June 10, 2022

Kara Hamley O'Donnell, AICP
Principal Planner
City of Shaker Heights
3400 Lee Road
Shaker Heights, Ohio 44120

Lee Road – Road Diet Evaluation

Dear Ms. O'Donnell,

This road diet evaluation is being prepared at the request of the City of Shaker Heights for the Lee Road corridor within the city limits. The purpose of this evaluation is to analyze the existing vehicular operating conditions at several key intersections along Lee Road to determine the impacts, if any, of implementing a "road diet" that would reconfigure the existing lane assignments. Such modifications would typically entail the reduction of lanes from two through lanes in each direction to one through lane, with the excess space being used to provide accommodations such as bike lanes or shared multi-use paths. This analysis will be completed to determine the minimum number of travel lanes needed to adequately serve the existing users while maintaining satisfactory traffic operations along the Lee Road corridor.

Traffic Volumes

Existing Traffic Volumes

For this evaluation, Tri-State Traffic Data, Inc. performed turning movement traffic counts at the following seven intersections from 7:30 AM – 9:30 AM and 4:00 PM – 6:00 PM on Tuesday, May 17, 2022:

- Lee Road / Shaker Boulevard WB
- Lee Road / Shaker Boulevard EB
- Lee Road / Van Aken Boulevard WB
- Lee Road / Van Aken Boulevard EB
- Lee Road / Chagrin Boulevard / Kenyon Road
- Lee Road / Lomond Boulevard
- Lee Road / Scottsdale Boulevard

From the count data, the AM peak hour of the corridor was determined to occur from 7:30 AM – 8:30 AM while the PM peak hour was found to occur from 4:45 PM – 5:45 PM. See **Attachment A** for printouts of the turning movement counts.

Planning Level Traffic Volumes

Planning level traffic volumes were created from the Existing Year 2022 traffic count data to represent the Design Year 2047 traffic conditions. To develop the Design Year 2047 traffic volumes, GPD utilized ODOT's Traffic Forecast Management System (TFMS) to determine an appropriate growth rate for the study area. According to information obtained from the ODOT TFMS that is shown in **Attachment B**, an annual growth rate of +0.5% per year (linearly) was deemed appropriate for this evaluation.

The Design Year 2047 planning level traffic volumes were developed by utilizing the previously identified growth rate and following the volume development process established by the Ohio Department of Transportation (ODOT). The planning level traffic volumes include the Average Daily Traffic (ADT) and

Design Hourly Volumes (DHV) for each peak hour. The Design Year 2047 ADT at several locations along Lee Road are noted below:

Location	***Design Year 2047 ADT***
Shaker Boulevard EB to Van Aken Boulevard WB:	19,260
Van Aken Boulevard EB to Chagrin Boulevard:	22,750
Lomond Boulevard to Scottsdale Boulevard:	22,900

The Design Year 2047 DHVs will be utilized for all capacity analyses performed as part of this evaluation.

Traffic Analysis

HCM Intersection Capacity Analysis

Intersection Capacity Analyses were performed for the Design Year 2047 'No-Build' and 'Build' traffic conditions to determine the operating conditions that would be expected to be experienced at each study intersection. The quality of the operating conditions experienced by an intersection is measured in terms of Level-of-Service (LOS). Levels-of-Service can range from LOS A to LOS F. When a study area lies within a Metropolitan Planning Organization (MPO), Levels-of-Service A, B, C, D, and E are considered acceptable for movements and approaches while the overall intersection must operate at LOS D or better. Level-of-Service F is considered unacceptable with significant levels of delay experienced by vehicles. These guidelines apply for this study as the City of Shaker Heights lies within the Northeast Ohio Areawide Coordinating Agency (NOACA) MPO area.

The thresholds related to average control delay for signalized intersections are as follows:

Level-of-Service	***Delay Threshold – Signalized (sec)***
A	< 10
B	> 10 – 20
C	> 20 – 35
D	> 35 – 55
E	> 55 – 80
F	> 80

The capacity analyses were performed utilizing the computer program *Synchro (Version 11)*, developed by Trafficware, and is based on the Highway Capacity Manual (HCM). 6th Edition. *Synchro* can provide a macroscopic analysis of an entire roadway system and take into account the interactions and impact of traffic which travels from one intersection to the next. Due to the limitations of the HCM, 6th Edition, the capacity analysis results for the following intersections will be based on the HCM, 2000 outputs:

- Lee Road / Shaker Boulevard WB
- Lee Road / Shaker Boulevard EB
- Lee Road / Van Aken Boulevard WB
- Lee Road / Van Aken Boulevard EB
- Lee Road / Chagrin Boulevard / Kenyon Road

For clarification purposes, the details of each analysis scenario are summarized below:

'No-Build' Scenario

- Represents the existing roadway conditions as they are today.
- Utilizes the Design Year 2047 DHVs for each peak hour.

'Build' Scenario

- Utilizes the Design Year 2047 DHVs for each peak hour.
- Incorporates the following intersection modifications to accommodate dedicated bike lanes on each side of Lee Road:
    - Lee Road / Shaker Boulevard WB
        - Restripe the NB shared left-thru lane as a dedicated left-only lane.
        - Reduce the number of NB receiving lanes from two to one.
    - Lee Road / Shaker Boulevard EB
        - Restripe the SB shared left-thru lane as a dedicated left-only lane.
        - Reduce the number of SB receiving lanes from two to one.
    - Lee Road / Chagrin Boulevard / Kenyon Road
        - Increase the NB left turn lane storage length to 300'.
    - Lee Road / Lomond Boulevard
        - Reduce the number of SB thru lanes from two to one.
        - Reduce the number of SB receiving lanes from two to one.
        - Restripe the NB approach as a single shared thru-right lane.
    - Lee Road / Scottsdale Boulevard
        - Restripe the SB approach as a single dedicated left-turn only lane and a single shared thru-right lane.
        - Make the SB left turn lane storage length = 100'.
        - Restripe the NB approach as a single dedicated left-turn only lane and a single shared thru-right lane.
        - Reduce the number of NB receiving lanes from two to one.

Screenshots from the 'Build' *Synchro* traffic model of the intersections described above are provided in **Attachment C**.

Table 1 summarizes the HCM intersection capacity analysis and details the Level-of-Service and delays experienced under the Design Year 2047 'No-Build' vs. 'Build' traffic conditions for the study intersections. See **Attachment D** for the HCM analysis printouts.

Table 1: HCM Intersection Capacity Analysis Summary – Design Year 2047 'No-Build' vs. 'Build' Conditions

Intersection / Movement	'No-Build' Conditions				'Build' Conditions			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
Lee Road / Shaker Boulevard WB								
Westbound Left	D	50.4	D	51.4	D	50.4	D	51.4
Westbound Thru	C	26.1	B	19.0	C	26.1	B	19.0
Westbound Thru-Right								
Westbound Approach	*C*	*27.9*	*C*	*23.2*	*C*	*27.9*	*C*	*23.2*
Northbound Left	C	22.7	B	13.9	B	17.0	B	13.0
Northbound Thru					D	41.7	D	45.5
Northbound Approach	*C*	*22.7*	*B*	*13.9*	*D*	*40.1*	*D*	*44.4*
Southbound Thru	C	34.2	D	45.2	C	34.2	D	45.2
Southbound Thru-Right								
Southbound Approach	*C*	*34.2*	*D*	*45.2*	*C*	*34.2*	*D*	*45.2*
Intersection Total	***C***	***27.7***	***C***	***28.4***	***C***	***33.9***	***D***	***39.2***
Lee Road / Shaker Boulevard EB								
Eastbound Left	D	40.7	D	43.4	D	40.7	D	43.4
Eastbound Thru	B	17.3	C	20.4	B	17.3	C	20.4
Eastbound Thru-Right								
Eastbound Approach	*B*	*19.5*	*C*	*21.2*	*B*	*19.5*	*C*	*21.2*
Northbound Thru	D	47.3	D	44.0	D	47.3	D	44.0
Northbound Thru-Right								
Northbound Approach	*D*	*47.3*	*D*	*44.0*	*D*	*47.3*	*D*	*44.0*
Southbound Left	B	11.2	E	73.3	B	16.6	C	25.3
Southbound Thru					B	16.0	E	68.8
Southbound Approach	*B*	*11.2*	*E*	*73.3*	*B*	*16.0*	*E*	*64.1*
Intersection Total	***C***	***28.4***	***D***	***46.8***	***C***	***30.0***	***D***	***43.6***
Lee Road / Van Aken Boulevard WB								
Westbound Left-Thru	D	44.5	D	48.1	D	44.5	D	48.1
Westbound Thru								
Westbound Right	D	39.5	D	43.5	D	39.5	D	43.5
Westbound Approach	*D*	*43.7*	*D*	*47.4*	*D*	*43.7*	*D*	*47.4*
Northbound Left	C	20.1	C	25.9	C	20.2	C	25.9
Northbound Thru	A	0.4	A	0.3	A	0.4	A	0.3
Northbound Approach	*A*	*6.1*	*A*	*6.4*	*A*	*6.1*	*A*	*6.4*
Southbound Thru	C	20.1	C	23.4	C	20.1	C	23.4
Southbound Thru-Right								
Southbound Approach	*C*	*20.1*	*C*	*23.4*	*C*	*20.1*	*C*	*23.4*
Intersection Total	***B***	***18.1***	***C***	***20.3***	***B***	***18.1***	***C***	***20.3***

Table 1: HCM Intersection Capacity Analysis Summary (Cont.) –
Design Year 2047 'No-Build' vs. 'Build' Conditions

Intersection / Movement	'No-Build' Conditions				'Build' Conditions			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)
Lee Road / Van Aken Boulevard EB								
Eastbound Left-Thru	D	42.2	D	45.9	D	42.2	D	45.9
Eastbound Thru								
Eastbound Right	D	46.6	E	67.7	D	46.6	E	67.7
Eastbound Approach	*D*	*43.7*	*D*	*54.0*	*D*	*43.7*	*D*	*54.0*
Northbound Thru	C	31.0	C	25.6	C	31.2	C	25.7
Northbound Thru-Right								
Northbound Approach	*C*	*31.0*	*C*	*25.6*	*C*	*31.2*	*C*	*25.7*
Southbound Left	A	5.7	A	3.4	A	5.7	A	3.4
Southbound Thru	A	0.8	A	1.9	A	0.8	A	1.9
Southbound Approach	*A*	*1.2*	*A*	*2.0*	*A*	*1.2*	*A*	*2.0*
Intersection Total	***C***	***25.8***	***C***	***25.1***	***C***	***25.8***	***C***	***25.1***
Lee Road / Chagrin Boulevard / Kenyon Road								
Eastbound Left	C	25.2	D	47.1	C	25.2	D	47.1
Eastbound Thru	D	39.1	D	51.1	D	39.1	D	51.1
Eastbound Right	C	30.0	D	38.4	C	30.0	D	38.4
Eastbound Approach	*C*	*33.9*	*D*	*46.7*	*C*	*33.9*	*D*	*46.7*
Westbound Left	C	26.4	F	106.2	C	26.4	F	106.2
Westbound Thru	C	32.5	D	36.9	C	32.5	D	36.9
Westbound Thru-Right								
Westbound Approach	*C*	*31.5*	*D*	*54.3*	*C*	*31.5*	*D*	*54.3*
Northbound Left	C	34.5	F	108.8	D	41.5	F	88.5
Northbound Thru	D	53.4	E	69.3	E	64.5	E	61.2
Northbound Thru-Right								
Northbound Approach	*D*	*51.1*	*E*	*75.3*	*E*	*61.7*	*E*	*65.3*
Southbound Left	C	21.4	E	58.0	C	21.4	E	58.0
Southbound Thru	C	34.7	E	77.3	C	34.7	E	77.3
Southbound Thru-Right								
Southbound Approach	*C*	*33.5*	*E*	*74.9*	*C*	*33.5*	*E*	*74.9*
Northwestbound Left-Thru-Right	E	60.9	F	101.2	E	60.9	F	101.2
Northwestbound Approach	*E*	*60.9*	*F*	*101.2*	*E*	*60.9*	*F*	*101.2*
Intersection Total	***D***	***40.2***	***E***	***65.1***	***D***	***44.1***	***E***	***62.4***

Table 1: HCM Intersection Capacity Analysis Summary (Cont.) – Design Year 2047 'No-Build' vs. 'Build' Conditions								
Intersection / Movement	**'No-Build' Conditions**				**'Build' Conditions**			
	AM Peak Hour		**PM Peak Hour**		**AM Peak Hour**		**PM Peak Hour**	
	LOS	**Delay** (sec)	**LOS**	**Delay** (sec)	**LOS**	**Delay** (sec)	**LOS**	**Delay** (sec)
Lee Road / Lomond Boulevard								
Westbound Left-Right	E	58.0	E	64.7	E	58.0	E	65.4
Westbound Approach	*E*	*58.0*	*E*	*64.7*	*E*	*58.0*	*E*	*65.4*
Northbound Thru	A	7.8	A	7.3				
Northbound Thru-Right	A	7.7	A	7.3	A	6.6	A	4.0
Northbound Approach	*A*	*7.7*	*A*	*7.3*	*A*	*6.6*	*A*	*4.0*
Southbound Left	A	4.2	A	4.0	A	2.4	A	3.5
Southbound Thru	A	0.1	A	0.0	A	0.8	A	0.3
Southbound Approach	*A*	*0.6*	*A*	*0.5*	*A*	*0.9*	*A*	*0.6*
Intersection Total	***A***	***7.5***	***A***	***6.6***	***A***	***7.0***	***A***	***5.1***
Lee Road / Scottsdale Boulevard								
Eastbound Left-Thru-Right	D	41.8	D	40.1	D	51.7	E	55.1
Eastbound Approach	*D*	*41.8*	*D*	*40.1*	*D*	*51.7*	*E*	*55.1*
Westbound Left	C	32.1	C	28.3	D	40.3	D	42.2
Westbound Thru-Right	C	29.3	C	25.2	D	37.3	D	38.1
Westbound Approach	*C*	*30.8*	*C*	*27.0*	*D*	*38.9*	*D*	*40.5*
Northbound Left-Thru	A	8.0	B	11.0	A	4.5	A	6.4
Northbound Thru-Right	A	8.2	B	11.5	B	18.2	B	19.2
Northbound Approach	*A*	*8.1*	*B*	*11.2*	*B*	*18.1*	*B*	*18.8*
Southbound Left-Thru	A	6.4	B	11.0	B	15.9	B	15.0
Southbound Thru-Right	A	6.5	B	11.4	A	1.4	A	5.4
Southbound Approach	*A*	*6.5*	*B*	*11.2*	*A*	*1.6*	*A*	*5.4*
Intersection Total	***B***	***10.9***	***B***	***14.4***	***B***	***15.6***	***B***	***17.2***

As shown in **Table 1**, all study intersections are anticipated to operate with acceptable Levels-of-Service during the AM and PM peak hours under both the Design Year 2047 'No-Build' and 'Build' traffic conditions except for the Lee Road / Chagrin Boulevard / Kenyon Road intersection. This intersection is anticipated to operate with unacceptable Levels-of-Service for multiple movements as well as the overall intersection during the PM peak hour under both the 'No-Build' and 'Build' traffic conditions. These unacceptable Levels-of-Service are not anticipated to improve or degrade, as no roadway modifications are proposed at this location.

