- -
Stage 1	118	-	- -
Stage 2	336	-	- -

Approach	EB	NB	SB
HCM Control Delay, s	48.4	0.1	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	334	-	86	278	-	-
HCM Lane V/C Ratio	0.024	-	0.341	0.067	-	-
HCM Control Delay (s)	16	-	67.1	18.9	-	-
HCM Lane LOS	C	-	F	C	-	-
HCM 95th %tile Q(veh)	0.1	-	1.3	0.2	-	-

Notes

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

Appendix D–Trip Generation

Trip Generation Summary

Alternative: Alternative 1 Open Date: 11/22/2017 88
 Phase: Analysis Date: 11/22/2017
 Project: Gateway of Rochester Hills

ITE	Land Use	Weekday Average Daily Trips			Weekday AM Peak Hour of Adjacent Street Traffic			Weekday PM Peak Hour of Adjacent Street Traffic		
		* Enter	Exit	Total	* Enter	Exit	Total	* Enter	Exit	Total
310	HOTEL 1 108 Rooms	441	441	882	34	23	57	33	32	65
710	OFFICEGENERAL 1 11.86 Gross Floor Area 1000 SF	66	65	131	17	2	19	3	15	18
820	CENTERSHOPPING 1 11.04 Gross Leasable Area 1000 SF	236	235	471	7	4	11	20	21	41
932	RESTAURANTHT 1 6.04 Gross Floor Area 1000 SF	384	384	768	36	29	65	35	24	59
<hr/>										
Unadjusted Volume		1127	1125	2252	94	58	152	91	92	183
Internal Capture Trips		0	0	0	11	11	22	25	25	50
Pass-By Trips		0	0	0	0	0	0	0	0	0
Volume Added to Adjacent Streets		1127	1125	2252	83	47	130	66	67	133

Total Weekday Average Daily Trips Internal Capture = 0 Percent
 Total Weekday AM Peak Hour of Adjacent Street Traffic Internal Capture = 14 Percent
 Total Weekday PM Peak Hour of Adjacent Street Traffic Internal Capture = 27 Percent

* - Custom rate used for selected time period.

Appendix F– CRASH DATA



Transportation Improvement Association

Crash Detail Report

Request #: 0045551

Printed By:

Printed On: 2/13/2018

ON_ROAD:	Rochester Rd
AT_ROAD:	South Blvd W
TYPE:	CRASH_INT
STATE:	MI
COUNTY:	OAKLAND
STAT_YEAR:	3-Year

#1 Location: SOUTH BLVD E (6.01) 10 feet N of ROCHESTER **Crash ID:** 9164664
Crash Date: 01/06/2015 **Day:** Tue **Hour:** 7am **Weather:** cloudy **Roadway:** snow **Light:** dark/ltltd
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 1 **How:** head-on/lt
CVT: Rochester Hills **Area:** w/i intersection **HBD:** N **Drugs:** N **Complaint No:** 150002380

Unit No	Veh Dir	Action	Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1		go straight		veh in transpt	none	none	none	unknown	car	none
2	E	left turn		veh in transpt	none	none	none	none	car	lftfront

UD-10: 9164664

#2 Location: SOUTH BLVD E (6.01) 15 feet E of S ROCHESTER RD **Crash ID:** 9169664
Crash Date: 01/09/2015 **Day:** Fri **Hour:** 6pm **Weather:** clear **Roadway:** wet **Light:** dark/unltd
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** head-on/lt
CVT: Rochester Hills **Area:** w/i intersection **HBD:** N **Drugs:** N **Complaint No:** 150004359

Unit No	Veh Dir	Action	Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	go straight		veh in transpt	none	none	none	disrgd traffic cntrl	car	lftfront
2	S	left turn		veh in transpt	none	none	none	none	car	ctrfont

UD-10: 9169664

#3 Location: ROCHESTER RD (8.77) 150 feet S of SOUTH BLVD E **Crash ID:** 9168907
Crash Date: 01/11/2015 **Day:** Sun **Hour:** 1pm **Weather:** cloudy **Roadway:** wet **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** rr-end
CVT: Troy **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 150001224

Unit No	Veh Dir	Action	Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	go straight		veh in transpt	none	none	none	unable to stop	car	ctrfont
2	N	slow/stop on rd		veh in transpt	none	none	none	none	car	ctrear
3	N	slow/stop on rd		veh in transpt	none	none	none	none	car	ctrear

UD-10: 9168907

#4 Location: SOUTH BLVD E (6.01) 1 feet E of S ROCHESTER RD **Crash ID:** 9177851
Crash Date: 01/16/2015 **Day:** Fri **Hour:** 6pm **Weather:** clear **Roadway:** dry **Light:** dark/ltltd
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** head-on/lt
CVT: Rochester Hills **Area:** w/i intersection **HBD:** N **Drugs:** N **Complaint No:** 150007969

Unit No	Veh Dir	Action	Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight		veh in transpt	none	none	none	disrgd traffic cntrl	car	ctrfont
2	W	left turn		veh in transpt	none	none	none	none	car	rtfront

UD-10: 9177851

#5 Location: ROCHESTER RD (8.80) 9 feet S of SOUTH BLVD E **Crash ID:** 9179178
Crash Date: 01/22/2015 **Day:** Thu **Hour:** 11pm **Weather:** clear **Roadway:** dry **Light:** dark/ltltd

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Injuries K: 0	Inj A: 0	Inj B: 0	Inj C: 0	Inj 0: 2	How: rr-end				
CVT: Troy	Area: inter other	HBD: N	Drugs: N	Complaint No: 150011056					
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	start on rdwy	veh in transpt	none	none	none	carels driving	car	ctrfront
2	N	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: [9179178](#)

#6 Location: S ROCHESTER RD (8.81) 74 feet N of SOUTH BLVD E **Crash ID:** 9191991

Crash Date: 01/27/2015 **Day:** Tue **Hour:** 5pm **Weather:** clear **Roadway:** dry **Light:** dusk

Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end

CVT: Rochester Hills **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:** 150013478

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	S	go straight	veh in transpt	none	none	none	carels driving	car	ctrfront
2	S	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: [9191991](#)

#7 Location: S ROCHESTER RD (8.82) 100 feet N of SOUTH BLVD E **Crash ID:** 9192729

Crash Date: 02/03/2015 **Day:** Tue **Hour:** 8pm **Weather:** snow **Roadway:** snow **Light:** dark/ltd

Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** other

CVT: Rochester Hills **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:** 150017182

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	go straight	loss of control	cross ctrline	veh in transpt	none	speeding	car	rtrfront
2	S	stop on road	veh in transpt	none	none	none	none	car	lftside

UD-10: [9192729](#)

#8 Location: SOUTH BLVD W (6.00) 75 feet W of ROCHESTER RD **Crash ID:** 9199616

Crash Date: 02/11/2015 **Day:** Wed **Hour:** 3pm **Weather:** cloudy **Roadway:** wet **Light:** day

Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end

CVT: Rochester Hills **Area:** inter driveway **HBD:** N **Drugs:** N **Complaint No:** 150004658

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: [9199616](#)

#9 Location: S ROCHESTER RD (8.81) 50 feet N of SOUTH BLVD E **Crash ID:** 9226059

Crash Date: 03/12/2015 **Day:** Thu **Hour:** 5pm **Weather:** clear **Roadway:** dry **Light:** day

Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 5 **How:** rr-end

CVT: Rochester Hills **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:** 150036593

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	S	go straight	veh in transpt	none	none	none	unable to stop	pickup	ctrfront
2	S	slow/stop on rd	veh in transpt	veh in transpt	none	none	none	car	ctrrear
3	S	slow/stop on rd	veh in transpt	veh in transpt	none	none	none	car	ctrrear
4	S	slow/stop on rd	veh in transpt	veh in transpt	none	none	none	car	ctrrear
5	S	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrrear

UD-10: [9226059](#)

#10 Location: SOUTH BLVD W (5.99) 99 feet W of S ROCHESTER RD **Crash ID:** 9239610

Crash Date: 03/29/2015 **Day:** Sun **Hour:** 4pm **Weather:** cloudy **Roadway:** dry **Light:** day

Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** rr-end

CVT: Rochester Hills **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:** 150046078

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	start on rdwy	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 9239610

#11 **Location:** S ROCHESTER RD (8.83) 150 feet N of SOUTH BLVD E **Crash ID:** 9239634
Crash Date: 04/01/2015 **Day:** Wed **Hour:** 2pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 1 **Inj C:** 0 **Inj 0:** 1 **How:** angle
CVT: Rochester Hills **Area:** inter driveway **HBD:** N **Drugs:** N **Complaint No:** 150047764

Unit No	Veh Dir	Action	Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	S	go straight		loss of control	ditch	veh in transpt	none	other	car	ctrfront
2	W	slow/stop	other	veh in transpt	none	none	none	none	truck/bus	rtrfront