The capacity analysis results indicate that the study intersections are anticipated to maintain acceptable Levels-of-Service, even with the proposed reduction in travel lanes from the road diet to accommodate the bike lanes, through the Design Year 2047.

Turn Lane Length Calculations

Turn Lane length calculations were performed to determine the required length for each turn lane on Lee Road based on the Design Year 2047 peak hour traffic volumes. The required turn lane length is a function of site conditions, lane assignments, design speed, and the vehicular demand of the individual movement and is based on *Figures 401-9*and *401-10*of the ODOT Location and Design Manual, Volume 1. **Table 2** shows the calculated and recommended turn lane lengths for the various turn lanes under the Design Year 2047 traffic conditions. See **Attachment E** for the turn lane length calculation printouts.

Table 2: Turn Lane Length Calculations – Design Year 2047 'Build' Conditions

Intersection / Movement	Storage Length (ft.)	
	Existing Turn Lane Length	Turn Lane Calculated Length
Lee Road / Shaker Boulevard WB		
Northbound Left Turn Lane	-	150'
Lee Road / Shaker Boulevard EB		
Southbound Left Turn Lane	-	200'
Lee Road / Van Aken Boulevard WB		
Northbound Left Turn Lane	300'	450'
Lee Road / Van Aken Boulevard EB		
Southbound Left Turn Lane	225'	200'
Lee Road / Chagrin Boulevard / Kenyon Road		
Northbound Left Turn Lane	250'	300'
Southbound Left Turn Lane	125'	250'
Lee Road / Scottsdale Boulevard		
Southbound Left Turn Lane	-	100'

As can be seen in **Table 2**, none of the existing turn lanes are sufficient to accommodate the projected Design Year 2047 traffic demand except for the southbound left turn lane at the Lee Road / Van Aken Boulevard EB intersection.

Summary and Conclusions

This evaluation of the Lee Road corridor has generally found that a road diet can be implemented at various intersections along the corridor to accommodate dedicated bike lanes on each side of Lee Road. The HCM intersection capacity analysis results indicate that the study intersections are anticipated to maintain acceptable Levels-of-Service, even with the proposed reduction in travel lanes from the road diet to accommodate the bike lanes, through the Design Year 2047.

If you have any questions regarding this Road Diet Evaluation, please feel free to contact me at (330) 572-2495 or via email at cdeibel@gpdgroup.com.

Respectfully Submitted,
GPD Group

Curtis J. Deibel

Curtis J. Deibel, P.E., RSP2
Associate Project Manager / Traffic Engineer

CC: Kevin Westbrooks, P.E., PTOE (GPD Group)
File

ATTACHMENT A
TURNING MOVEMENT COUNTS

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469 TSTData@aol.com
Serving Transportation Professionals Since 1995

Shaker Heights, OH
Lee Rd & Shaker Blvd WB
Tuesday, May 17, 2022
Location: 41.48098, -81.565049

Count Name: Lee Rd/Shaker Blvd WB
Site Code:
Start Date: 05/17/2022

Turning Movement Data

Start Time	Shaker Blvd Eastbound							Shaker Blvd Westbound							Lee Rd Northbound							Lee Rd Southbound							Int. Total
	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	
7:30 AM	0	0	0	0	0	2	0	7	149	17	0	0	0	173	16	164	0	0	0	0	180	0	121	8	0	0	0	129	482
7:45 AM	0	0	0	0	0	2	0	9	161	17	0	0	0	187	12	184	0	0	0	0	196	0	140	6	0	0	1	146	529
Hourly Total	0	0	0	0	0	4	0	16	310	34	0	0	0	360	28	348	0	0	0	0	376	0	261	14	0	0	1	275	1011
8:00 AM	0	0	0	0	0	0	0	19	163	22	1	0	0	205	5	177	0	0	0	0	182	0	132	5	1	0	0	138	525
8:15 AM	0	0	0	0	0	0	0	15	153	14	4	0	0	186	11	156	0	0	0	0	167	0	125	3	0	0	0	128	481
8:30 AM	0	0	0	0	0	0	0	9	122	18	1	0	1	150	12	156	0	0	0	0	168	0	145	3	2	0	0	150	468
8:45 AM	0	0	0	0	0	0	0	6	123	17	3	0	0	149	13	149	0	0	0	0	162	0	113	4	1	0	0	118	429
Hourly Total	0	0	0	0	0	0	0	49	561	71	9	0	1	690	41	638	0	0	0	0	679	0	515	15	4	0	0	534	1903
9:00 AM	0	0	0	0	0	1	0	9	75	10	2	0	0	96	12	164	0	0	0	0	176	0	124	3	1	0	0	128	400
9:15 AM	0	0	0	0	0	2	0	9	84	10	3	0	0	106	5	124	0	0	0	0	129	0	89	4	1	0	0	94	329
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	3	0	18	159	20	5	0	0	202	17	288	0	0	0	0	305	0	213	7	2	0	0	222	729
4:00 PM	0	0	0	0	0	0	0	13	109	10	5	0	1	137	5	162	0	0	0	0	167	0	161	1	1	0	0	163	467
4:15 PM	0	0	0	0	0	0	0	11	65	11	2	0	0	89	9	156	0	0	0	0	165	0	180	6	0	0	0	186	440
4:30 PM	0	0	0	0	0	1	0	14	77	18	1	0	1	110	4	153	0	0	0	0	157	0	200	3	2	0	0	205	472
4:45 PM	0	0	0	0	0	1	0	16	82	13	1	0	1	112	13	171	0	0	0	0	184	0	172	9	2	0	1	183	479
Hourly Total	0	0	0	0	0	2	0	54	333	52	9	0	3	448	31	642	0	0	0	0	673	0	713	19	5	0	1	737	1858
5:00 PM	0	0	0	0	0	0	0	8	75	15	1	0	2	99	3	177	0	0	0	0	180	0	190	10	1	0	0	201	480
5:15 PM	0	0	0	0	0	1	0	23	99	28	1	0	0	151	6	152	0	0	0	0	158	0	150	8	0	0	0	158	467
5:30 PM	0	0	0	0	0	1	0	16	99	23	0	0	0	138	4	163	0	0	0	0	167	0	167	5	0	0	1	172	477
5:45 PM	0	0	0	0	0	0	0	15	78	16	3	0	3	112	5	180	0	0	0	0	185	0	165	12	0	0	2	177	474
Hourly Total	0	0	0	0	0	2	0	62	351	82	5	0	5	500	18	672	0	0	0	0	690	0	672	35	1	0	3	708	1898
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2
Grand Total	0	0	0	0	0	11	0	199	1714	259	28	0	9	2200	135	2588	0	0	0	0	2723	0	2376	90	12	0	5	2478	7401
Approach %	0.0	0.0	0.0	0.0	0.0	-	-	9.0	77.9	11.8	1.3	0.0	-	-	5.0	95.0	0.0	0.0	0.0	-	-	0.0	95.9	3.6	0.5	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	0.0	-	0.0	2.7	23.2	3.5	0.4	0.0	-	29.7	1.8	35.0	0.0	0.0	0.0	-	36.8	0.0	32.1	1.2	0.2	0.0	-	33.5	-
Lights	0	0	0	0	0	-	0	195	1699	257	28	0	-	2179	129	2534	0	0	0	-	2663	0	2338	88	11	0	-	2437	7279
% Lights	-	-	-	-	-	-	-	98.0	99.1	99.2	100.0	-	-	99.0	95.6	97.9	-	-	-	-	97.8	-	98.4	97.8	91.7	-	-	98.3	98.4
Buses	0	0	0	0	0	-	0	2	7	1	0	0	-	10	1	18	0	0	0	-	19	0	14	1	0	0	-	15	44
% Buses	-	-	-	-	-	-	-	1.0	0.4	0.4	0.0	-	-	0.5	0.7	0.7	-	-	-	-	0.7	-	0.6	1.1	0.0	-	-	0.6	0.6
Trucks	0	0	0	0	0	-	0	2	7	1	0	0	-	10	5	36	0	0	0	-	41	0	24	1	1	0	-	26	77
% Trucks	-	-	-	-	-	-	-	1.0	0.4	0.4	0.0	-	-	0.5	3.7	1.4	-	-	-	-	1.5	-	1.0	1.1	8.3	-	-	1.0	1.0
Bicycles on Road	0	0	0	0	0	-	0	0	1	0	0	0	-	1	0	0	0	0	0	-	0	0	0	0	0	0	-	0	1
% Bicycles on Road	-	-	-	-	-	-	-	0.0	0.1	0.0	0.0	-	-	0.0	0.0	0.0	-	-	-	-	0.0	-	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	-	1	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	9.1	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	-	10	-	-	-	-	-	-	9	-	-	-	-	-	-	0	-	-	-	-	-	-	5	-	-
% Pedestrians	-	-	-	-	-	90.9	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

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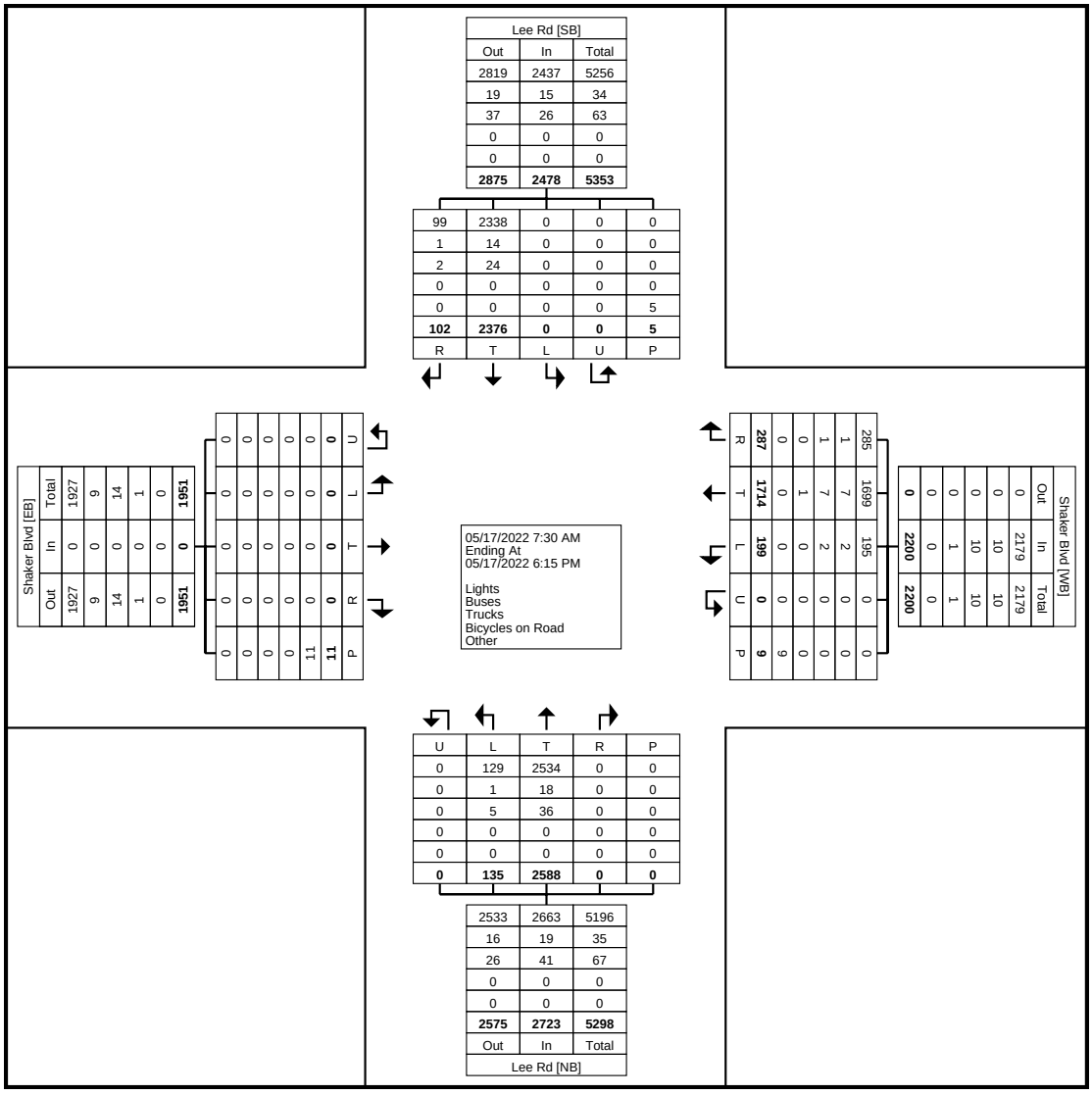
Shaker Heights, OH
Lee Rd & Shaker Blvd WB
Tuesday, May 17, 2022
Location: 41.48098, -81.565049

Count Name: Lee Rd/Shaker Blvd WB
Site Code:
Start Date: 05/17/2022



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Shaker Heights, OH
Lee Rd & Shaker Blvd WB
Tuesday, May 17, 2022
Location: 41.48098, -81.565049

Count Name: Lee Rd/Shaker Blvd WB
Site Code:
Start Date: 05/17/2022

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Shaker Blvd Eastbound							Shaker Blvd Westbound							Lee Rd Northbound							Lee Rd Southbound							Int. Total
	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	
7:30 AM	0	0	0	0	0	2	0	7	149	17	0	0	0	173	16	164	0	0	0	0	180	0	121	8	0	0	0	129	482
7:45 AM	0	0	0	0	0	2	0	9	161	17	0	0	0	187	12	184	0	0	0	0	196	0	140	6	0	0	1	146	529
8:00 AM	0	0	0	0	0	0	0	19	163	22	1	0	0	205	5	177	0	0	0	0	182	0	132	5	1	0	0	138	525
8:15 AM	0	0	0	0	0	0	0	15	153	14	4	0	0	186	11	156	0	0	0	0	167	0	125	3	0	0	0	128	481
Total	0	0	0	0	0	4	0	50	626	70	5	0	0	751	44	681	0	0	0	0	725	0	518	22	1	0	1	541	2017
Approach %	0.0	0.0	0.0	0.0	0.0	-	-	6.7	83.4	9.3	0.7	0.0	-	-	6.1	93.9	0.0	0.0	0.0	-	-	0.0	95.7	4.1	0.2	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	0.0	-	0.0	2.5	31.0	3.5	0.2	0.0	-	37.2	2.2	33.8	0.0	0.0	0.0	-	35.9	0.0	25.7	1.1	0.0	0.0	-	26.8	-
PHF	0.000	0.000	0.000	0.000	0.000	-	0.000	0.658	0.960	0.795	0.313	0.000	-	0.916	0.688	0.925	0.000	0.000	0.000	-	0.925	0.000	0.925	0.688	0.250	0.000	-	0.926	0.953
Lights	0	0	0	0	0	-	0	48	619	70	5	0	-	742	41	665	0	0	0	-	706	0	508	21	1	0	-	530	1978
% Lights	-	-	-	-	-	-	-	96.0	98.9	100.0	100.0	-	-	98.8	93.2	97.7	-	-	-	-	97.4	-	98.1	95.5	100.0	-	-	98.0	98.1
Buses	0	0	0	0	0	-	0	1	4	0	0	0	-	5	1	7	0	0	0	-	8	0	5	1	0	0	-	6	19
% Buses	-	-	-	-	-	-	-	2.0	0.6	0.0	0.0	-	-	0.7	2.3	1.0	-	-	-	-	1.1	-	1.0	4.5	0.0	-	-	1.1	0.9
Trucks	0	0	0	0	0	-	0	1	2	0	0	0	-	3	2	9	0	0	0	-	11	0	5	0	0	0	-	5	19
% Trucks	-	-	-	-	-	-	-	2.0	0.3	0.0	0.0	-	-	0.4	4.5	1.3	-	-	-	-	1.5	-	1.0	0.0	0.0	-	-	0.9	0.9
Bicycles on Road	0	0	0	0	0	-	0	0	1	0	0	0	-	1	0	0	0	0	0	-	0	0	0	0	0	0	-	0	1
% Bicycles on Road	-	-	-	-	-	-	-	0.0	0.2	0.0	0.0	-	-	0.1	0.0	0.0	-	-	-	-	0.0	-	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	-	4	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