UD-10: 9239634

#12 **Location:** S ROCHESTER RD (8.81) 50 feet N of SOUTH BLVD E **Crash ID:** 9243810
Crash Date: 04/07/2015 **Day:** Tue **Hour:** 6am **Weather:** clear **Roadway:** dry **Light:** dark/unltd
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end
CVT: Rochester Hills **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:** 150050902

Unit No	Veh Dir	Action	Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	S	go straight		veh in transpt	none	none	none	unable to stop	car	ctrfront
2	S	slow/stop on rd		veh in transpt	none	none	none	none	car	rtrrear

UD-10: 9243810

#13 **Location:** SOUTH BLVD W (5.98) 169 feet W of S ROCHESTER RD **Crash ID:** 9254583
Crash Date: 04/16/2015 **Day:** Thu **Hour:** 5pm **Weather:** rain **Roadway:** wet **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end/lt
CVT: Rochester Hills **Area:** driveway **HBD:** N **Drugs:** N **Complaint No:** 150056525

Unit No	Veh Dir	Action	Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	NW	left turn		veh in transpt	none	none	none	unable to stop	car	lftfront
2	NW	left turn		veh in transpt	none	none	none	none	car	rtrrear

UD-10: 9254583

#14 **Location:** ROCHESTER RD (8.76) 199 feet S of SOUTH BLVD E **Crash ID:** 9258235
Crash Date: 04/29/2015 **Day:** Wed **Hour:** 6pm **Weather:** cloudy **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** rr-end
CVT: Troy **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 150013829

Unit No	Veh Dir	Action	Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	go straight		veh in transpt	none	none	none	unable to stop	car	ctrfront
2	N	stop on road		veh in transpt	none	none	none	none	car	ctrrear
3	N	stop on road		veh in transpt	none	none	none	none	car	ctrrear

UD-10: 9258235

#15 **Location:** NWB SOUTH BLVD E (6.03) 100 feet E of S ROCHESTER RD **Crash ID:** 9268431
Crash Date: 05/08/2015 **Day:** Fri **Hour:** 8am **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end
CVT: Rochester Hills **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:** 150069027

Unit No	Veh Dir	Action	Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	go straight		veh in transpt	none	none	none	unable to stop	car	ctrfront
2	W	stop on road		veh in transpt	none	none	none	none	car	ctrrear

UD-10: 9268431

#16 **Location:** ROCHESTER RD (8.79) 75 feet S of SOUTH BLVD E **Crash ID:** 9296784
Crash Date: 06/02/2015 **Day:** Tue **Hour:** 2pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end
CVT: Troy **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:** 150084007

Unit No	Veh Dir	Action	Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	S	go straight		veh in transpt	none	none	none	unable to stop	car	ctrfront

2	S	slow/stop on rd	veh in transpt	none	none	none	none	car	rtrear
UD-10: 9296784									
#17 Location: ROCHESTER RD (8.77) 150 feet S of SOUTH BLVD E								Crash ID: 9303525	
Crash Date: 06/05/2015		Day: Fri	Hour: 5pm	Weather: clear	Roadway: dry	Light: day			
Injuries K: 0		Inj A: 0	Inj B: 0	Inj C: 1	Inj 0: 1	How: head-on/lt			
CVT: Troy		Area: inter driveway		HBD: N	Drugs: N	Complaint No: 150086132			
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	SE	left turn	veh in transpt	none	none	none	failed to yield	car	rtside
2	N	go straight	veh in transpt	none	none	none	none	car	ctrfront
UD-10: 9303525									
#18 Location: ROCHESTER RD (8.76) 200 feet S of SOUTH BLVD E								Crash ID: 9304666	
Crash Date: 06/06/2015		Day: Sat	Hour: 4pm	Weather: clear	Roadway: dry	Light: day			
Injuries K: 0		Inj A: 0	Inj B: 0	Inj C: 0	Inj 0: 2	How: angle			
CVT: Troy		Area: straight		HBD: N	Drugs: N	Complaint No: 150018346			
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	enter rdwy	veh in transpt	none	none	none	none	car	lftfront
2	N	go straight	veh in transpt	none	none	none	none	car	ctrfront
UD-10: 9304666									
#19 Location: SOUTH BLVD E (6.01) 10 feet E of S ROCHESTER RD								Crash ID: 9309848	
Crash Date: 06/06/2015		Day: Sat	Hour: 1pm	Weather: clear	Roadway: dry	Light: day			
Injuries K: 0		Inj A: 0	Inj B: 0	Inj C: 0	Inj 0: 3	How: other			
CVT: Rochester Hills		Area: inter other		HBD: N	Drugs: N	Complaint No: 150086630			
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	go straight	veh in transpt	veh in transpt	none	none	unable to stop	car	rffront
2	W	stop on road	veh in transpt	none	none	none	none	car	rtrear
3	W	stop on road	veh in transpt	none	none	none	none	car	lftside
UD-10: 9309848									
#20 Location: S ROCHESTER RD (8.81) 50 feet N of SOUTH BLVD E								Crash ID: 9310636	
Crash Date: 06/14/2015		Day: Sun	Hour: 7pm	Weather: rain	Roadway: wet	Light: day			
Injuries K: 0		Inj A: 0	Inj B: 0	Inj C: 0	Inj 0: 2	How: rr-end			
CVT: Rochester Hills		Area: inter other		HBD: N	Drugs: N	Complaint No: 150091846			
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	S	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	S	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrrear
UD-10: 9310636									
#21 Location: SOUTH BLVD W (5.97) 200 feet W of ROCHESTER RD								Crash ID: 9310731	
Crash Date: 06/15/2015		Day: Mon	Hour: 5pm	Weather: clear	Roadway: dry	Light: day			
Injuries K: 0		Inj A: 0	Inj B: 0	Inj C: 0	Inj 0: 2	How: other			
CVT: Rochester Hills		Area: straight		HBD: N	Drugs: N	Complaint No: 150019430			
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	NW	left turn	veh in transpt	none	none	none	failed to yield	car	rffront
2	E	go straight	veh in transpt	none	none	none	none	car	rtside
UD-10: 9310731									

#22 Location: ROCHESTER RD (8.79) 50 feet S of SOUTH BLVD E								Crash ID: 9322650	
Crash Date: 06/28/2015		Day: Sun	Hour: 11pm	Weather: clear	Roadway: dry	Light: dark/lt			
Injuries K: 0		Inj A: 0	Inj B: 0	Inj C: 1	Inj 0: 2	How: rr-end			
CVT: Troy		Area: inter other		HBD: Y	Drugs: N	Complaint No: 150020983			
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage

1	N	go straight	veh in transpt	none	none	none	other	car	ctrfront
2	N	stop on road	veh in transpt	none	none	none	none	car	ctrrear
3	W	stop on road	veh in transpt	none	none	none	none	car	ctrfront

UD-10: [9322650](#)

#23 Location: SOUTH BLVD W (6.01) 0 feet X of ROCHESTER RD Crash ID: 9327944

Crash Date: 07/07/2015 Day: Tue Hour: 5pm Weather: clear Roadway: dry Light: day
 Injuries K: 0 Inj A: 0 Inj B: 0 Inj C: 0 Inj 0: 2 How: rr-end
 CVT: Rochester Hills Area: w/i intersection HBD: N Drugs: N Complaint No: 150022135

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	start on rdwy	veh in transpt	none	none	none	unable to stop	motorhome	ctrfront
2	E	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: [9327944](#)

#24 Location: S ROCHESTER RD (8.82) 99 feet N of SOUTH BLVD E Crash ID: 9333998

Crash Date: 07/16/2015 Day: Thu Hour: 3pm Weather: clear Roadway: dry Light: day
 Injuries K: 0 Inj A: 0 Inj B: 0 Inj C: 0 Inj 0: 2 How: angle
 CVT: Rochester Hills Area: inter driveway HBD: N Drugs: N Complaint No: 150112573

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	left turn	veh in transpt	none	none	none	failed to yield	car	lftfront
2	S	go straight	veh in transpt	none	none	none	none	car	ctrrear

UD-10: [9333998](#)

#25 Location: S ROCHESTER RD (8.83) 150 feet N of SOUTH BLVD E Crash ID: 9340569

Crash Date: 07/21/2015 Day: Tue Hour: 5pm Weather: clear Roadway: dry Light: day
 Injuries K: 0 Inj A: 0 Inj B: 0 Inj C: 1 Inj 0: 3 How: angle
 CVT: Rochester Hills Area: inter driveway HBD: N Drugs: N Complaint No: 150115866

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	left turn	veh in transpt	none	none	none	failed to yield	car	rtfront
2	S	go straight	veh in transpt	none	none	none	none	car	rtrear

UD-10: [9340569](#)