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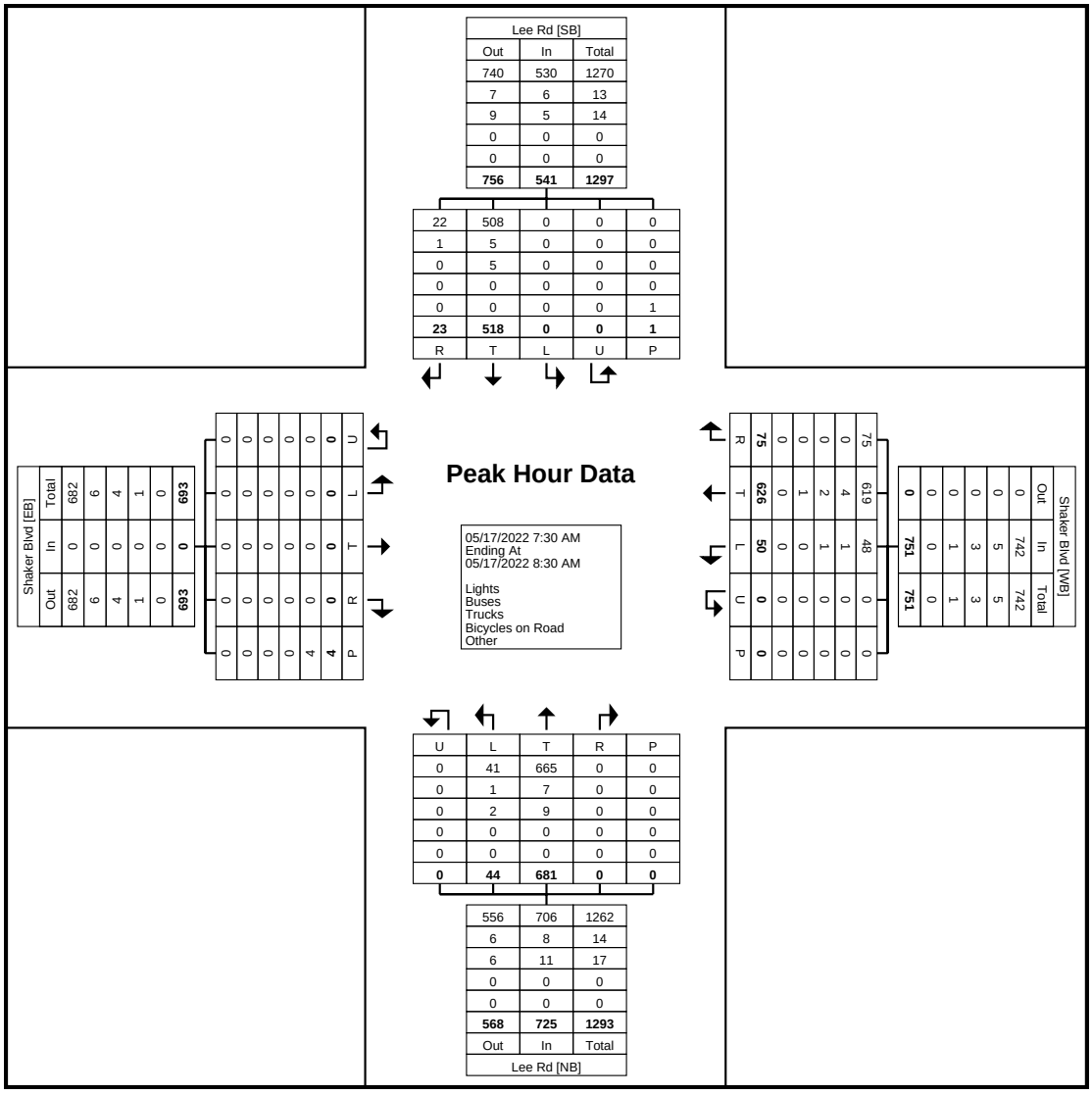
Start Date: 05/17/2022



Turning Movement Peak Hour Data Plot (7:30 AM)

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Location: 41.48098, -81.565049

Count Name: Lee Rd/Shaker Blvd WB
Site Code:
Start Date: 05/17/2022

Turning Movement Peak Hour Data (4:45 PM)

Start Time	Shaker Blvd Eastbound							Shaker Blvd Westbound							Lee Rd Northbound							Lee Rd Southbound							Int. Total
	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	
4:45 PM	0	0	0	0	0	1	0	16	82	13	1	0	1	112	13	171	0	0	0	0	184	0	172	9	2	0	1	183	479
5:00 PM	0	0	0	0	0	0	0	8	75	15	1	0	2	99	3	177	0	0	0	0	180	0	190	10	1	0	0	201	480
5:15 PM	0	0	0	0	0	1	0	23	99	28	1	0	0	151	6	152	0	0	0	0	158	0	150	8	0	0	0	158	467
5:30 PM	0	0	0	0	0	1	0	16	99	23	0	0	0	138	4	163	0	0	0	0	167	0	167	5	0	0	1	172	477
Total	0	0	0	0	0	3	0	63	355	79	3	0	3	500	26	663	0	0	0	0	689	0	679	32	3	0	2	714	1903
Approach %	0.0	0.0	0.0	0.0	0.0	-	-	12.6	71.0	15.8	0.6	0.0	-	-	3.8	96.2	0.0	0.0	0.0	-	-	0.0	95.1	4.5	0.4	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	0.0	-	0.0	3.3	18.7	4.2	0.2	0.0	-	26.3	1.4	34.8	0.0	0.0	0.0	-	36.2	0.0	35.7	1.7	0.2	0.0	-	37.5	-
PHF	0.000	0.000	0.000	0.000	0.000	-	0.000	0.685	0.896	0.705	0.750	0.000	-	0.828	0.500	0.936	0.000	0.000	0.000	-	0.936	0.000	0.893	0.800	0.375	0.000	-	0.888	0.991
Lights	0	0	0	0	0	-	0	63	354	79	3	0	-	499	26	657	0	0	0	-	683	0	669	32	2	0	-	703	1885
% Lights	-	-	-	-	-	-	-	100.0	99.7	100.0	100.0	-	-	99.8	100.0	99.1	-	-	-	-	99.1	-	98.5	100.0	66.7	-	-	98.5	99.1
Buses	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	4	0	0	0	-	4	0	3	0	0	0	-	3	7
% Buses	-	-	-	-	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.6	-	-	-	-	0.6	-	0.4	0.0	0.0	-	-	0.4	0.4
Trucks	0	0	0	0	0	-	0	0	1	0	0	0	-	1	0	2	0	0	0	-	2	0	7	0	1	0	-	8	11
% Trucks	-	-	-	-	-	-	-	0.0	0.3	0.0	0.0	-	-	0.2	0.0	0.3	-	-	-	-	0.3	-	1.0	0.0	33.3	-	-	1.1	0.6
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0
% Bicycles on Road	-	-	-	-	-	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	-	-	0.0	-	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	-	1	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	33.3	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	-	2	-	-	-	-	-	-	3	-	-	-	-	-	-	0	-	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	-	66.7	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

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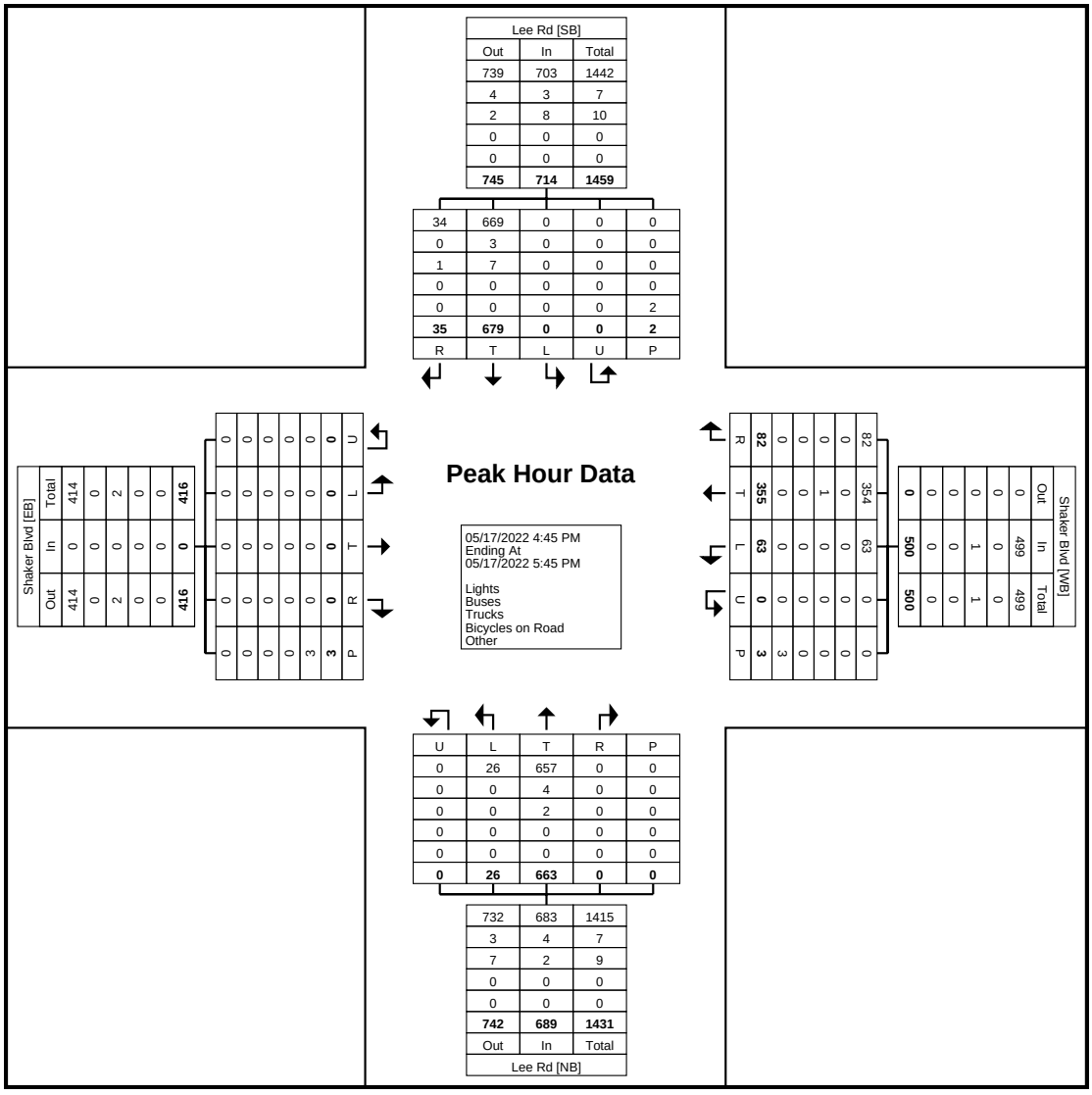
Lee Rd & Shaker Blvd WB
Tuesday, May 17, 2022
Location: 41.48098, -81.565049

Count Name: Lee Rd/Shaker Blvd WB
Site Code:
Start Date: 05/17/2022



Turning Movement Peak Hour Data Plot (4:45 PM)

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Shaker Heights, OH
Lee Rd & Shaker Blvd EB
Tuesday, May 17, 2022
Location: 41.480737, -81.565089