#26 Location: ROCHESTER RD (8.78) 99 feet S of SOUTH BLVD E Crash ID: 9349266

Crash Date: 08/06/2015 Day: Thu Hour: 11am Weather: clear Roadway: dry Light: day
 Injuries K: 0 Inj A: 0 Inj B: 0 Inj C: 0 Inj 0: 2 How: other
 CVT: Troy Area: inter driveway HBD: N Drugs: N Complaint No: 150025759

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	enter rdwy	veh in transpt	none	none	none	failed to yield	car	lftrear
2	N	go straight	veh in transpt	none	none	none	none	car	rtfront

UD-10: [9349266](#)

#27 Location: S ROCHESTER RD (8.82) 99 feet N of SOUTH BLVD E Crash ID: 9352810

Crash Date: 08/07/2015 Day: Fri Hour: 5pm Weather: clear Roadway: dry Light: day
 Injuries K: 0 Inj A: 0 Inj B: 0 Inj C: 0 Inj 0: 2 How: rr-end
 CVT: Rochester Hills Area: inter other HBD: N Drugs: N Complaint No: 150127226

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	N	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrrear

UD-10: [9352810](#)

#28 Location: S ROCHESTER RD (8.83) 150 feet N of SOUTH BLVD E Crash ID: 9354493

Crash Date: 08/11/2015 Day: Tue Hour: 5pm Weather: clear Roadway: dry Light: day
 Injuries K: 0 Inj A: 0 Inj B: 0 Inj C: 1 Inj 0: 4 How: rr-end
 CVT: Rochester Hills Area: inter other HBD: N Drugs: N Complaint No: 150129452

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	S	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	S	slow/stop on rd	veh in transpt	veh in transpt	none	none	none	car	ctrfront
3	S	slow/stop on rd	veh in transpt	none	none	none	none	pickup	ctrrear

UD-10: 9354493

#29 Location: SOUTH BLVD E (6.03) 100 feet E of S ROCHESTER RD **Crash ID:** 9369792
Crash Date: 08/28/2015 **Day:** Fri **Hour:** 11am **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 4 **How:** head-on/lt
CVT: Rochester Hills **Area:** inter driveway **HBD:** N **Drugs:** N **Complaint No:** 150140120

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	NE	left turn	veh in transpt	none	none	none	failed to yield	car	rtfront
2	W	go straight	veh in transpt	none	none	none	none	car	lftfront

UD-10: 9369792

#30 Location: ROCHESTER RD (8.77) 150 feet S of SOUTH BLVD W **Crash ID:** 9369013
Crash Date: 08/30/2015 **Day:** Sun **Hour:** 1pm **Weather:** cloudy **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** angle
CVT: Troy **Area:** inter driveway **HBD:** N **Drugs:** N **Complaint No:** 150028459

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	left turn	veh in transpt	none	none	none	failed to yield	car	lftfront
2	N	go straight	veh in transpt	none	none	none	imprp passing	car	rtfront

UD-10: 9369013

#31 Location: ROCHESTER RD (8.77) 150 feet S of SOUTH BLVD W **Crash ID:** 9376492
Crash Date: 09/06/2015 **Day:** Sun **Hour:** 7pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** ss-same
CVT: Troy **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 150029390

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	change lanes	veh in transpt	none	none	none	imprp lane use	car	rtside
2	N	go straight	veh in transpt	none	none	none	none	car	rtfront

UD-10: 9376492

#32 Location: S ROCHESTER RD (8.80) 20 feet N of SOUTH BLVD E **Crash ID:** 9384641
Crash Date: 09/14/2015 **Day:** Mon **Hour:** 3pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 1 **Inj 0:** 1 **How:** rr-end
CVT: Rochester Hills **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:** 150150685

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	S	go straight	veh in transpt	none	none	none	unable to stop	car	rtfront
2	S	stop on road	veh in transpt	none	none	none	none	car	lftrear

UD-10: 9384641

#33 Location: SOUTH BLVD W (6.01) 24 feet W of S ROCHESTER RD **Crash ID:** 9389630
Crash Date: 09/21/2015 **Day:** Mon **Hour:** 12pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** rr-end/lt
CVT: Rochester Hills **Area:** w/i intersection **HBD:** N **Drugs:** N **Complaint No:** 150154809

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	go straight	veh in transpt	none	none	none	failed to yield	motorhome	rtfront
2	NW	left turn	veh in transpt	none	none	none	none	car	rtrear

UD-10: 9389630

#34 Location: S ROCHESTER RD (8.83) 150 feet N of SOUTH BLVD E **Crash ID:** 9397113
Crash Date: 10/01/2015 **Day:** Thu **Hour:** 4pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end

CVT: Rochester Hills		Area: inter other		HBD: N		Drugs: N		Complaint No: 150160802	
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	N	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrear

UD-10: [9397113](#)

#35 Location: S ROCHESTER RD (8.82) 99 feet N of SOUTH BLVD E							Crash ID: 9400674			
Crash Date: 10/02/2015		Day: Fri		Hour: 4pm		Weather: clear		Roadway: dry		Light: day
Injuries K: 0		Inj A: 0		Inj B: 0		Inj C: 0		Inj 0: 2		How: rr-end
CVT: Rochester Hills		Area: inter other		HBD: N		Drugs: N		Complaint No: 150161424		
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage	
1	N	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront	
2	N	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrear	

UD-10: [9400674](#)

#36 Location: SOUTH BLVD E (6.02) 50 feet E of S ROCHESTER RD							Crash ID: 9408976			
Crash Date: 10/12/2015		Day: Mon		Hour: 9am		Weather: clear		Roadway: dry		Light: day
Injuries K: 0		Inj A: 0		Inj B: 0		Inj C: 0		Inj 0: 2		How: rr-end
CVT: Rochester Hills		Area: inter other		HBD: N		Drugs: N		Complaint No: 150166865		
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage	
1	W	start on rdwy	veh in transpt	none	none	none	unable to stop	car	ctrfront	
2	W	stop on road	veh in transpt	none	none	none	none	car	ctrear	

UD-10: [9408976](#)

#37 Location: S ROCHESTER RD (8.82) 99 feet N of SOUTH BLVD E							Crash ID: 9447372			
Crash Date: 11/17/2015		Day: Tue		Hour: 2pm		Weather: clear		Roadway: dry		Light: day
Injuries K: 0		Inj A: 0		Inj B: 0		Inj C: 0		Inj 0: 4		How: rr-end
CVT: Rochester Hills		Area: inter other		HBD: N		Drugs: N		Complaint No: 150188123		
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage	
1	N	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront	
2	N	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrear	

UD-10: [9447372](#)

#38 Location: ROCHESTER RD (8.78) 100 feet S of SOUTH BLVD E							Crash ID: 9450244			
Crash Date: 11/19/2015		Day: Thu		Hour: 7pm		Weather: clear		Roadway: dry		Light: day
Injuries K: 0		Inj A: 0		Inj B: 0		Inj C: 0		Inj 0: 2		How: rr-end
CVT: Troy		Area: straight		HBD: N		Drugs: N		Complaint No: 150038075		
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage	
1	N	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront	
2	N	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrear	

UD-10: [9450244](#)

#39 Location: SOUTH BLVD W (6.00) 50 feet W of ROCHESTER RD							Crash ID: 9454180			
Crash Date: 11/25/2015		Day: Wed		Hour: 7pm		Weather: clear		Roadway: dry		Light: dark/lt
Injuries K: 0		Inj A: 0		Inj B: 0		Inj C: 0		Inj 0: 3		How: rr-end
CVT: Rochester Hills		Area: straight		HBD: N		Drugs: N		Complaint No: 150038717		
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage	
1	E	start on rdwy	veh in transpt	none	none	none	other	car	lftfront	
2	E	start on rdwy	veh in transpt	none	none	none	none	car	rtrear	

UD-10: [9454180](#)

#40 Location: S ROCHESTER RD (8.83) 150 feet N of SOUTH BLVD W							Crash ID: 9472382			
Crash Date: 12/11/2015		Day: Fri		Hour: 4pm		Weather: clear		Roadway: dry		Light: day
Injuries K: 0		Inj A: 0		Inj B: 0		Inj C: 0		Inj 0: 2		How: rr-end

CVT: Rochester Hills		Area: straight		HBD: N		Drugs: N		Complaint No: 150201750	
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	N	stop on road	veh in transpt	none	none	none	none	car	ctrrear
UD-10: 9472382									
#41 Location: S ROCHESTER RD (8.82) 99 feet N of SOUTH BLVD E							Crash ID: 9474302		
Crash Date: 12/16/2015		Day: Wed	Hour: 2pm	Weather: cloudy		Roadway: dry	Light: day		
Injuries K: 0		Inj A: 0	Inj B: 0	Inj C: 0		Inj 0: 3	How: rr-end		
CVT: Rochester Hills		Area: inter other		HBD: N		Drugs: N		Complaint No: 150204483	
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	S	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	S	slow/stop on rd	veh in transpt	veh in transpt	none	none	none	car	ctrrear
3	S	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrrear
UD-10: 9474302									
#42 Location: ROCHESTER RD (8.78) 80 feet S of SOUTH BLVD E							Crash ID: 9478635		
Crash Date: 12/21/2015		Day: Mon	Hour: 12pm	Weather: rain		Roadway: wet	Light: day		
Injuries K: 0		Inj A: 0	Inj B: 0	Inj C: 0		Inj 0: 2	How: rr-end		
CVT: Troy		Area: straight		HBD: N		Drugs: N		Complaint No: 150207263	
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	N	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrrear
UD-10: 9478635									
#43 Location: ROCHESTER RD (8.76) 200 feet S of SOUTH BLVD E							Crash ID: 9592864		
Crash Date: 12/25/2015		Day: Fri	Hour: 6pm	Weather: cloudy		Roadway: dry	Light: dark/ltltd		
Injuries K: 0		Inj A: 0	Inj B: 0	Inj C: 2		Inj 0: 2	How: rr-end		
CVT: Troy		Area: straight		HBD: Y		Drugs: N		Complaint No: 150041883	
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	go straight	veh in transpt	none	none	none	unable to stop	car	rtfront
2	N	stop on road	veh in transpt	none	none	none	none	car	ctrfront
3	N	stop on road	veh in transpt	none	none	none	none	car	ctrrear
UD-10: 9592864									
#44 Location: SOUTH BLVD W (6.01) 30 feet W of ROCHESTER RD							Crash ID: 9606909		
Crash Date: 01/10/2016		Day: Sun	Hour: 10am	Weather: snow		Roadway: slush	Light: day		
Injuries K: 0		Inj A: 0	Inj B: 0	Inj C: 0		Inj 0: 2	How: angle		
CVT: Rochester Hills		Area: inter other		HBD: N		Drugs: N		Complaint No: 160001006	
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	S	left turn	loss of control	veh in transpt	none	none	unable to stop	pickup	ctrfront
2	E	go straight	veh in transpt	none	none	none	none	car	rtside
UD-10: 9606909									
#45 Location: ROCHESTER RD (8.79) 39 feet S of SOUTH BLVD E							Crash ID: 9609948		
Crash Date: 01/13/2016		Day: Wed	Hour: 7pm	Weather: snow		Roadway: snow	Light: dark/unltd		
Injuries K: 0		Inj A: 0	Inj B: 0	Inj C: 0		Inj 0: 2	How: rr-end		
CVT: Troy		Area: straight		HBD: N		Drugs: N		Complaint No: 160001432	
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	slow/stop on rd	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	N	go straight	veh in transpt	none	none	none	none	car	ctrrear
UD-10: 9609948									
#46 Location: ROCHESTER (8.79) 40 feet S of SOUTH BLVD W							Crash ID: 9665181		

Crash Date: 02/18/2016 **Day:** Thu **Hour:** 9am **Weather:** clear **Roadway:** dry **Light:** dark/unltd
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 1 **Inj 0:** 0 **How:** single
CVT: Troy **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:** 160005014

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	SE	right turn	pedestrian	none	none	none	failed to yield	car	none
2	E	crossing at inter	veh in transpt	none	none	none	none	uncoded	none

UD-10: [9665181](#)

#47 Location: SOUTH BLVD E (6.03) 78 feet E of S ROCHESTER RD **Crash ID:** 9648034
Crash Date: 02/23/2016 **Day:** Tue **Hour:** 9am **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end
CVT: Rochester Hills **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:** 160030612

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	slow/stop on rd	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	W	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrrear

UD-10: [9648034](#)

#48 Location: SOUTH BLVD W (5.98) 152 feet W of S ROCHESTER RD **Crash ID:** 9667129
Crash Date: 03/18/2016 **Day:** Fri **Hour:** 5pm **Weather:** rain **Roadway:** wet **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 1 **Inj C:** 1 **Inj 0:** 3 **How:** angle
CVT: Rochester Hills **Area:** inter driveway **HBD:** N **Drugs:** N **Complaint No:** 160008417

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	left turn	veh in transpt	none	none	none	disrgd traffic cntrl	car	lftfront
2	E	go straight	veh in transpt	none	none	none	imprp lane use	car	rtfront

UD-10: [9667129](#)

#49 Location: SOUTH BLVD W (6.01) 9 feet W of S ROCHESTER RD **Crash ID:** 9696067
Crash Date: 04/27/2016 **Day:** Wed **Hour:** 11am **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** other
CVT: Rochester Hills **Area:** w/i intersection **HBD:** N **Drugs:** N **Complaint No:** 160012875

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	NE	left turn	veh in transpt	none	none	none	imprp turn	car	lftside
2	NE	left turn	veh in transpt	none	none	none	none	truck/bus	rtfront

UD-10: [9696067](#)

#50 Location: S ROCHESTER RD (8.83) 148 feet N of SOUTH BLVD E **Crash ID:** 9706766
Crash Date: 04/29/2016 **Day:** Fri **Hour:** 5pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** angle
CVT: Rochester Hills **Area:** inter driveway **HBD:** N **Drugs:** N **Complaint No:** 160071002

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	left turn	veh in transpt	none	none	none	failed to yield	car	rtfront
2	S	go straight	veh in transpt	none	none	none	none	car	rtside

UD-10: [9706766](#)

#51 Location: SOUTH BLVD W (5.97) 200 feet W of ROCHESTER RD **Crash ID:** 9702973
Crash Date: 05/06/2016 **Day:** Fri **Hour:** 5pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** rr-end
CVT: Rochester Hills **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 160013877

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: [9702973](#)

#52 Location: ROCHESTER RD (8.79) 50 feet S of SOUTH BLVD E **Crash ID:** 9760801

Crash Date: 07/15/2016 **Day:** Fri **Hour:** 3pm **Weather:** cloudy **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** rr-end
CVT: Troy **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:** 160022097

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	go straight	veh in transpt	none	none	none	unable to stop	pickup	ctrfront
2	N	stop on road	veh in transpt	none	none	none	none	car	ctrear

UD-10: [9760801](#)

#53 Location: NB ROCHESTER RD (8.80) 24 feet S of SOUTH BLVD E **Crash ID:** 9774856
Crash Date: 08/01/2016 **Day:** Mon **Hour:** 6pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 4 **How:** ss-same
CVT: Troy **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 160133300

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	go straight	veh in transpt	none	none	none	imprp passing	car	rtfront
2	N	go straight	veh in transpt	none	none	none	none	car	rtfront
3	N	go straight	veh in transpt	none	none	none	none	car	lftrear

UD-10: [9774856](#)

#54 Location: S ROCHESTER RD (8.80) 5 feet N of SOUTH BLVD E **Crash ID:** 9791808
Crash Date: 08/20/2016 **Day:** Sat **Hour:** 6pm **Weather:** rain **Roadway:** wet **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 4 **How:** head-on
CVT: Rochester Hills **Area:** w/i intersection **HBD:** N **Drugs:** N **Complaint No:** 160145953

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	avoid veh-angle	veh in transpt	none	none	none	none	motorhome	ctrfront
2	S	stop on road	veh in transpt	none	none	none	none	car	ctrfront

UD-10: [9791808](#)

#55 Location: SOUTH BLVD E (6.02) 50 feet E of ROCHESTER RD **Crash ID:** 9801672
Crash Date: 08/30/2016 **Day:** Tue **Hour:** 2pm **Weather:** cloudy **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end
CVT: Rochester Hills **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 160027326

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	left turn	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	stop on road	veh in transpt	none	none	none	none	pickup	ctrear

UD-10: [9801672](#)

#56 Location: ROCHESTER RD (8.79) 50 feet S of SOUTH BLVD E **Crash ID:** 9804594
Crash Date: 09/02/2016 **Day:** Fri **Hour:** 6pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end
CVT: Troy **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:** 160154492

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	N	stop on road	veh in transpt	none	none	none	none	car	ctrear

UD-10: [9804594](#)

#57 Location: SOUTH BLVD E (6.01) 20 feet W of ROCHESTER RD **Crash ID:** 9816594
Crash Date: 09/21/2016 **Day:** Wed **Hour:** 11am **Weather:** clear **Roadway:** dry **Light:** dark/unltd
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** unknown
CVT: Rochester Hills **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 160029783

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	NE	right turn	veh in transpt	none	none	none	imprp turn	pickup	lftfront
2	E	stop on road	veh in transpt	none	none	none	none	car	rtrear

UD-10: [9816594](#)

#58 Location: ROCHESTER RD (8.80) 25 feet S of SOUTH BLVD E **Crash ID:** 9828615
Crash Date: 09/27/2016 **Day:** Tue **Hour:** 3pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 1 **Inj 0:** 2 **How:** rr-end
CVT: Troy **Area:** w/i intersection **HBD:** N **Drugs:** N **Complaint No:** 160030434

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	N	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrear
3	N	stop on road	veh in transpt	none	none	none	none	car	ctrear