Count Name: Lee Rd/Shaker Blvd EB
Site Code:
Start Date: 05/17/2022

Turning Movement Data

Start Time	Lee Rd Southbound							Shaker Blvd Westbound							Lee Rd Northbound							Shaker Blvd Eastbound							Int. Total
	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	
7:30 AM	0	0	105	16	0	0	121	0	0	0	0	0	1	0	12	0	165	0	0	0	177	3	3	83	6	0	0	95	393
7:45 AM	0	0	131	17	0	0	148	0	0	0	0	0	0	0	11	0	181	0	0	0	192	7	2	99	9	0	2	117	457
Hourly Total	0	0	236	33	0	0	269	0	0	0	0	0	1	0	23	0	346	0	0	0	369	10	5	182	15	0	2	212	850
8:00 AM	0	0	143	15	0	0	158	0	0	0	0	0	0	0	7	0	177	0	0	0	184	9	0	95	12	0	0	116	458
8:15 AM	0	0	120	11	0	0	131	0	0	0	0	0	0	0	6	0	147	0	0	0	153	8	0	78	8	0	0	94	378
8:30 AM	0	0	134	13	0	0	147	0	0	0	0	0	0	0	2	0	175	0	0	0	177	8	5	76	7	0	0	96	420
8:45 AM	0	0	123	19	0	0	142	0	0	0	0	0	0	0	8	0	156	0	0	0	164	8	1	67	7	0	0	83	389
Hourly Total	0	0	520	58	0	0	578	0	0	0	0	0	0	0	23	0	655	0	0	0	678	33	6	316	34	0	0	389	1645
9:00 AM	0	0	111	14	0	0	125	0	0	0	0	0	0	0	5	0	153	0	0	1	158	8	3	70	9	0	1	90	373
9:15 AM	0	0	87	12	0	0	99	0	0	0	0	0	0	0	10	0	137	0	0	1	147	14	0	72	5	0	1	91	337
9:30 AM	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	198	27	0	0	225	0	0	0	0	0	0	0	15	0	290	0	0	2	305	22	3	142	14	0	2	181	711
4:00 PM	0	0	138	17	0	0	155	0	0	0	0	0	1	0	9	1	156	0	0	0	166	20	1	116	3	0	0	140	461
4:15 PM	0	0	175	23	0	0	198	0	0	0	0	0	2	0	4	0	157	0	0	0	161	22	0	127	13	0	0	162	521
4:30 PM	0	0	169	26	0	0	195	0	0	0	0	0	1	0	13	0	153	0	0	0	166	22	4	144	5	0	0	175	536
4:45 PM	0	0	177	16	0	0	193	0	0	0	0	0	1	0	6	1	170	0	0	0	177	17	0	157	3	0	0	177	547
Hourly Total	0	0	659	82	0	0	741	0	0	0	0	0	5	0	32	2	636	0	0	0	670	81	5	544	24	0	0	654	2065
5:00 PM	0	0	165	17	0	0	182	0	0	0	0	0	1	0	7	0	153	0	0	0	160	21	0	140	8	0	0	169	511
5:15 PM	0	0	184	19	0	0	203	0	0	0	0	0	2	0	12	0	160	0	0	1	172	18	1	139	12	0	0	170	545
5:30 PM	0	0	157	28	0	0	185	0	0	0	0	0	0	0	10	0	167	0	0	0	177	20	1	174	8	0	1	203	565
5:45 PM	0	0	172	16	0	0	188	0	0	0	0	0	0	0	5	0	171	0	0	0	176	16	3	140	9	0	0	168	532
Hourly Total	0	0	678	80	0	0	758	0	0	0	0	0	3	0	34	0	651	0	0	1	685	75	5	593	37	0	1	710	2153
6:00 PM	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	0	2291	281	0	0	2572	0	0	0	0	0	9	0	127	2	2578	0	0	3	2707	221	24	1777	124	0	5	2146	7425
Approach %	0.0	0.0	89.1	10.9	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	-	4.7	0.1	95.2	0.0	0.0	-	-	10.3	1.1	82.8	5.8	0.0	-	-	-
Total %	0.0	0.0	30.9	3.8	0.0	-	34.6	0.0	0.0	0.0	0.0	0.0	-	0.0	1.7	0.0	34.7	0.0	0.0	-	36.5	3.0	0.3	23.9	1.7	0.0	-	28.9	-
Lights	0	0	2249	275	0	-	2524	0	0	0	0	0	-	0	122	2	2518	0	0	-	2642	214	23	1756	123	0	-	2116	7282
% Lights	-	-	98.2	97.9	-	-	98.1	-	-	-	-	-	-	-	96.1	100.0	97.7	-	-	-	97.6	96.8	95.8	98.8	99.2	-	-	98.6	98.1
Buses	0	0	14	3	0	-	17	0	0	0	0	0	-	0	3	0	18	0	0	-	21	0	0	7	1	0	-	8	46
% Buses	-	-	0.6	1.1	-	-	0.7	-	-	-	-	-	-	-	2.4	0.0	0.7	-	-	-	0.8	0.0	0.0	0.4	0.8	-	-	0.4	0.6
Trucks	0	0	28	3	0	-	31	0	0	0	0	0	-	0	2	0	42	0	0	-	44	7	1	10	0	0	-	18	93
% Trucks	-	-	1.2	1.1	-	-	1.2	-	-	-	-	-	-	-	1.6	0.0	1.6	-	-	-	1.6	3.2	4.2	0.6	0.0	-	-	0.8	1.3
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	4	0	0	-	4	4
% Bicycles on Road	-	-	0.0	0.0	-	-	0.0	-	-	-	-	-	-	-	0.0	0.0	0.0	-	-	-	0.0	0.0	0.0	0.2	0.0	-	-	0.2	0.1
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	33.3	-	-	-	-	-	-	20.0	-	-
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	-	9	-	-	-	-	-	-	2	-	-	-	-	-	-	4	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	66.7	-	-	-	-	-	-	80.0	-	-

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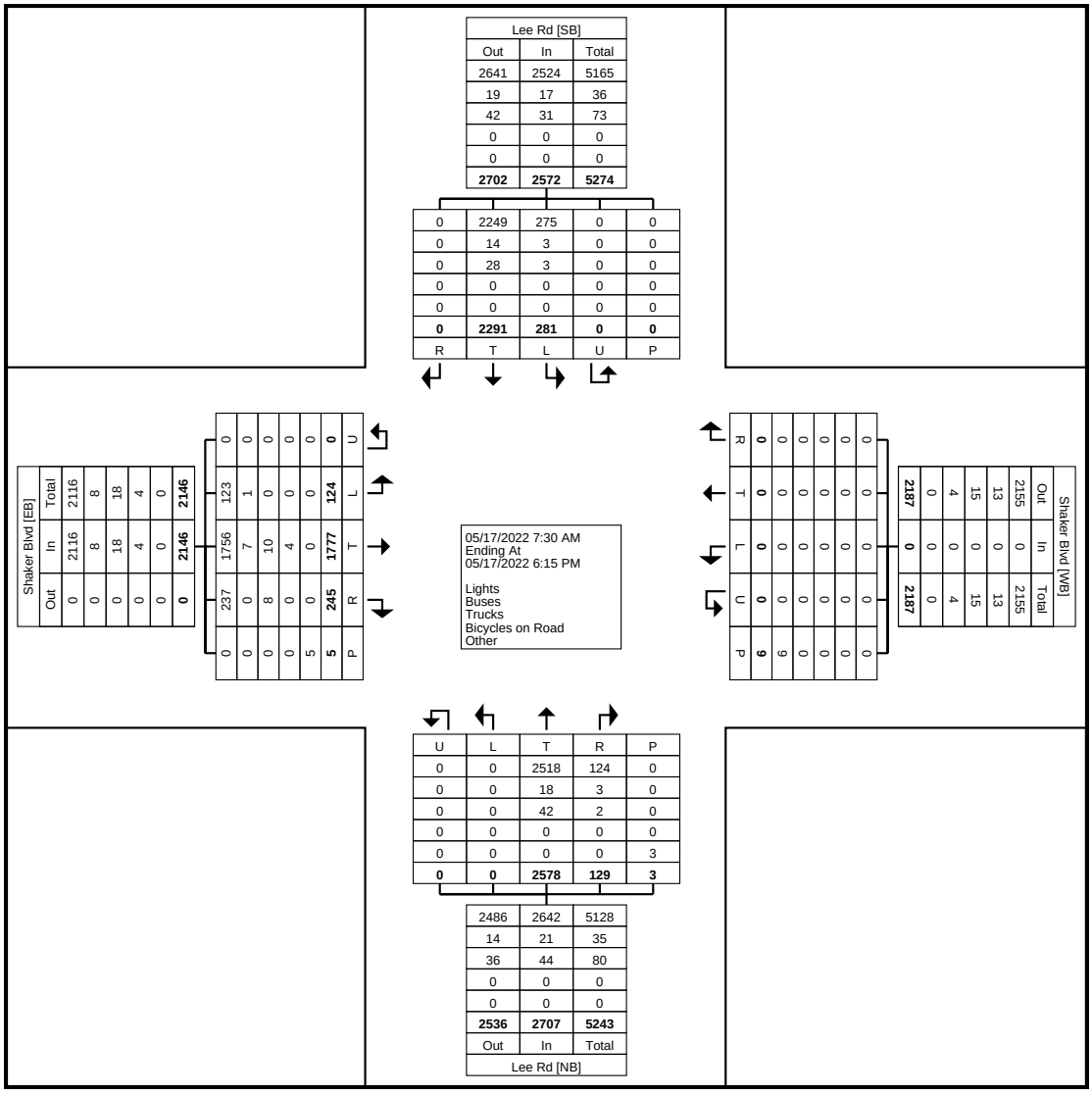

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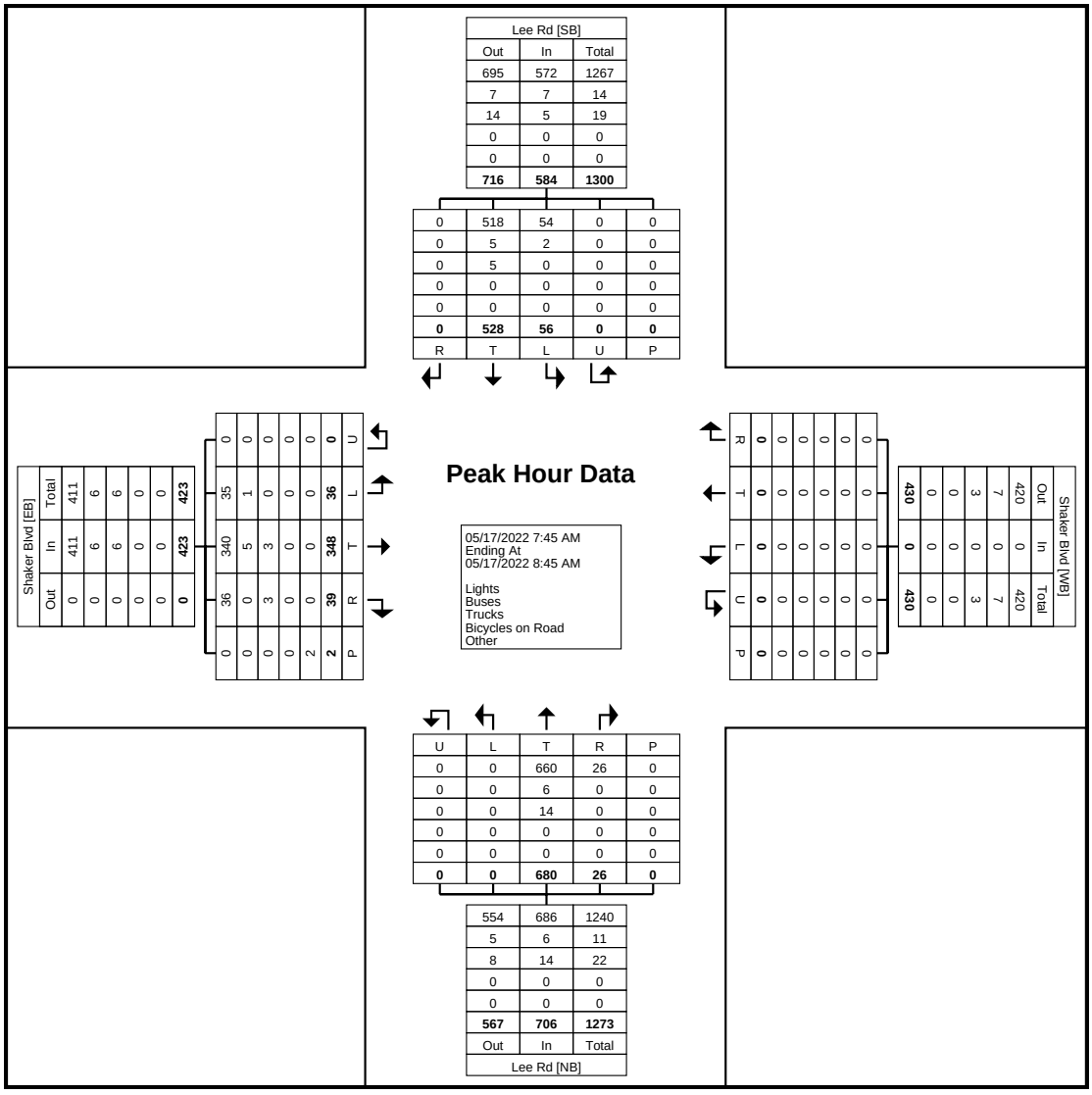
Count Name: Lee Rd/Shaker Blvd EB
Site Code:
Start Date: 05/17/2022

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Lee Rd Southbound							Shaker Blvd Westbound							Lee Rd Northbound							Shaker Blvd Eastbound							Int. Total
	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	
7:45 AM	0	0	131	17	0	0	148	0	0	0	0	0	0	0	11	0	181	0	0	0	192	7	2	99	9	0	2	117	457
8:00 AM	0	0	143	15	0	0	158	0	0	0	0	0	0	0	7	0	177	0	0	0	184	9	0	95	12	0	0	116	458
8:15 AM	0	0	120	11	0	0	131	0	0	0	0	0	0	0	6	0	147	0	0	0	153	8	0	78	8	0	0	94	378
8:30 AM	0	0	134	13	0	0	147	0	0	0	0	0	0	0	2	0	175	0	0	0	177	8	5	76	7	0	0	96	420
Total	0	0	528	56	0	0	584	0	0	0	0	0	0	0	26	0	680	0	0	0	706	32	7	348	36	0	2	423	1713
Approach %	0.0	0.0	90.4	9.6	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	-	3.7	0.0	96.3	0.0	0.0	-	-	7.6	1.7	82.3	8.5	0.0	-	-	-
Total %	0.0	0.0	30.8	3.3	0.0	-	34.1	0.0	0.0	0.0	0.0	0.0	-	0.0	1.5	0.0	39.7	0.0	0.0	-	41.2	1.9	0.4	20.3	2.1	0.0	-	24.7	-
PHF	0.000	0.000	0.923	0.824	0.000	-	0.924	0.000	0.000	0.000	0.000	0.000	-	0.000	0.591	0.000	0.939	0.000	0.000	-	0.919	0.889	0.350	0.879	0.750	0.000	-	0.904	0.935
Lights	0	0	518	54	0	-	572	0	0	0	0	0	-	0	26	0	660	0	0	-	686	30	6	340	35	0	-	411	1669
% Lights	-	-	98.1	96.4	-	-	97.9	-	-	-	-	-	-	-	100.0	-	97.1	-	-	-	97.2	93.8	85.7	97.7	97.2	-	-	97.2	97.4
Buses	0	0	5	2	0	-	7	0	0	0	0	0	-	0	0	0	6	0	0	-	6	0	0	5	1	0	-	6	19
% Buses	-	-	0.9	3.6	-	-	1.2	-	-	-	-	-	-	-	0.0	-	0.9	-	-	-	0.8	0.0	0.0	1.4	2.8	-	-	1.4	1.1
Trucks	0	0	5	0	0	-	5	0	0	0	0	0	-	0	0	0	14	0	0	-	14	2	1	3	0	0	-	6	25
% Trucks	-	-	0.9	0.0	-	-	0.9	-	-	-	-	-	-	-	0.0	-	2.1	-	-	-	2.0	6.3	14.3	0.9	0.0	-	-	1.4	1.5
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0
% Bicycles on Road	-	-	0.0	0.0	-	-	0.0	-	-	-	-	-	-	-	0.0	-	0.0	-	-	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-



Turning Movement Peak Hour Data Plot (7:45 AM)

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Shaker Heights, OH
Lee Rd & Shaker Blvd EB
Tuesday, May 17, 2022
Location: 41.480737, -81.565089

Count Name: Lee Rd/Shaker Blvd EB
Site Code:
Start Date: 05/17/2022

Turning Movement Peak Hour Data (4:45 PM)