UD-10: [9828615](#)

#59 Location: S ROCHESTER RD (8.80) 8 feet N of SOUTH BLVD E **Crash ID:** 9862165
Crash Date: 10/19/2016 **Day:** Wed **Hour:** 2pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** head-on/lt
CVT: Rochester Hills **Area:** w/i intersection **HBD:** N **Drugs:** N **Complaint No:** 160184097

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	avoid veh-ft/bk	veh in transpt	none	none	none	imprp passing	car	rtfront
2	S	left turn	veh in transpt	none	none	none	none	car	rtrear

UD-10: [9862165](#)

#60 Location: SOUTH BLVD E (6.02) 50 feet E of S ROCHESTER RD **Crash ID:** 9862169
Crash Date: 10/25/2016 **Day:** Tue **Hour:** 5pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** ss-same
CVT: Rochester Hills **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 160187968

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	change lanes	veh in transpt	none	none	none	imprp lane use	car	lftfront
2	W	go straight	veh in transpt	none	none	none	none	car	rtfront

UD-10: [9862169](#)

#61 Location: ROCHESTER RD (8.80) 29 feet S of SOUTH BLVD E **Crash ID:** 9855951
Crash Date: 10/28/2016 **Day:** Fri **Hour:** 6pm **Weather:** clear **Roadway:** dry **Light:** dark/unltd
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** rr-end
CVT: Troy **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 160033796

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	N	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrear

UD-10: [9855951](#)

#62 Location: S ROCHESTER RD (8.80) 9 feet N of SOUTH BLVD E **Crash ID:** 9878369
Crash Date: 10/29/2016 **Day:** Sat **Hour:** 8pm **Weather:** cloudy **Roadway:** dry **Light:** dark/unltd
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** head-on/lt
CVT: Rochester Hills **Area:** w/i intersection **HBD:** N **Drugs:** N **Complaint No:** 160190523

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	S	go straight	veh in transpt	none	none	none	disrgd traffic cntrl	pickup	rtrear
2	NW	left turn	veh in transpt	none	none	none	none	car	rtfront

UD-10: [9878369](#)

#63 Location: ROCHESTER RD (8.80) 0 feet X of SOUTH BLVD E **Crash ID:** 9858766
Crash Date: 10/31/2016 **Day:** Mon **Hour:** 6am **Weather:** clear **Roadway:** dry **Light:** dark/lt
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** angle
CVT: Rochester Hills **Area:** w/i intersection **HBD:** N **Drugs:** N **Complaint No:** 160034031

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	right turn	veh in transpt	none	none	none	failed to yield	car	lftfront
2	S	go straight	veh in transpt	none	none	none	none	car	rtfront

UD-10: 9858766

#64 **Location:** ROCHESTER RD E (8.80) 0 feet X of SOUTH BLVD **Crash ID:** 9869696
Crash Date: 11/09/2016 **Day:** Wed **Hour:** 4pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** angle
CVT: Rochester Hills **Area:** w/i intersection **HBD:** N **Drugs:** N **Complaint No:** 160035050

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	go straight	veh in transpt	none	none	none	disrgd traffic cntrl	car	ctrfront
2	E	left turn	veh in transpt	none	none	none	failed to yield	pickup	rtfront

UD-10: 9869696

#65 **Location:** ROCHESTER RD (8.76) 200 feet S of SOUTH BLVD E **Crash ID:** 9874688
Crash Date: 11/13/2016 **Day:** Sun **Hour:** 2pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** rr-end
CVT: Troy **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 160035551

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	go straight	veh in transpt	none	none	none	none	car	ctrfront
2	N	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 9874688

#66 **Location:** ROCHESTER RD (8.78) 125 feet S of SOUTH BLVD E **Crash ID:** 9875702
Crash Date: 11/14/2016 **Day:** Mon **Hour:** 11am **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** angle
CVT: Troy **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 160035615

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	go straight	veh in transpt	none	none	none	imprp lane use	car	lftfront
2	E	left turn	veh in transpt	none	none	none	none	car	ctrfront

UD-10: 9875702

#67 **Location:** ROCHESTER RD (8.79) 30 feet S of SOUTH BLVD E **Crash ID:** 9879521
Crash Date: 11/18/2016 **Day:** Fri **Hour:** 1pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end
CVT: Troy **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:** 160036057

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	N	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 9879521

#68 **Location:** S ROCHESTER RD (8.80) 9 feet N of SOUTH BLVD E **Crash ID:** 9882998
Crash Date: 11/18/2016 **Day:** Fri **Hour:** 5pm **Weather:** clear **Roadway:** dry **Light:** dark/unltd
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end/lft
CVT: Rochester Hills **Area:** w/i intersection **HBD:** N **Drugs:** N **Complaint No:** 160203154

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	left turn	veh in transpt	none	none	none	unable to stop	car	rtfront
2	N	left turn	veh in transpt	none	none	none	none	car	lftrear

UD-10: 9882998

#69 **Location:** ROCHESTER RD (8.77) 150 feet S of SOUTH BLVD E **Crash ID:** 9884750
Crash Date: 11/23/2016 **Day:** Wed **Hour:** 8pm **Weather:** rain **Roadway:** wet **Light:** dark/ltd
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 4 **How:** rr-end
CVT: Troy **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 160036690

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	N	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 9884750

#70 Location: ROCHESTER RD (8.77) 150 feet S of SOUTH BLVD E **Crash ID:** 9893453
Crash Date: 11/29/2016 **Day:** Tue **Hour:** 5pm **Weather:** cloudy **Roadway:** dry **Light:** dark/lt
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 1 **How:** ss-same
CVT: Troy **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:** 160037288

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1		change lanes	veh in transpt	none	none	none	imprp lane use	pickup	rtfront
2	N	stop on road	veh in transpt	none	none	none	none	car	lftrear

UD-10: 9893453

#71 Location: SOUTH BLVD E (5.99) 100 feet W of ROCHESTER RD **Crash ID:** 9903354
Crash Date: 12/08/2016 **Day:** Thu **Hour:** 11am **Weather:** blowing snow **Roadway:** wet **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 1 **How:** single
CVT: Rochester Hills **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 160038254

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	curb	none	none	none	none	car	lftside

UD-10: 9903354

#72 Location: ROCHESTER RD (8.80) 21 feet S of SOUTH BLVD E **Crash ID:** 9910057
Crash Date: 12/15/2016 **Day:** Thu **Hour:** 7am **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 1 **Inj C:** 0 **Inj 0:** 2 **How:** head-on/lt
CVT: Troy **Area:** w/i intersection **HBD:** N **Drugs:** N **Complaint No:** 160218929

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	SE	left turn	veh in transpt	none	none	none	failed to yield	car	ctrfront
2	N	go straight	veh in transpt	none	none	none	none	car	ctrfront

UD-10: 9910057

#73 Location: S ROCHESTER RD (8.81) 50 feet N of SOUTH BLVD E **Crash ID:** 9914647
Crash Date: 12/16/2016 **Day:** Fri **Hour:** 3pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** angle
CVT: Rochester Hills **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 160219888

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	left turn	veh in transpt	none	none	none	failed to yield	car	rtside
2	N	go straight	veh in transpt	none	none	none	none	car	ctrfront

UD-10: 9914647

#74 Location: ROCHESTER RD (8.78) 100 feet S of SOUTH BLVD E **Crash ID:** 9913362
Crash Date: 12/19/2016 **Day:** Mon **Hour:** 11am **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end
CVT: Troy **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 160039545

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	N	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 9913362

#75 Location: ROCHESTER RD (8.76) 200 feet S of SOUTH BLVD E **Crash ID:** 9950857
Crash Date: 01/26/2017 **Day:** Thu **Hour:** 6pm **Weather:** rain **Roadway:** wet **Light:** dark/unilt
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** angle
CVT: Troy **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 170002649

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	left turn	veh in transpt	none	none	none	failed to yield	car	rtfront
2	N	slow/stop on rd	veh in transpt	none	none	none	none	car	lffront