Start Time	Lee Rd Southbound							Shaker Blvd Westbound							Lee Rd Northbound							Shaker Blvd Eastbound							Int. Total
	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	Right	Right on Red	Thru	Left	U-Turn	Peds	App. Total	
4:45 PM	0	0	177	16	0	0	193	0	0	0	0	0	1	0	6	1	170	0	0	0	177	17	0	157	3	0	0	177	547
5:00 PM	0	0	165	17	0	0	182	0	0	0	0	0	1	0	7	0	153	0	0	0	160	21	0	140	8	0	0	169	511
5:15 PM	0	0	184	19	0	0	203	0	0	0	0	0	2	0	12	0	160	0	0	1	172	18	1	139	12	0	0	170	545
5:30 PM	0	0	157	28	0	0	185	0	0	0	0	0	0	0	10	0	167	0	0	0	177	20	1	174	8	0	1	203	565
Total	0	0	683	80	0	0	763	0	0	0	0	0	4	0	35	1	650	0	0	1	686	76	2	610	31	0	1	719	2168
Approach %	0.0	0.0	89.5	10.5	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	-	5.1	0.1	94.8	0.0	0.0	-	-	10.6	0.3	84.8	4.3	0.0	-	-	-
Total %	0.0	0.0	31.5	3.7	0.0	-	35.2	0.0	0.0	0.0	0.0	0.0	-	0.0	1.6	0.0	30.0	0.0	0.0	-	31.6	3.5	0.1	28.1	1.4	0.0	-	33.2	-
PHF	0.000	0.000	0.928	0.714	0.000	-	0.940	0.000	0.000	0.000	0.000	0.000	-	0.000	0.729	0.250	0.956	0.000	0.000	-	0.969	0.905	0.500	0.876	0.646	0.000	-	0.885	0.959
Lights	0	0	673	80	0	-	753	0	0	0	0	0	-	0	35	1	644	0	0	-	680	76	2	607	31	0	-	716	2149
% Lights	-	-	98.5	100.0	-	-	98.7	-	-	-	-	-	-	-	100.0	100.0	99.1	-	-	-	99.1	100.0	100.0	99.5	100.0	-	-	99.6	99.1
Buses	0	0	3	0	0	-	3	0	0	0	0	0	-	0	0	0	4	0	0	-	4	0	0	0	0	0	-	0	7
% Buses	-	-	0.4	0.0	-	-	0.4	-	-	-	-	-	-	-	0.0	0.0	0.6	-	-	-	0.6	0.0	0.0	0.0	0.0	-	-	0.0	0.3
Trucks	0	0	7	0	0	-	7	0	0	0	0	0	-	0	0	0	2	0	0	-	2	0	0	3	0	0	-	3	12
% Trucks	-	-	1.0	0.0	-	-	0.9	-	-	-	-	-	-	-	0.0	0.0	0.3	-	-	-	0.3	0.0	0.0	0.5	0.0	-	-	0.4	0.6
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0
% Bicycles on Road	-	-	0.0	0.0	-	-	0.0	-	-	-	-	-	-	-	0.0	0.0	0.0	-	-	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	-	4	-	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	0.0	-	-	-	-	-	-	100.0	-	-

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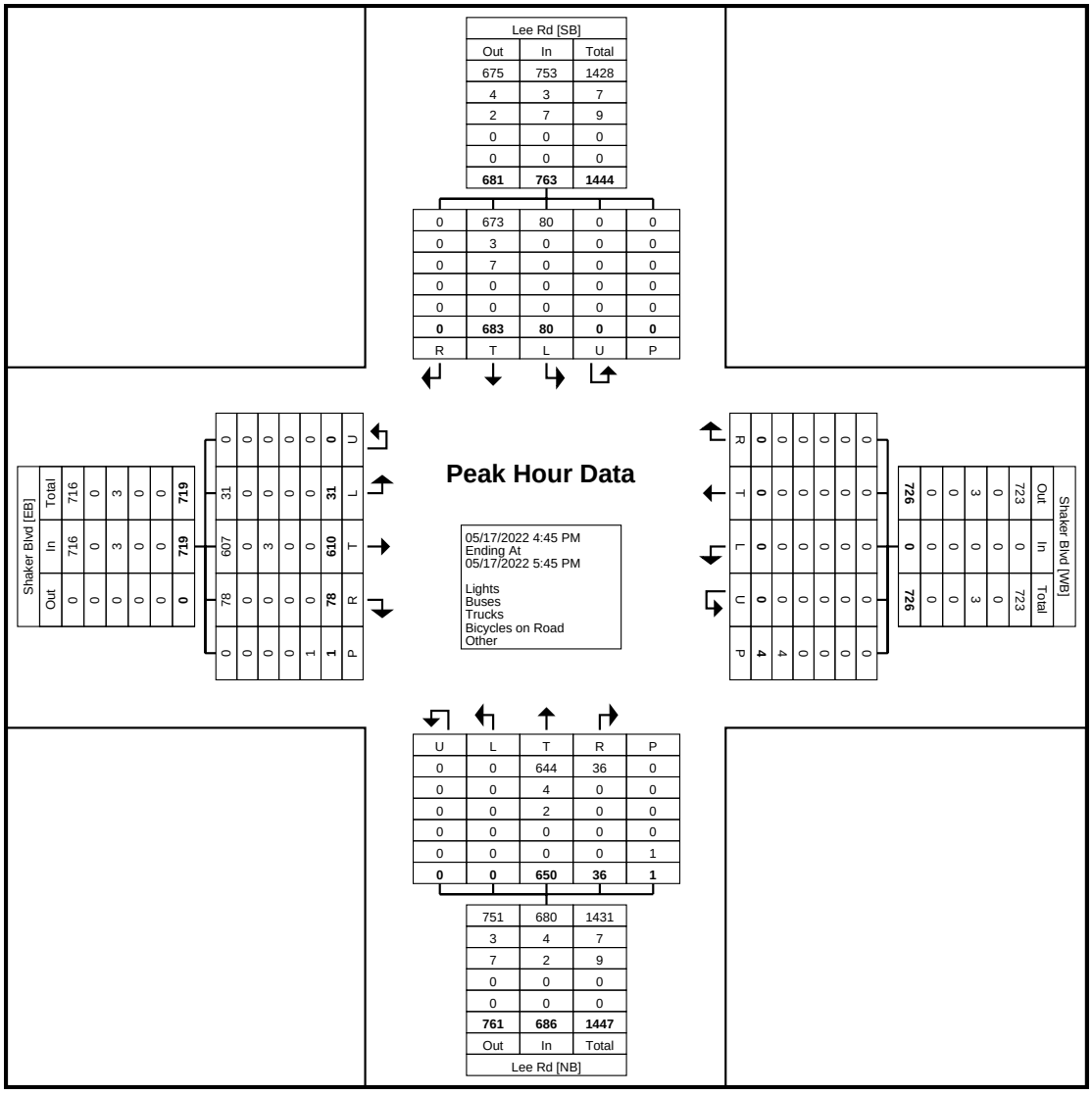
Shaker Heights, OH
Lee Rd & Shaker Blvd EB
Tuesday, May 17, 2022
Location: 41.480737, -81.565089

Count Name: Lee Rd/Shaker Blvd EB
Site Code:
Start Date: 05/17/2022



Turning Movement Peak Hour Data Plot (4:45 PM)

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Shaker Heights, OH
Lee Rd & Van Aiken Blvd WB
Tuesday, May 17, 2022
Location: 41.466725, -81.565014

Count Name: Lee Rd/Van Aiken Blvd WB
Site Code:
Start Date: 05/17/2022

Turning Movement Data

Start Time	Van Aiken Blvd Eastbound						Van Aiken Blvd Westbound							Lee Rd Northbound						Lee Rd Southbound							
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Int. Total
7:30 AM	0	0	0	0	4	0	7	85	19	0	0	2	111	65	164	0	0	0	229	0	96	3	0	0	0	99	439
7:45 AM	0	0	0	0	2	0	8	80	19	0	0	1	107	69	175	0	0	0	244	0	109	4	0	0	1	113	464
Hourly Total	0	0	0	0	6	0	15	165	38	0	0	3	218	134	339	0	0	0	473	0	205	7	0	0	1	212	903
8:00 AM	0	0	0	0	5	0	11	61	14	0	0	2	86	69	179	0	0	0	248	0	144	5	0	0	1	149	483
8:15 AM	0	0	0	0	7	0	7	79	21	0	0	2	107	68	146	0	0	0	214	0	112	3	0	0	2	115	436
8:30 AM	0	0	0	0	7	0	6	49	16	0	0	9	71	55	141	0	0	0	196	0	156	8	0	0	1	164	431
8:45 AM	0	0	0	0	5	0	7	41	17	0	0	1	65	37	142	0	0	0	179	0	129	6	0	0	0	135	379
Hourly Total	0	0	0	0	24	0	31	230	68	0	0	14	329	229	608	0	0	0	837	0	541	22	0	0	4	563	1729
9:00 AM	0	0	0	0	6	0	9	38	5	1	0	1	53	31	127	0	0	0	158	0	104	6	1	0	3	111	322
9:15 AM	0	0	0	0	3	0	19	36	13	0	0	3	68	37	111	0	0	0	148	0	128	5	1	0	0	134	350
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	9	0	28	74	18	1	0	4	121	68	238	0	0	0	306	0	234	11	2	0	3	247	674
4:00 PM	0	0	0	0	13	0	14	74	13	0	0	0	101	46	143	0	0	0	189	0	183	2	0	0	1	185	475
4:15 PM	0	0	0	0	5	0	9	60	15	0	0	2	84	45	134	0	0	1	179	0	174	6	0	0	1	180	443
4:30 PM	0	0	0	0	6	0	15	48	12	0	0	3	75	45	138	0	0	0	183	0	197	7	0	0	3	204	462
4:45 PM	0	0	1	0	8	1	12	65	10	1	0	1	88	42	155	0	0	1	197	0	170	5	0	1	0	176	462
Hourly Total	0	0	1	0	32	1	50	247	50	1	0	6	348	178	570	0	0	2	748	0	724	20	0	1	5	745	1842
5:00 PM	0	0	0	0	4	0	10	65	10	0	0	1	85	57	131	0	0	0	188	0	171	4	0	0	3	175	448
5:15 PM	0	0	0	0	2	0	15	47	10	0	0	9	72	47	143	0	0	0	190	0	182	9	0	0	4	191	453
5:30 PM	0	0	0	0	3	0	12	68	14	1	0	1	95	48	135	0	0	0	183	0	167	7	0	0	3	174	452
5:45 PM	0	0	0	0	4	0	5	53	10	0	0	4	68	44	130	0	0	0	174	0	172	6	0	0	0	178	420
Hourly Total	0	0	0	0	13	0	42	233	44	1	0	15	320	196	539	0	0	0	735	0	692	26	0	0	10	718	1773
Grand Total	0	0	1	0	84	1	166	949	218	3	0	42	1336	805	2294	0	0	2	3099	0	2396	86	2	1	23	2485	6921
Approach %	0.0	0.0	100.0	0.0	-	-	12.4	71.0	16.3	0.2	0.0	-	-	26.0	74.0	0.0	0.0	-	-	0.0	96.4	3.5	0.1	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	2.4	13.7	3.1	0.0	0.0	-	19.3	11.6	33.1	0.0	0.0	-	44.8	0.0	34.6	1.2	0.0	0.0	-	35.9	-
Lights	0	0	0	0	-	0	162	934	215	3	0	-	1314	786	2220	0	0	-	3006	0	2336	82	2	1	-	2421	6741
% Lights	-	-	0.0	-	-	0.0	97.6	98.4	98.6	100.0	-	-	98.4	97.6	96.8	-	-	-	97.0	-	97.5	95.3	100.0	100.0	-	97.4	97.4
Buses	0	0	0	0	-	0	2	7	2	0	0	-	11	9	20	0	0	-	29	0	24	4	0	0	-	28	68
% Buses	-	-	0.0	-	-	0.0	1.2	0.7	0.9	0.0	-	-	0.8	1.1	0.9	-	-	-	0.9	-	1.0	4.7	0.0	0.0	-	1.1	1.0
Trucks	0	0	0	0	-	0	2	6	1	0	0	-	9	9	54	0	0	-	63	0	36	0	0	0	-	36	108
% Trucks	-	-	0.0	-	-	0.0	1.2	0.6	0.5	0.0	-	-	0.7	1.1	2.4	-	-	-	2.0	-	1.5	0.0	0.0	0.0	-	1.4	1.6
Bicycles on Road	0	0	1	0	-	1	0	2	0	0	0	-	2	1	0	0	0	-	1	0	0	0	0	0	-	0	4
% Bicycles on Road	-	-	100.0	-	-	100.0	0.0	0.2	0.0	0.0	-	-	0.1	0.1	0.0	-	-	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.1
Bicycles on Crosswalk	-	-	-	-	15	-	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	17.9	-	-	-	-	-	-	2.4	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	69	-	-	-	-	-	-	41	-	-	-	-	-	2	-	-	-	-	-	-	23	-	-
% Pedestrians	-	-	-	-	82.1	-	-	-	-	-	-	97.6	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-

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Shaker Heights, OH
Lee Rd & Van Aiken Blvd WB
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Location: 41.466725, -81.565014

Count Name: Lee Rd/Van Alken Blvd WB
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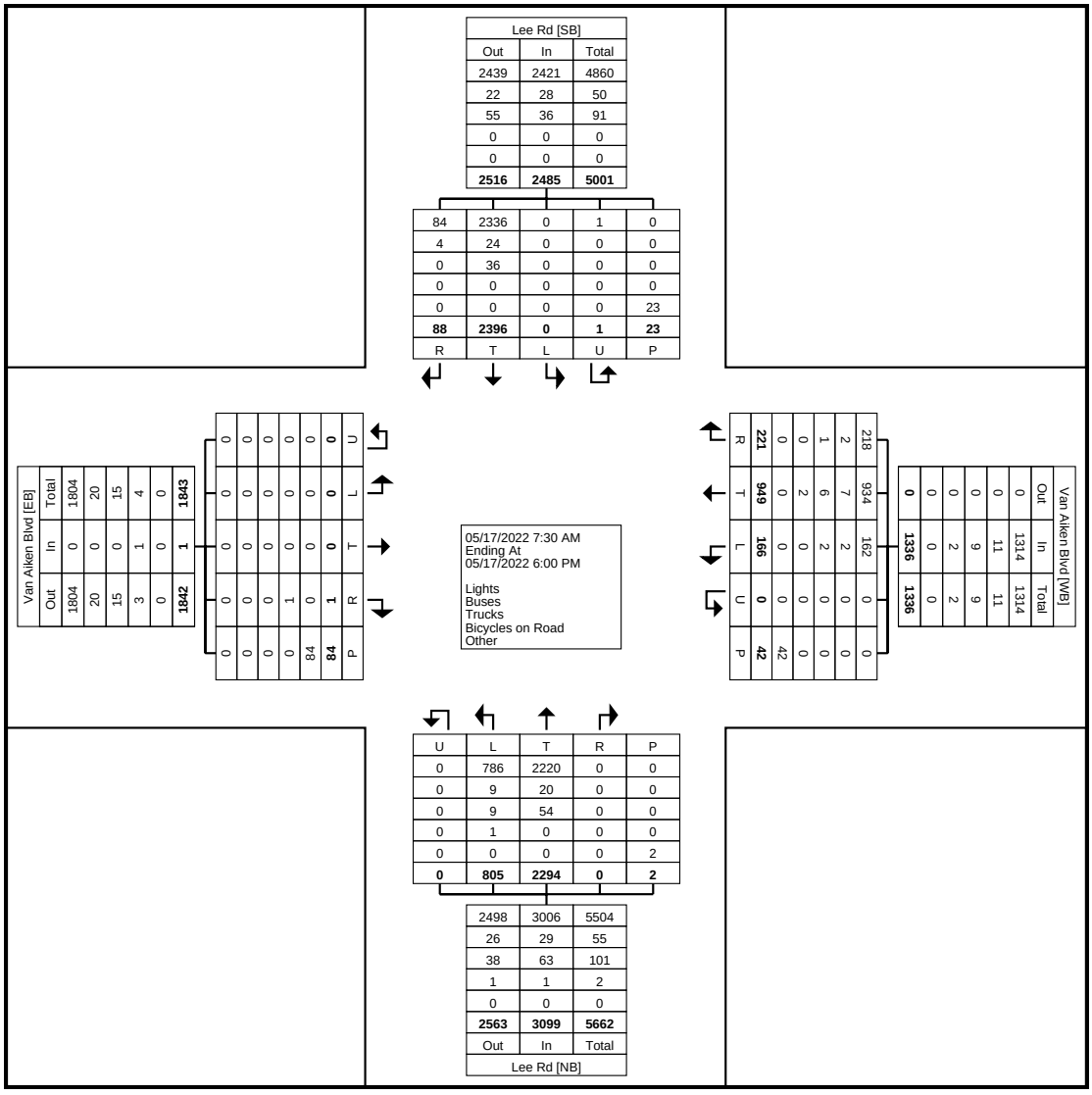
Page No: 2



Turning Movement Data Plot

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Shaker Heights, OH
Lee Rd & Van Aiken Blvd WB
Tuesday, May 17, 2022
Location: 41.466725, -81.565014

Count Name: Lee Rd/Van Aiken Blvd WB
Site Code:
Start Date: 05/17/2022

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Van Aiken Blvd Eastbound						Van Aiken Blvd Westbound							Lee Rd Northbound						Lee Rd Southbound							
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Int. Total
7:30 AM	0	0	0	0	4	0	7	85	19	0	0	2	111	65	164	0	0	0	229	0	96	3	0	0	0	99	439
7:45 AM	0	0	0	0	2	0	8	80	19	0	0	1	107	69	175	0	0	0	244	0	109	4	0	0	1	113	464
8:00 AM	0	0	0	0	5	0	11	61	14	0	0	2	86	69	179	0	0	0	248	0	144	5	0	0	1	149	483
8:15 AM	0	0	0	0	7	0	7	79	21	0	0	2	107	68	146	0	0	0	214	0	112	3	0	0	2	115	436
Total	0	0	0	0	18	0	33	305	73	0	0	7	411	271	664	0	0	0	935	0	461	15	0	0	4	476	1822
Approach %	0.0	0.0	0.0	0.0	-	-	8.0	74.2	17.8	0.0	0.0	-	-	29.0	71.0	0.0	0.0	-	-	0.0	96.8	3.2	0.0	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	1.8	16.7	4.0	0.0	0.0	-	22.6	14.9	36.4	0.0	0.0	-	51.3	0.0	25.3	0.8	0.0	0.0	-	26.1	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.750	0.897	0.869	0.000	0.000	-	0.926	0.982	0.927	0.000	0.000	-	0.943	0.000	0.800	0.750	0.000	0.000	-	0.799	0.943
Lights	0	0	0	0	-	0	30	302	71	0	0	-	403	262	638	0	0	-	900	0	446	12	0	0	-	458	1761
% Lights	-	-	-	-	-	-	90.9	99.0	97.3	-	-	-	98.1	96.7	96.1	-	-	-	96.3	-	96.7	80.0	-	-	-	96.2	96.7
Buses	0	0	0	0	-	0	2	1	1	0	0	-	4	4	4	0	0	-	8	0	9	3	0	0	-	12	24
% Buses	-	-	-	-	-	-	6.1	0.3	1.4	-	-	-	1.0	1.5	0.6	-	-	-	0.9	-	2.0	20.0	-	-	-	2.5	1.3
Trucks	0	0	0	0	-	0	1	2	1	0	0	-	4	5	22	0	0	-	27	0	6	0	0	0	-	6	37
% Trucks	-	-	-	-	-	-	3.0	0.7	1.4	-	-	-	1.0	1.8	3.3	-	-	-	2.9	-	1.3	0.0	-	-	-	1.3	2.0
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0
% Bicycles on Road	-	-	-	-	-	-	0.0	0.0	0.0	-	-	-	0.0	0.0	0.0	-	-	-	0.0	-	0.0	0.0	-	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	2	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	11.1	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	16	-	-	-	-	-	-	7	-	-	-	-	-	0	-	-	-	-	-	-	4	-	-
% Pedestrians	-	-	-	-	88.9	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

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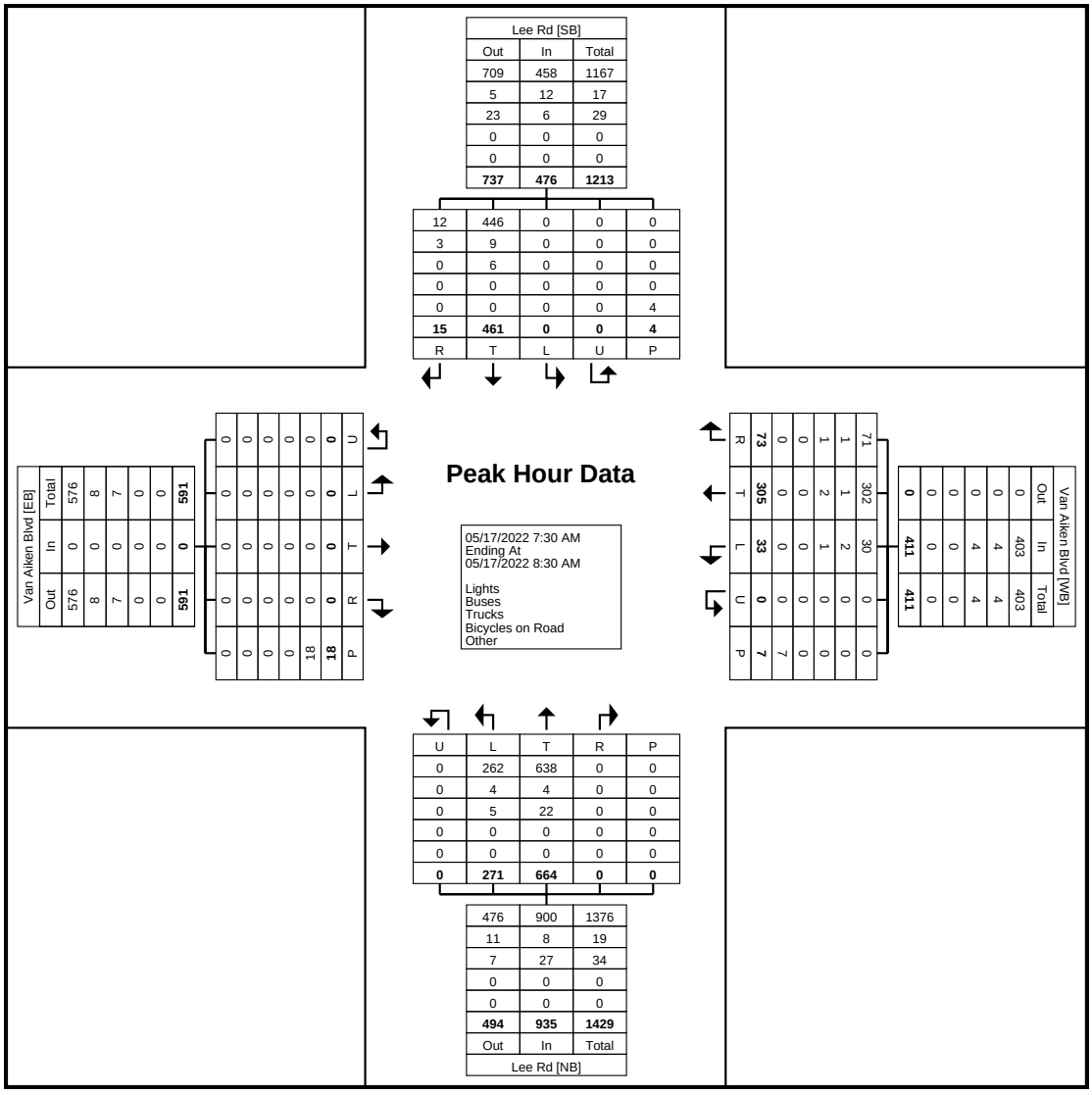
Shaker Heights, OH
Lee Rd & Van Aiken Blvd WB
Tuesday, May 17, 2022
Location: 41.466725, -81.565014

Count Name: Lee Rd/Van Aiken Blvd WB
Site Code:
Start Date: 05/17/2022



Turning Movement Peak Hour Data Plot (7:30 AM)

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Shaker Heights, OH
Lee Rd & Van Aiken Blvd WB
Tuesday, May 17, 2022
Location: 41.466725, -81.565014

Count Name: Lee Rd/Van Aiken Blvd WB
Site Code:
Start Date: 05/17/2022

Turning Movement Peak Hour Data (4:00 PM)

Start Time	Van Aiken Blvd Eastbound						Van Aiken Blvd Westbound							Lee Rd Northbound						Lee Rd Southbound							
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Int. Total
4:00 PM	0	0	0	0	13	0	14	74	13	0	0	0	101	46	143	0	0	0	189	0	183	2	0	0	1	185	475
4:15 PM	0	0	0	0	5	0	9	60	15	0	0	2	84	45	134	0	0	1	179	0	174	6	0	0	1	180	443
4:30 PM	0	0	0	0	6	0	15	48	12	0	0	3	75	45	138	0	0	0	183	0	197	7	0	0	3	204	462
4:45 PM	0	0	1	0	8	1	12	65	10	1	0	1	88	42	155	0	0	1	197	0	170	5	0	1	0	176	462
Total	0	0	1	0	32	1	50	247	50	1	0	6	348	178	570	0	0	2	748	0	724	20	0	1	5	745	1842
Approach %	0.0	0.0	100.0	0.0	-	-	14.4	71.0	14.4	0.3	0.0	-	-	23.8	76.2	0.0	0.0	-	-	0.0	97.2	2.7	0.0	0.1	-	-	-
Total %	0.0	0.0	0.1	0.0	-	0.1	2.7	13.4	2.7	0.1	0.0	-	18.9	9.7	30.9	0.0	0.0	-	40.6	0.0	39.3	1.1	0.0	0.1	-	40.4	-
PHF	0.000	0.000	0.250	0.000	-	0.250	0.833	0.834	0.833	0.250	0.000	-	0.861	0.967	0.919	0.000	0.000	-	0.949	0.000	0.919	0.714	0.000	0.250	-	0.913	0.969
Lights	0	0	0	0	-	0	50	245	49	1	0	-	345	176	559	0	0	-	735	0	707	20	0	1	-	728	1808
% Lights	-	-	0.0	-	-	0.0	100.0	99.2	98.0	100.0	-	-	99.1	98.9	98.1	-	-	-	98.3	-	97.7	100.0	-	100.0	-	97.7	98.2
Buses	0	0	0	0	-	0	0	1	1	0	0	-	2	2	6	0	0	-	8	0	4	0	0	0	-	4	14
% Buses	-	-	0.0	-	-	0.0	0.0	0.4	2.0	0.0	-	-	0.6	1.1	1.1	-	-	-	1.1	-	0.6	0.0	-	0.0	-	0.5	0.8
Trucks	0	0	0	0	-	0	0	0	0	0	0	-	0	0	5	0	0	-	5	0	13	0	0	0	-	13	18
% Trucks	-	-	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.9	-	-	-	0.7	-	1.8	0.0	-	0.0	-	1.7	1.0
Bicycles on Road	0	0	1	0	-	1	0	1	0	0	0	-	1	0	0	0	0	-	0	0	0	0	0	0	-	0	2
% Bicycles on Road	-	-	100.0	-	-	100.0	0.0	0.4	0.0	0.0	-	-	0.3	0.0	0.0	-	-	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.1
Bicycles on Crosswalk	-	-	-	-	9	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	28.1	-	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	23	-	-	-	-	-	-	6	-	-	-	-	-	2	-	-	-	-	-	-	5	-	-
% Pedestrians	-	-	-	-	71.9	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-

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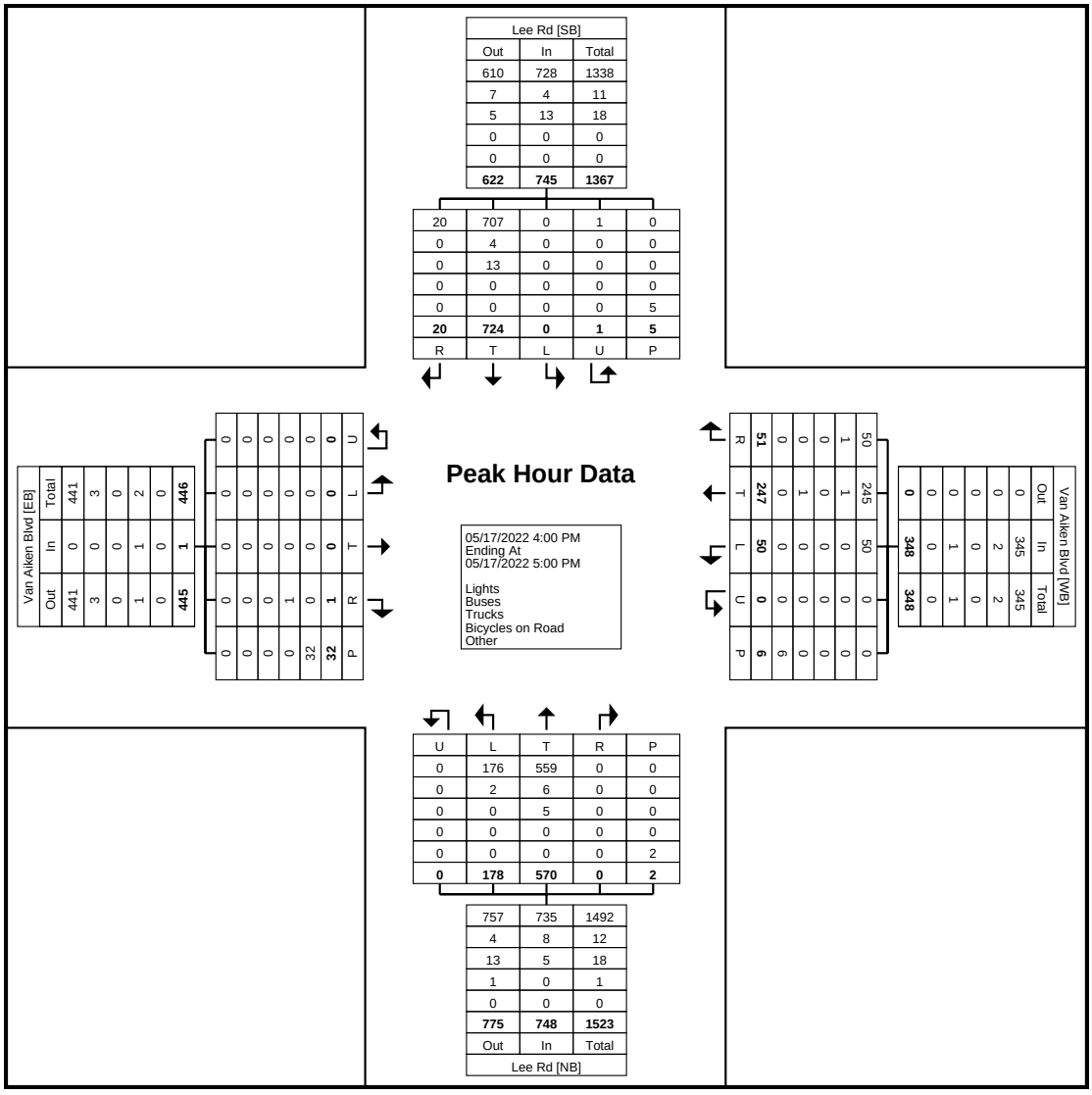
Shaker Heights, OH
Lee Rd & Van Aiken Blvd WB
Tuesday, May 17, 2022
Location: 41.466725, -81.565014