UD-10: 9950857

#76 Location: SOUTH BLVD W (6.01) 11 feet W of S ROCHESTER RD									Crash ID: 9953698
Crash Date: 01/26/2017	Day: Thu	Hour: 9pm	Weather: cloudy	Roadway: dry	Light: dark/ltd				
Injuries K: 0	Inj A: 0	Inj B: 1	Inj C: 0	Inj 0: 2	How: ss-same				
CVT: Rochester Hills	Area: straight	HBD: N	Drugs: N	Complaint No: 170015282					
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	go straight	veh in transpt	none	none	none	failed to yield	car	lftside
2	W	go straight	veh in transpt	none	none	none	none	car	rtside
UD-10: 9953698									
#77 Location: SOUTH BLVD E (6.01) 30 feet W of ROCHESTER RD									Crash ID: 9953797
Crash Date: 01/30/2017	Day: Mon	Hour: 8am	Weather: cloudy	Roadway: snow	Light: day				
Injuries K: 0	Inj A: 0	Inj B: 0	Inj C: 0	Inj 0: 2	How: rr-end				
CVT: Rochester Hills	Area: inter driveway	HBD: N	Drugs: N	Complaint No: 170002973					
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	car	rtfront
2	E	stop on road	veh in transpt	none	none	none	none	car	lftrear
UD-10: 9953797									
#78 Location: ROCHESTER RD (8.80) 19 feet S of SOUTH BLVD E									Crash ID: 9968478
Crash Date: 02/15/2017	Day: Wed	Hour: 6pm	Weather: clear	Roadway: dry	Light: dark/ltd				
Injuries K: 0	Inj A: 0	Inj B: 0	Inj C: 2	Inj 0: 0	How: head-on/lt				
CVT: Troy	Area: w/i intersection	HBD: N	Drugs: N	Complaint No: 170027773					
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	S	left turn	veh in transpt	none	none	none	carels driving	car	ctrfront
2	N	go straight	veh in transpt	none	none	none	none	car	ctrfront
UD-10: 9968478									
#79 Location: S ROCHESTER RD (8.83) 150 feet N of SOUTH BLVD E									Crash ID: 9979098
Crash Date: 02/28/2017	Day: Tue	Hour: 9am	Weather: rain	Roadway: wet	Light: day				
Injuries K: 0	Inj A: 0	Inj B: 0	Inj C: 1	Inj 0: 2	How: rr-end				
CVT: Rochester Hills	Area: inter other	HBD: N	Drugs: N	Complaint No: 170035454					
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	S	stop on road	veh in transpt	none	none	none	none	car	ctrrear
2	S	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
3	S	stop on road	veh in transpt	veh in transpt	none	none	none	car	ctrfront
UD-10: 9979098									
#80 Location: SOUTH BLVD W (5.98) 149 feet W of S ROCHESTER RD									Crash ID: 9984967
Crash Date: 03/04/2017	Day: Sat	Hour: 10am	Weather: clear	Roadway: dry	Light: day				
Injuries K: 0	Inj A: 0	Inj B: 0	Inj C: 1	Inj 0: 4	How: rr-end				
CVT: Rochester Hills	Area: inter other	HBD: N	Drugs: N	Complaint No: 170038242					
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	start on rdwy	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	stop on road	veh in transpt	none	none	none	none	car	ctrrear
UD-10: 9984967									
#81 Location: S ROCHESTER RD (8.80) 20 feet N of SOUTH BLVD E									Crash ID: 9990878
Crash Date: 03/10/2017	Day: Fri	Hour: 8pm	Weather: clear	Roadway: dry	Light: dark/ltd				
Injuries K: 0	Inj A: 0	Inj B: 0	Inj C: 1	Inj 0: 0	How: single				
CVT: Rochester Hills	Area: straight	HBD: N	Drugs: N	Complaint No: 170042901					
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	S	go straight	pedestrian	none	none	none	none	car	ctrfront
2		crossing at inter	veh in transpt	none	none	none	disrgd traffic cntrl	uncoded	none

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UD-10: 9990878

#82 Location: ROCHESTER RD (8.78) 100 feet S of SOUTH BLVD E **Crash ID:** 1002476
Crash Date: 03/24/2017 **Day:** Fri **Hour:** 1pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** ss-same
CVT: Troy **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 170009031

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	S	change lanes	veh in transpt	none	none	none	failed to yield	car	lftfront
2	S	go straight	veh in transpt	none	none	none	none	car	rtside

UD-10: 1002476

#83 Location: ROCHESTER RD (8.78) 100 feet S of SOUTH BLVD E **Crash ID:** 1011133
Crash Date: 04/06/2017 **Day:** Thu **Hour:** 8am **Weather:** rain **Roadway:** wet **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 1 **Inj 0:** 1 **How:** head-on/lt
CVT: Troy **Area:** inter driveway **HBD:** N **Drugs:** N **Complaint No:** 170010307

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	left turn	veh in transpt	none	none	none	failed to yield	car	rtside
2	S	go straight	veh in transpt	none	none	none	none	car	ctrfront

UD-10: 1011133

#84 Location: SOUTH BLVD E (6.01) 30 feet W of ROCHESTER RD **Crash ID:** 1035288
Crash Date: 05/05/2017 **Day:** Fri **Hour:** 4pm **Weather:** rain **Roadway:** wet **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 4 **How:** rr-end
CVT: Rochester Hills **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 170013838

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1		slow/stop on rd	veh in transpt	none	none	none	unknown	car	none
2	E	stop on road	veh in transpt	none	none	none	none	car	ctrrear
3	E	stop on road	veh in transpt	none	none	none	none	car	ctrrear
4	E	stop on road	veh in transpt	none	none	none	none	car	ctrrear
5	E	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 1035288

#85 Location: SOUTH BLVD E (6.00) 75 feet SW of ROCHESTER RD **Crash ID:** 1037229
Crash Date: 05/07/2017 **Day:** Sun **Hour:** 6pm **Weather:** cloudy **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 1 **Inj 0:** 2 **How:** rr-end
CVT: Rochester Hills **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:** 170014087

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: 1037229

#86 Location: S ROCHESTER RD (8.80) 14 feet N of SOUTH BLVD E **Crash ID:** 1045375
Crash Date: 05/17/2017 **Day:** Wed **Hour:** 12pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 9 **How:** head-on/lt
CVT: Rochester Hills **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:** 170086877

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	go straight	veh in transpt	none	none	none	none	car	ctrfront
2	SE	left turn	veh in transpt	none	none	none	failed to yield	car	ctrfront

UD-10: 1045375

#87 Location: ROCHESTER RD (8.76) 200 feet S of SOUTH BLVD E **Crash ID:** 1061777
Crash Date: 06/03/2017 **Day:** Sat **Hour:** 5pm **Weather:** cloudy **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 5 **How:** angle
CVT: Troy **Area:** inter driveway **HBD:** N **Drugs:** N **Complaint No:** 170017144

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Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	left turn	veh in transpt	none	none	none	failed to yield	car	rtrear
2	N	go straight	veh in transpt	none	none	none	none	car	rtfront

UD-10: [1061777](#)

#88 **Location:** ROCHESTER RD (8.80) 19 feet S of SOUTH BLVD E **Crash ID:** 1066338
Crash Date: 06/08/2017 **Day:** Thu **Hour:** 4pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** ss-same
CVT: Troy **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:** 170017714

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	change lanes	veh in transpt	none	none	none	other	car	rtside
2	N	go straight	veh in transpt	curb	none	none	none	car	lftfront

UD-10: [1066338](#)

#89 **Location:** S ROCHESTER RD (8.83) 150 feet N of SOUTH BLVD E **Crash ID:** 1070116
Crash Date: 06/09/2017 **Day:** Fri **Hour:** 2pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** angle
CVT: Rochester Hills **Area:** inter driveway **HBD:** N **Drugs:** N **Complaint No:** 170103200

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	left turn	veh in transpt	none	none	none	failed to yield	car	lftfront
2	S	go straight	veh in transpt	none	none	none	none	car	lftfront

UD-10: [1070116](#)

#90 **Location:** S ROCHESTER RD (8.82) 99 feet N of SOUTH BLVD E **Crash ID:** 1076461
Crash Date: 06/21/2017 **Day:** Wed **Hour:** 6am **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end
CVT: Rochester Hills **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:** 170111593

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	S	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	S	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: [1076461](#)

#91 **Location:** S ROCHESTER RD (8.80) 9 feet N of SOUTH BLVD E **Crash ID:** 1111711
Crash Date: 07/31/2017 **Day:** Mon **Hour:** 12pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** angle
CVT: Rochester Hills **Area:** w/i intersection **HBD:** N **Drugs:** N **Complaint No:** 170139592

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	S	go straight	veh in transpt	none	none	none	failed to yield	car	ctrfront
2	E	left turn	veh in transpt	none	none	none	none	car	ctrrear

UD-10: [1111711](#)

#92 **Location:** SOUTH BLVD E (5.97) 200 feet W of ROCHESTER RD **Crash ID:** 1110751
Crash Date: 08/02/2017 **Day:** Wed **Hour:** 5pm **Weather:** rain **Roadway:** wet **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** ss-same
CVT: Rochester Hills **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 170024008

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	avoid veh-angle	veh in transpt	none	none	none	other	car	rtside
2	E	go straight	veh in transpt	none	none	none	none	car	lftfront

UD-10: [1110751](#)

#93 **Location:** ROCHESTER RD (8.77) 150 feet S of SOUTH BLVD E **Crash ID:** 1111791
Crash Date: 08/03/2017 **Day:** Thu **Hour:** 5pm **Weather:** cloudy **Roadway:** wet **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 1 **Inj 0:** 1 **How:** angle
CVT: Troy **Area:** inter driveway **HBD:** N **Drugs:** N **Complaint No:** 170024130

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Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	left turn	veh in transpt	none	none	none	failed to yield	car	rtside
2	N	go straight	veh in transpt	none	none	none	none	car	ctrfront

UD-10: [1111791](#)

#94 Location: S ROCHESTER RD (8.81) 39 feet N of SOUTH BLVD E **Crash ID:** 1116279
Crash Date: 08/06/2017 **Day:** Sun **Hour:** 9am **Weather:** cloudy **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** rr-end
CVT: Rochester Hills **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 170143601

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	S	slow/stop on rd	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	S	stop on road	veh in transpt	none	none	none	none	car	ctrrear

UD-10: [1116279](#)

#95 Location: ROCHESTER RD (8.78) 100 feet S of SOUTH BLVD E **Crash ID:** 1116398
Crash Date: 08/09/2017 **Day:** Wed **Hour:** 4pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** ss-same
CVT: Troy **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 170024796

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	change lanes	veh in transpt	none	none	none	failed to yield	car	rtfront
2	N	go straight	veh in transpt	none	none	none	none	car	lftside

UD-10: [1116398](#)

#96 Location: S ROCHESTER RD (8.82) 100 feet N of SOUTH BLVD W **Crash ID:** 1145120
Crash Date: 09/12/2017 **Day:** Tue **Hour:** 8am **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end
CVT: Rochester Hills **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 170167917

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	S	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	S	go straight	veh in transpt	none	none	none	none	car	ctrrear

UD-10: [1145120](#)

#97 Location: S ROCHESTER RD (8.81) 50 feet N of SOUTH BLVD E **Crash ID:** 1160314
Crash Date: 09/17/2017 **Day:** Sun **Hour:** 2pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 1 **Inj 0:** 2 **How:** rr-end
CVT: Rochester Hills **Area:** inter other **HBD:** N **Drugs:** N **Complaint No:** 170171443

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	S	stop on road	veh in transpt	none	none	none	none	car	ctrrear
2	S	slow/stop on rd	veh in transpt	none	none	none	unable to stop	motorcycle	ctrfront

UD-10: [1160314](#)

#98 Location: SOUTH BLVD W (6.00) 78 feet W of S ROCHESTER RD **Crash ID:** 1151825
Crash Date: 09/18/2017 **Day:** Mon **Hour:** 1pm **Weather:** clear **Roadway:** wet **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 3 **How:** rr-end
CVT: Rochester Hills **Area:** straight **HBD:** N **Drugs:** N **Complaint No:** 170172004

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	W	stop on road	veh in transpt	veh in transpt	none	none	none	car	ctrrear
3	W	stop on road	veh in transpt	none	none	none	none	car	lftrear

UD-10: [1151825](#)

#99 Location: S ROCHESTER RD (8.82) 100 feet N of SOUTH BLVD E **Crash ID:** 1165934
Crash Date: 09/27/2017 **Day:** Wed **Hour:** 5pm **Weather:** clear **Roadway:** dry **Light:** day
Injuries K: 0 **Inj A:** 0 **Inj B:** 0 **Inj C:** 0 **Inj 0:** 2 **How:** rr-end

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CVT: Rochester Hills		Area: inter other		HBD: N	Drugs: N	Complaint No: 170178069			
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	N	slow/stop on rd	veh in transpt	none	none	none	none	car	ctrear

UD-10: [1165934](#)

#100 Location: ROCHESTER RD (8.80) 27 feet SE of SOUTH BLVD E							Crash ID: 1168618			
Crash Date: 10/06/2017		Day: Fri	Hour: 6pm	Weather: clear	Roadway: wet	Light: dusk				
Injuries K: 0		Inj A: 0	Inj B: 0	Inj C: 0	Inj 0: 2		How: ss-same			
CVT: Troy		Area: straight		HBD: N	Drugs: N	Complaint No: 170031271				

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	go straight	veh in transpt	none	none	none	imprp lane use	car	lftfront
2	N	change lanes	veh in transpt	none	none	none	none	car	rtfront

UD-10: [1168618](#)

#101 Location: SOUTH BLVD E (5.99) 100 feet W of ROCHESTER RD							Crash ID: 1181156			
Crash Date: 10/17/2017		Day: Tue	Hour: 9am	Weather: clear	Roadway: dry	Light: day				
Injuries K: 0		Inj A: 0	Inj B: 0	Inj C: 0	Inj 0: 3		How: rr-end			
CVT: Rochester Hills		Area: straight		HBD: N	Drugs: N	Complaint No: 170032368				

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	E	stop on road	veh in transpt	none	none	none	none	car	ctrear

UD-10: [1181156](#)

#102 Location: ROCHESTER RD (8.77) 150 feet S of SOUTH BLVD E							Crash ID: 1181170			
Crash Date: 10/18/2017		Day: Wed	Hour: 8pm	Weather: clear	Roadway: dry	Light: dark/lt				
Injuries K: 0		Inj A: 0	Inj B: 0	Inj C: 0	Inj 0: 4		How: angle			
CVT: Troy		Area: straight		HBD: N	Drugs: N	Complaint No: 170032532				

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	go straight	veh in transpt	none	none	none	failed to yield	car	ctrfront
2	N	go straight	veh in transpt	none	none	none	none	car	ctrfront

UD-10: [1181170](#)

#103 Location: S ROCHESTER RD (8.82) 99 feet N of SOUTH BLVD E							Crash ID: 1188841			
Crash Date: 10/24/2017		Day: Tue	Hour: 12pm	Weather: rain	Roadway: wet	Light: day				
Injuries K: 0		Inj A: 0	Inj B: 0	Inj C: 0	Inj 0: 2		How: rr-end			
CVT: Rochester Hills		Area: straight		HBD: N	Drugs: N	Complaint No: 170195576				

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	S	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	S	stop on road	veh in transpt	none	none	none	none	car	ctrear

UD-10: [1188841](#)

#104 Location: S ROCHESTER RD (8.80) 2 feet N of SOUTH BLVD E							Crash ID: 1202071			
Crash Date: 10/25/2017		Day: Wed	Hour: 7am	Weather: rain	Roadway: wet	Light: dawn				
Injuries K: 0		Inj A: 0	Inj B: 0	Inj C: 0	Inj 0: 2		How: head-on/lt			
CVT: Rochester Hills		Area: w/i intersection		HBD: N	Drugs: N	Complaint No: 170196096				

Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	SE	left turn	veh in transpt	none	none	none	failed to yield	car	ctrear
2	N	go straight	veh in transpt	none	none	none	none	car	ctrfront

UD-10: [1202071](#)

#105 Location: SOUTH BLVD W (5.99) 99 feet W of S ROCHESTER RD							Crash ID: 1196983			
Crash Date: 11/01/2017		Day: Wed	Hour: 5pm	Weather: clear	Roadway: dry	Light: day				
Injuries K: 0		Inj A: 0	Inj B: 0	Inj C: 0	Inj 0: 2		How: head-on/lt			

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CVT: Rochester Hills		Area: inter driveway		HBD: N		Drugs: N		Complaint No: 170201092	
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	left turn	veh in transpt	none	none	none	failed to yield	car	rtside
2	E	go straight	veh in transpt	none	none	none	none	car	ctrfront

UD-10: [1196983](#)

#106 Location: ROCHESTER RD (8.78) 113 feet S of SOUTH BLVD E							Crash ID: 1202410			
Crash Date: 11/10/2017		Day: Fri		Hour: 2pm		Weather: clear		Roadway: dry		Light: day
Injuries K: 0		Inj A: 0		Inj B: 0		Inj C: 0		Inj 0: 2		How: rr-end
CVT: Troy		Area: straight		HBD: N		Drugs: N		Complaint No: 170035102		
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage	
1	N	go straight	veh in transpt	none	none	none	unable to stop	car	lftfront	
2	N	stop on road	veh in transpt	none	none	none	none	car	rtrear	

UD-10: [1202410](#)

#107 Location: ROCHESTER RD (8.79) 50 feet S of SOUTH BLVD E							Crash ID: 1232358			
Crash Date: 11/24/2017		Day: Fri		Hour: 7pm		Weather: clear		Roadway: dry		Light: dark/ltd
Injuries K: 0		Inj A: 0		Inj B: 1		Inj C: 0		Inj 0: 1		How: rr-end
CVT: Troy		Area: straight		HBD: N		Drugs: N		Complaint No: 170037004		
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage	
1	N	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront	
2	N	stop on road	veh in transpt	none	none	none	none	car	ctrear	

UD-10: [1232358](#)

#108 Location: ROCHESTER RD (8.76) 200 feet S of SOUTH BLVD E							Crash ID: 1226251			
Crash Date: 11/27/2017		Day: Mon		Hour: 5pm		Weather: clear		Roadway: dry		Light: dark/unltd
Injuries K: 0		Inj A: 0		Inj B: 0		Inj C: 0		Inj 0: 2		How: angle
CVT: Troy		Area: straight		HBD: N		Drugs: N		Complaint No: 170037130		
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage	
1	E	left turn	veh in transpt	none	none	none	failed to yield	car	ctrfront	
2	N	go straight	veh in transpt	none	none	none	none	pickup	lftrear	