Count Name: Lee Rd/Van Aiken Blvd WB
Site Code:
Start Date: 05/17/2022



Turning Movement Peak Hour Data Plot (4:00 PM)

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Shaker Heights, OH
Lee Rd & Van Aiken Blvd EB
Tuesday, May 17, 2022
Location: 41.466421, -81.564996

Count Name: Lee Rd/Van Aiken Blvd EB
Site Code:
Start Date: 05/17/2022

Turning Movement Data

Start Time	Van Aiken Blvd Eastbound					Van Aiken Blvd Westbound		Lee Rd Northbound					Lee Rd Southbound					
	Left	Thru	Right	Peds	App. Total	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Int. Total
7:30 AM	20	38	28	5	86	1	0	225	10	0	2	235	3	110	0	0	113	434
7:45 AM	13	52	29	2	94	1	0	232	12	0	2	244	13	114	0	0	127	465
Hourly Total	33	90	57	7	180	2	0	457	22	0	4	479	16	224	0	0	240	899
8:00 AM	15	50	42	3	107	2	0	226	6	0	1	232	6	132	0	0	138	477
8:15 AM	11	63	37	5	111	3	0	196	7	0	1	203	12	103	0	0	115	429
8:30 AM	3	48	30	9	81	6	0	169	6	0	1	175	19	145	0	0	164	420
8:45 AM	6	40	31	6	77	1	0	171	7	0	2	178	9	134	0	0	143	398
Hourly Total	35	201	140	23	376	12	0	762	26	0	5	788	46	514	0	0	560	1724
9:00 AM	4	35	29	6	68	1	0	144	7	0	3	151	9	107	0	0	116	335
9:15 AM	7	46	22	3	75	3	0	138	7	0	0	145	7	135	0	0	142	362
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	11	81	51	9	143	4	0	282	14	0	3	296	16	242	0	0	258	697
4:00 PM	16	82	67	20	165	0	0	170	9	0	5	179	14	189	0	0	203	547
4:15 PM	10	69	56	4	135	2	0	184	11	0	2	195	18	177	0	1	195	525
4:30 PM	11	77	75	6	163	2	0	157	9	0	0	166	22	175	0	0	197	526
4:45 PM	11	70	49	6	130	2	0	203	9	0	0	212	18	178	0	2	196	538
Hourly Total	48	298	247	36	593	6	0	714	38	0	7	752	72	719	0	3	791	2136
5:00 PM	10	86	58	4	154	2	0	181	6	0	2	187	11	167	0	0	178	519
5:15 PM	5	72	58	3	135	8	0	215	14	0	0	229	10	194	0	0	204	568
5:30 PM	16	92	52	6	160	1	0	173	11	0	1	184	12	162	0	0	174	518
5:45 PM	7	55	47	3	109	3	0	180	12	0	1	192	14	168	0	0	182	483
Hourly Total	38	305	215	16	558	14	0	749	43	0	4	792	47	691	0	0	738	2088
Grand Total	165	975	710	91	1850	38	0	2964	143	0	23	3107	197	2390	0	3	2587	7544
Approach %	8.9	52.7	38.4	-	-	-	-	95.4	4.6	0.0	-	-	7.6	92.4	0.0	-	-	-
Total %	2.2	12.9	9.4	-	24.5	-	0.0	39.3	1.9	0.0	-	41.2	2.6	31.7	0.0	-	34.3	-
Lights	160	962	700	-	1822	-	0	2872	136	0	-	3008	190	2334	0	-	2524	7354
% Lights	97.0	98.7	98.6	-	98.5	-	-	96.9	95.1	-	-	96.8	96.4	97.7	-	-	97.6	97.5
Buses	3	5	2	-	10	-	0	29	2	0	-	31	3	22	0	-	25	66
% Buses	1.8	0.5	0.3	-	0.5	-	-	1.0	1.4	-	-	1.0	1.5	0.9	-	-	1.0	0.9
Trucks	2	7	8	-	17	-	0	62	5	0	-	67	3	34	0	-	37	121
% Trucks	1.2	0.7	1.1	-	0.9	-	-	2.1	3.5	-	-	2.2	1.5	1.4	-	-	1.4	1.6
Bicycles on Road	0	1	0	-	1	-	0	1	0	0	-	1	1	0	0	-	1	3
% Bicycles on Road	0.0	0.1	0.0	-	0.1	-	-	0.0	0.0	-	-	0.0	0.5	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	7	-	5	-	-	-	-	2	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	7.7	-	13.2	-	-	-	-	8.7	-	-	-	-	33.3	-	-
Pedestrians	-	-	-	84	-	33	-	-	-	-	21	-	-	-	-	2	-	-
% Pedestrians	-	-	-	92.3	-	86.8	-	-	-	-	91.3	-	-	-	-	66.7	-	-

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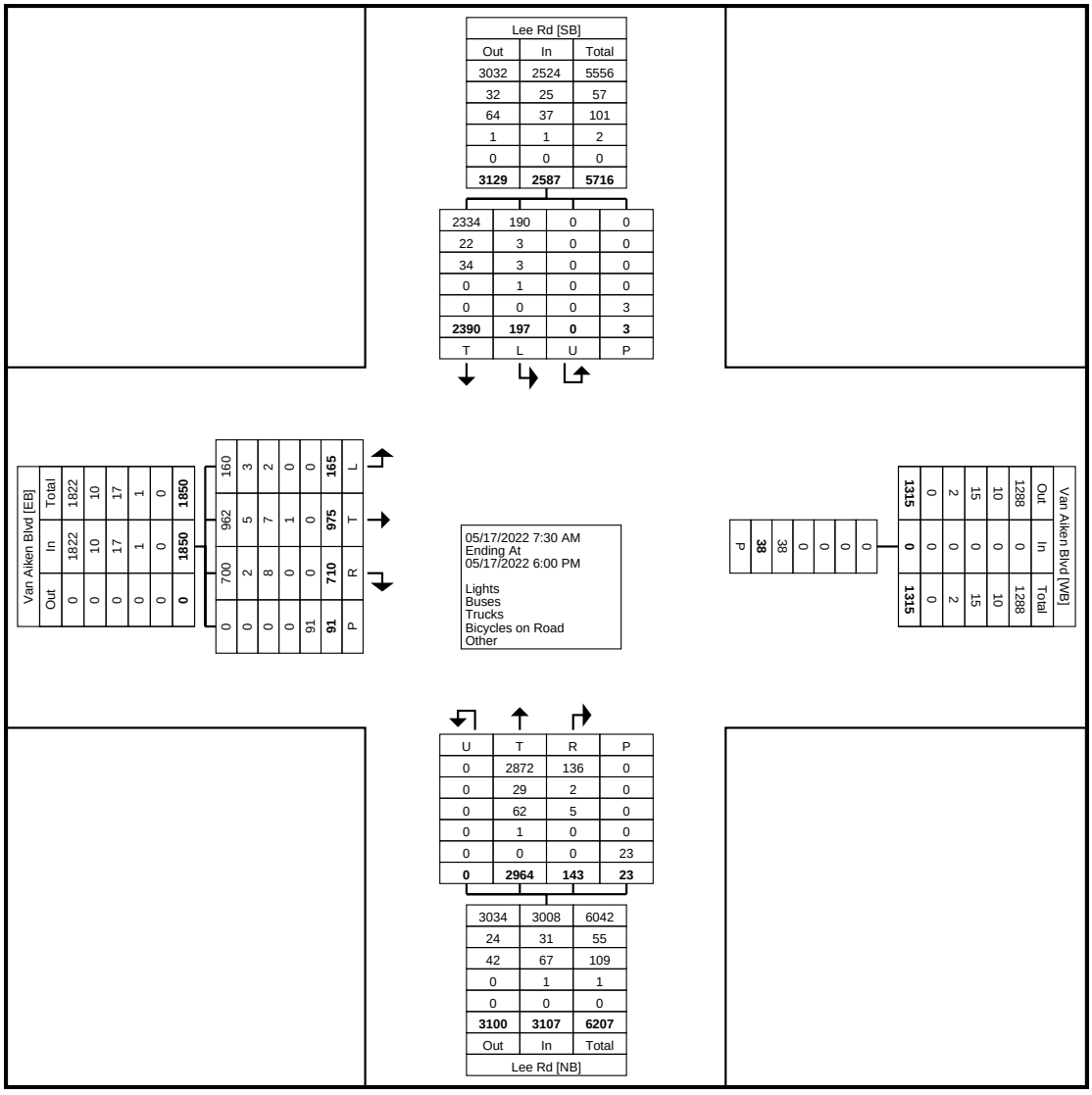
Shaker Heights, OH
Lee Rd & Van Aiken Blvd EB
Tuesday, May 17, 2022
Location: 41.466421, -81.564996

Count Name: Lee Rd/Van Aiken Blvd EB
Site Code:
Start Date: 05/17/2022



Turning Movement Data Plot

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Shaker Heights, OH
Lee Rd & Van Aiken Blvd EB
Tuesday, May 17, 2022
Location: 41.466421, -81.564996

Count Name: Lee Rd/Van Aiken Blvd EB
Site Code:
Start Date: 05/17/2022

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Van Aiken Blvd Eastbound					Van Aiken Blvd Westbound		Lee Rd Northbound					Lee Rd Southbound					
	Left	Thru	Right	Peds	App. Total	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Int. Total
7:30 AM	20	38	28	5	86	1	0	225	10	0	2	235	3	110	0	0	113	434
7:45 AM	13	52	29	2	94	1	0	232	12	0	2	244	13	114	0	0	127	465
8:00 AM	15	50	42	3	107	2	0	226	6	0	1	232	6	132	0	0	138	477
8:15 AM	11	63	37	5	111	3	0	196	7	0	1	203	12	103	0	0	115	429
Total	59	203	136	15	398	7	0	879	35	0	6	914	34	459	0	0	493	1805
Approach %	14.8	51.0	34.2	-	-	-	-	96.2	3.8	0.0	-	-	6.9	93.1	0.0	-	-	-
Total %	3.3	11.2	7.5	-	22.0	-	0.0	48.7	1.9	0.0	-	50.6	1.9	25.4	0.0	-	27.3	-
PHF	0.738	0.806	0.810	-	0.896	-	0.000	0.947	0.729	0.000	-	0.936	0.654	0.869	0.000	-	0.893	0.946
Lights	58	199	135	-	392	-	0	843	32	0	-	875	29	446	0	-	475	1742
% Lights	98.3	98.0	99.3	-	98.5	-	-	95.9	91.4	-	-	95.7	85.3	97.2	-	-	96.3	96.5
Buses	0	2	1	-	3	-	0	11	1	0	-	12	3	8	0	-	11	26
% Buses	0.0	1.0	0.7	-	0.8	-	-	1.3	2.9	-	-	1.3	8.8	1.7	-	-	2.2	1.4
Trucks	1	2	0	-	3	-	0	25	2	0	-	27	2	5	0	-	7	37
% Trucks	1.7	1.0	0.0	-	0.8	-	-	2.8	5.7	-	-	3.0	5.9	1.1	-	-	1.4	2.0
Bicycles on Road	0	0	0	-	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	0.0	-	-	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	1	-	2	-	-	-	-	1	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	6.7	-	28.6	-	-	-	-	16.7	-	-	-	-	-	-	-
Pedestrians	-	-	-	14	-	5	-	-	-	-	5	-	-	-	-	0	-	-
% Pedestrians	-	-	-	93.3	-	71.4	-	-	-	-	83.3	-	-	-	-	-	-	-

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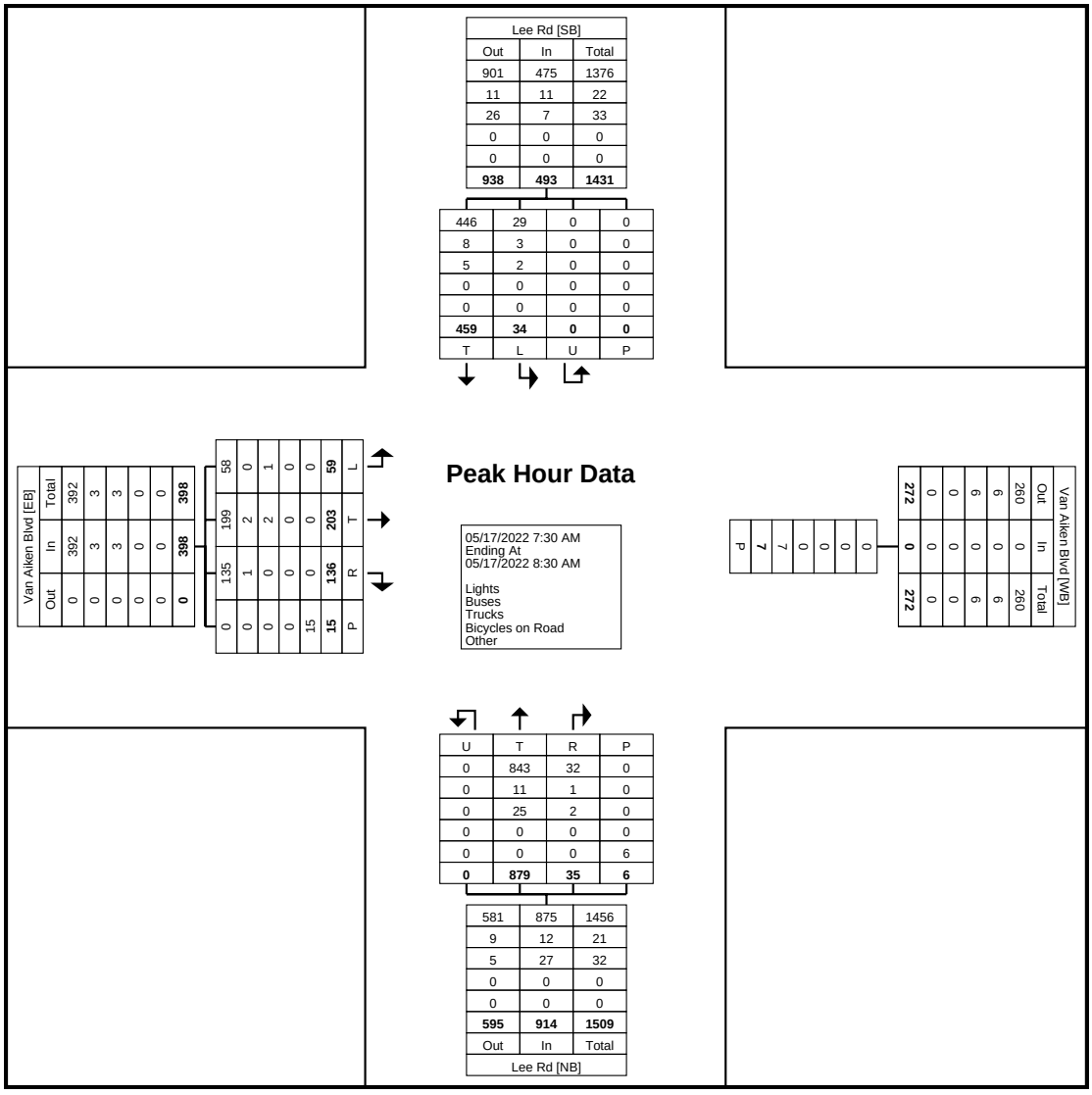
Shaker Heights, OH
Lee Rd & Van Aiken Blvd EB
Tuesday, May 17, 2022
Location: 41.466421, -81.564996