UD-10: [1226251](#)

#109 Location: SOUTH BLVD E (6.03) 100 feet E of S ROCHESTER RD							Crash ID: 1234790			
Crash Date: 11/27/2017		Day: Mon		Hour: 1pm		Weather: cloudy		Roadway: dry		Light: day
Injuries K: 0		Inj A: 0		Inj B: 0		Inj C: 0		Inj 0: 2		How: ss-same
CVT: Rochester Hills		Area: straight		HBD: N		Drugs: N		Complaint No: 170217288		
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage	
1	W	go straight	veh in transpt	none	none	none	none	car	lftside	
2	W	change lanes	veh in transpt	none	none	none	unknown	car	none	

UD-10: [1234790](#)

#110 Location: ROCHESTER RD (8.76) 200 feet S of SOUTH BLVD E							Crash ID: 1226257			
Crash Date: 11/28/2017		Day: Tue		Hour: 7am		Weather: clear		Roadway: dry		Light: dawn
Injuries K: 0		Inj A: 0		Inj B: 0		Inj C: 0		Inj 0: 1		How: single
CVT: Troy		Area: straight		HBD: N		Drugs: N		Complaint No: 170037182		
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage	
1	S	go straight	other non-fixed obj	none	none	none	none	car	undercrg	

UD-10: [1226257](#)

#111 Location: ROCHESTER RD (8.79) 75 feet S of SOUTH BLVD E							Crash ID: 1248472			
Crash Date: 11/30/2017		Day: Thu		Hour: 7pm		Weather: clear		Roadway: dry		Light: day
Injuries K: 0		Inj A: 0		Inj B: 0		Inj C: 0		Inj 0: 2		How: rr-end
CVT: Troy		Area: straight		HBD: N		Drugs: N		Complaint No: 170039170		

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Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	go straight	veh in transpt	none	none	none	unable to stop	car	ctrfront
2	N	stop on road	veh in transpt	none	none	none	none	car	ctrrear
UD-10: 1248472									
#112 Location: S ROCHESTER RD (8.83) 150 feet N of SOUTH BLVD E								Crash ID: 1237633	
Crash Date: 12/01/2017		Day: Fri	Hour: 5pm	Weather: clear	Roadway: dry	Light: dusk			
Injuries K: 0		Inj A: 0	Inj B: 0	Inj C: 0	Inj 0: 2	How: angle			
CVT: Rochester Hills		Area: inter driveway		HBD: N	Drugs: N	Complaint No: 170220035			
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	left turn	veh in transpt	none	none	none	failed to yield	car	lftfront
2	S	go straight	veh in transpt	none	none	none	imprp lane use	car	rtside
UD-10: 1237633									
#113 Location: ROCHESTER RD (8.79) 50 feet S of SOUTH BLVD E								Crash ID: 1237831	
Crash Date: 12/06/2017		Day: Wed	Hour: 12pm	Weather: clear	Roadway: dry	Light: day			
Injuries K: 0		Inj A: 0	Inj B: 0	Inj C: 0	Inj 0: 3	How: ss-same			
CVT: Troy		Area: inter other		HBD: N	Drugs: N	Complaint No: 170038116			
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	N	change lanes	veh in transpt	none	none	none	other	car	lftfront
2	N	go straight	veh in transpt	none	none	none	none	car	rtside
UD-10: 1237831									
#114 Location: SOUTH BLVD W (5.98) 149 feet W of S ROCHESTER RD								Crash ID: 1249507	
Crash Date: 12/12/2017		Day: Tue	Hour: 4pm	Weather: clear	Roadway: dry	Light: day			
Injuries K: 0		Inj A: 0	Inj B: 0	Inj C: 0	Inj 0: 2	How: rr-end			
CVT: Rochester Hills		Area: inter driveway		HBD: N	Drugs: N	Complaint No: 170227116			
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	E	right turn	veh in transpt	none	none	none	carels driving	car	rtfront
2	E	stop on road	veh in transpt	none	none	none	none	car	ctrrear
UD-10: 1249507									
#115 Location: ROCHESTER RD (8.77) 150 feet S of SOUTH BLVD E								Crash ID: 1252673	
Crash Date: 12/17/2017		Day: Sun	Hour: 2pm	Weather: cloudy	Roadway: wet	Light: day			
Injuries K: 0		Inj A: 0	Inj B: 0	Inj C: 0	Inj 0: 2	How: angle			
CVT: Troy		Area: straight		HBD: N	Drugs: N	Complaint No: 170039446			
Unit No	Veh Dir	Action Prior	Event 1	Event 2	Event 3	Event 4	Haz Action	Veh Type	Damage
1	W	left turn	veh in transpt	none	none	none	none	car	lftfront
2	N	go straight	veh in transpt	none	none	none	none	car	rtfront
UD-10: 1252673									

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Crash Type

Count	Type
0	uncoded
4	single
1	head-on
13	head-on/lt
21	angle
55	rr-end
3	rr-end/lt
0	rr-end/rt
12	ss-same
0	ss-opp
0	back
5	other
1	unknown
Totals: 115	

Light Conditions

Count	Type
0	uncoded
85	day
2	dawn
3	dusk
15	dark/lt
10	dark/unltd
0	other
0	unknown
Totals: 115	

Weather

Count	Type
0	uncoded
78	clear
0	smoke
20	cloudy
0	fog
13	rain
3	snow
0	wind
0	sleet/hail
1	blowing snow
0	blowing sand
0	unknown
Totals: 115	

Road Condition

Count	Type
0	uncoded
89	dry
0	oily
21	wet
0	ice
4	snow
0	mud
1	slush
0	debris
0	water
0	sand
0	other
0	unknown
Totals: 115	

Crashes By Month

Count	Type
11	January
6	February
6	March
7	April
5	May
11	June
5	July
12	August
10	September
13	October
17	November
12	December
Totals: 115	

Hazardous Action

Count	Type
132	none
1	speeding
0	imprp/no signal
0	imprp backing
52	unable to stop
6	other
3	unknown
0	reckls driving
4	carels driving
0	spd too slow
29	failed to yield
6	disrgd traffic cntrl
0	wrong way
0	left of center
3	imprp passing
7	imprp lane use
2	imprp turn
Totals: 245	

Unit Type

Count	Type
0	Bicyclist
0	Engineer
243	Vehicle
2	Pedestrian
Totals: 245	

Crashes By Year

Count	Type
0	2000
0	2001
0	2002
0	2003
0	2004
0	2005
0	2006
0	2007
0	2008
0	2009
0	2010
0	2011
0	2012
0	2013
0	2014
43	2015
31	2016
41	2017
0	2018
Totals: 115	

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Crash Severity

	FATAL	A	B	C	No Inj	Total
Persons	0	0	5	19	269	293
Crashes	0	0	5	16	94	115

Alcohol in Crashes

	FATAL	PI	PD	Total
Drinking	0	2	0	2
Not Drinking	0	19	94	113
Total	0	21	94	115

Crashes per Hour by Day

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Unknown	Total
12a - 1a	0	0	0	0	0	0	0	0	0
1a - 2a	0	0	0	0	0	0	0	0	0
2a - 3a	0	0	0	0	0	0	0	0	0
3a - 4a	0	0	0	0	0	0	0	0	0
4a - 5a	0	0	0	0	0	0	0	0	0
5a - 6a	0	0	0	0	0	0	0	0	0
6a - 7a	0	1	1	1	0	0	0	0	3
7a - 8a	0	0	2	1	1	0	0	0	4
8a - 9a	0	1	1	0	1	1	0	0	4
9a - 10a	1	1	3	0	1	0	0	0	6
10a - 11a	1	0	0	0	0	0	1	0	2
11a - 12p	0	2	0	2	2	1	0	0	7
12p - 1p	0	3	1	2	0	0	0	0	6
1p - 2p	2	2	0	0	0	2	1	0	7
2p - 3p	3	0	3	3	0	2	0	0	11
3p - 4p	0	1	1	1	1	2	0	0	6
4p - 5p	1	0	1	2	2	3	1	0	10
5p - 6p	0	2	6	3	3	7	1	0	22
6p - 7p	1	1	0	2	1	6	1	0	12
7p - 8p	2	0	0	2	2	1	0	0	7
8p - 9p	0	0	1	2	0	1	1	0	5
9p - 10p	0	0	0	0	1	0	0	0	1
10p - 11p	0	0	0	0	0	0	0	0	0
11p - 12a	1	0	0	0	1	0	0	0	2
Unknown Time	0	0	0	0	0	0	0	0	0
Total	12	14	20	21	16	26	6	0	115

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