Count Name: Lee Rd/Van Aiken Blvd EB
Site Code:
Start Date: 05/17/2022



Turning Movement Peak Hour Data Plot (7:30 AM)

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Shaker Heights, OH
Lee Rd & Van Aiken Blvd EB
Tuesday, May 17, 2022
Location: 41.466421, -81.564996

Count Name: Lee Rd/Van Aiken Blvd EB
Site Code:
Start Date: 05/17/2022

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Van Aiken Blvd Eastbound					Van Aiken Blvd Westbound		Lee Rd Northbound					Lee Rd Southbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Peds	App. Total	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	
4:30 PM	11	77	75	6	163	2	0	157	9	0	0	166	22	175	0	0	197	526
4:45 PM	11	70	49	6	130	2	0	203	9	0	0	212	18	178	0	2	196	538
5:00 PM	10	86	58	4	154	2	0	181	6	0	2	187	11	167	0	0	178	519
5:15 PM	5	72	58	3	135	8	0	215	14	0	0	229	10	194	0	0	204	568
Total	37	305	240	19	582	14	0	756	38	0	2	794	61	714	0	2	775	2151
Approach %	6.4	52.4	41.2	-	-	-	-	95.2	4.8	0.0	-	-	7.9	92.1	0.0	-	-	-
Total %	1.7	14.2	11.2	-	27.1	-	0.0	35.1	1.8	0.0	-	36.9	2.8	33.2	0.0	-	36.0	-
PHF	0.841	0.887	0.800	-	0.893	-	0.000	0.879	0.679	0.000	-	0.867	0.693	0.920	0.000	-	0.950	0.947
Lights	37	303	235	-	575	-	0	747	37	0	-	784	60	702	0	-	762	2121
% Lights	100.0	99.3	97.9	-	98.8	-	-	98.8	97.4	-	-	98.7	98.4	98.3	-	-	98.3	98.6
Buses	0	1	0	-	1	-	0	6	1	0	-	7	0	2	0	-	2	10
% Buses	0.0	0.3	0.0	-	0.2	-	-	0.8	2.6	-	-	0.9	0.0	0.3	-	-	0.3	0.5
Trucks	0	0	5	-	5	-	0	2	0	0	-	2	0	10	0	-	10	17
% Trucks	0.0	0.0	2.1	-	0.9	-	-	0.3	0.0	-	-	0.3	0.0	1.4	-	-	1.3	0.8
Bicycles on Road	0	1	0	-	1	-	0	1	0	0	-	1	1	0	0	-	1	3
% Bicycles on Road	0.0	0.3	0.0	-	0.2	-	-	0.1	0.0	-	-	0.1	1.6	0.0	-	-	0.1	0.1
Bicycles on Crosswalk	-	-	-	0	-	2	-	-	-	-	1	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	0.0	-	14.3	-	-	-	-	50.0	-	-	-	-	50.0	-	-
Pedestrians	-	-	-	19	-	12	-	-	-	-	1	-	-	-	-	1	-	-
% Pedestrians	-	-	-	100.0	-	85.7	-	-	-	-	50.0	-	-	-	-	50.0	-	-

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Tuesday, May 17, 2022
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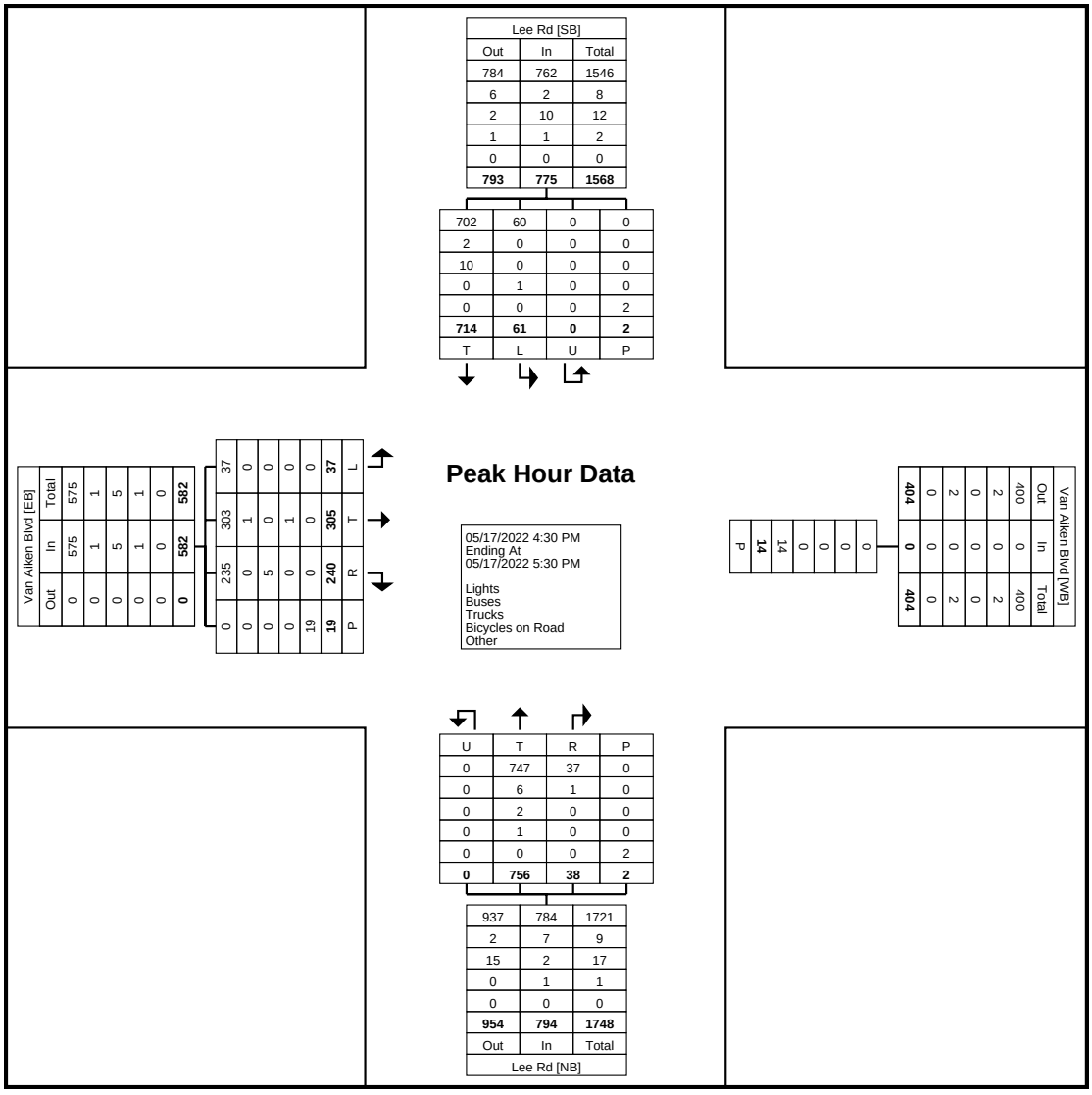
Start Date: 05/17/2022



Turning Movement Peak Hour Data Plot (4:30 PM)

Lee Rd/Chagrin Blvd - TMC

Tue May 17, 2022
Full Length (7:30 AM-9:30 AM, 4 PM-6 PM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 953140, Location: 41.464465, -81.564946

Provided by: Tri-State Traffic Data, Inc.
184 Baker Road,
Coatesville, PA, 19320, US

Leg	Lee Rd								Chagrin Blvd								Southeast							
Direction	Southbound								Westbound								Northwestbound							
Time	R	T	BL	L	U	RR	App	Ped*	R	T	L	HL	U	RR	App	Ped*	HR	BR	BL	HL	U	HRR	App	Ped*
2022-05-17 7:30AM	16	99	2	7	0	0	**124**	3	8	68	11	0	0	0	**87**	2	0	1	4	1	0	0	**6**	2
7:45AM	15	98	3	7	0	0	**123**	2	17	72	14	0	0	1	**104**	1	0	2	3	1	0	0	**6**	0
Hourly Total	31	197	5	14	0	0	**247**	5	25	140	25	0	0	1	**191**	3	0	3	7	2	0	0	**12**	2
8:00AM	27	135	3	12	0	0	**177**	0	15	72	11	0	0	0	**98**	0	0	1	5	0	0	0	**6**	0
8:15AM	20	96	2	11	0	0	**129**	1	18	62	20	0	0	1	**101**	7	0	3	0	0	0	0	**3**	2
8:30AM	18	116	2	21	0	0	**157**	1	12	62	16	2	0	2	**94**	1	0	3	3	1	0	0	**7**	0
8:45AM	19	115	4	15	0	0	**153**	2	8	58	20	1	0	0	**87**	0	1	1	3	2	0	0	**7**	0
Hourly Total	84	462	11	59	0	0	**616**	4	53	254	67	3	0	3	**380**	8	1	8	11	3	0	0	**23**	2
9:00AM	21	93	2	9	0	0	**125**	3	7	73	26	0	0	0	**106**	1	1	2	1	0	0	0	**4**	0
9:15AM	21	92	1	8	0	0	**122**	1	14	64	8	1	0	0	**87**	1	0	3	3	2	0	0	**8**	1
9:30AM	0	2	0	0	0	0	**2**	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0
Hourly Total	42	187	3	17	0	0	**249**	4	21	137	34	1	0	0	**193**	2	1	5	4	2	0	0	**12**	1
4:00PM	28	167	5	13	0	0	**213**	6	10	113	32	0	0	0	**155**	2	2	5	1	0	0	0	**8**	1
4:15PM	21	157	12	16	0	0	**206**	1	11	112	23	1	0	0	**147**	2	1	3	2	2	0	0	**8**	1
4:30PM	31	158	7	28	0	0	**224**	0	19	99	36	1	0	2	**157**	3	1	2	2	2	0	0	**7**	2
4:45PM	25	165	8	14	0	0	**212**	3	18	94	31	0	0	0	**143**	6	0	5	8	2	0	0	**15**	0
Hourly Total	105	647	32	71	0	0	**855**	10	58	418	122	2	0	2	**602**	13	4	15	13	6	0	0	**38**	4
5:00PM	17	149	4	22	0	0	**192**	3	16	92	36	0	0	0	**144**	6	1	3	6	4	0	0	**14**	0
5:15PM	37	158	10	16	0	0	**221**	3	11	121	45	2	0	0	**179**	5	0	4	4	1	0	0	**9**	1
5:30PM	27	136	15	16	0	0	**194**	5	13	94	36	0	0	0	**143**	1	3	8	9	1	0	0	**21**	0
5:45PM	16	127	3	25	0	0	**171**	0	23	112	31	1	0	0	**167**	2	2	1	3	2	0	0	**8**	0
Hourly Total	97	570	32	79	0	0	**778**	11	63	419	148	3	0	0	**633**	14	6	16	22	8	0	0	**52**	1
6:00PM	0	0	0	0	0	0	**0**	0	1	0	0	0	0	0	**1**	0	0	0	0	0	0	0	**0**	0
Hourly Total	0	0	0	0	0	0	**0**	0	1	0	0	0	0	0	**1**	0	0	0	0	0	0	0	**0**	0
Total	359	2063	83	240	0	0	**2745**	34	221	1368	396	9	0	6	**2000**	40	12	47	57	21	0	0	**137**	10
% Approach	13.1%	75.2%	3.0%	8.7%	0%	0%	**-**	-	11.1%	68.4%	19.8%	0.5%	0%	0.3%	**-**	-	8.8%	34.3%	41.6%	15.3%	0%	0%	**-**	-
% Total	3.5%	19.9%	0.8%	2.3%	0%	0%	**26.5%**	-	2.1%	13.2%	3.8%	0.1%	0%	0.1%	**19.3%**	-	0.1%	0.5%	0.5%	0.2%	0%	0%	**1.3%**	-
Lights	351	2007	81	237	0	0	**2676**	-	217	1336	390	8	0	6	**1957**	-	12	46	56	19	0	0	**133**	-
% Lights	97.8%	97.3%	97.6%	98.8%	0%	0%	**97.5%**	-	98.2%	97.7%	98.5%	88.9%	0%	100%	**97.9%**	-	100%	97.9%	98.2%	90.5%	0%	0%	**97.1%**	-
Articulated Trucks and Single-Unit Trucks	4	37	1	1	0	0	**43**	-	4	10	6	1	0	0	**21**	-	0	1	1	0	0	0	**2**	-
% Articulated Trucks and Single-Unit Trucks	1.1%	1.8%	1.2%	0.4%	0%	0%	**1.6%**	-	1.8%	0.7%	1.5%	11.1%	0%	0%	**1.1%**	-	0%	2.1%	1.8%	0%	0%	0%	**1.5%**	-
Buses	4	19	1	2	0	0	**26**	-	0	22	0	0	0	0	**22**	-	0	0	0	2	0	0	**2**	-
% Buses	1.1%	0.9%	1.2%	0.8%	0%	0%	**0.9%**	-	0%	1.6%	0%	0%	0%	0%	**1.1%**	-	0%	0%	0%	9.5%	0%	0%	**1.5%**	-
Bicycles on Road	0	0	0	0	0	0	**0**	-	0	0	0	0	0	0	**0**	-	0	0	0	0	0	0	**0**	-
% Bicycles on Road	0%	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	0%	**0%**	-
Pedestrians	-	-	-	-	-	-	-	30	-	-	-	-	-	-	-	38	-	-	-	-	-	-	-	10
% Pedestrians	-	-	-	-	-	-	-	88.2%	-	-	-	-	-	-	-	95.0%	-	-	-	-	-	-	-	100%
Bicycles on Crosswalk	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	11.8%	-	-	-	-	-	-	-	5.0%	-	-	-	-	-	-	-	0%

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, HRR: Hard right on red, L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

Lee Rd/Chagrin Blvd - TMC

Tue May 17, 2022
Full Length (7:30 AM-9:30 AM, 4 PM-6 PM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 953140, Location: 41.464465, -81.564946

Provided by: Tri-State Traffic Data, Inc.
184 Baker Road,
Coatesville, PA, 19320, US

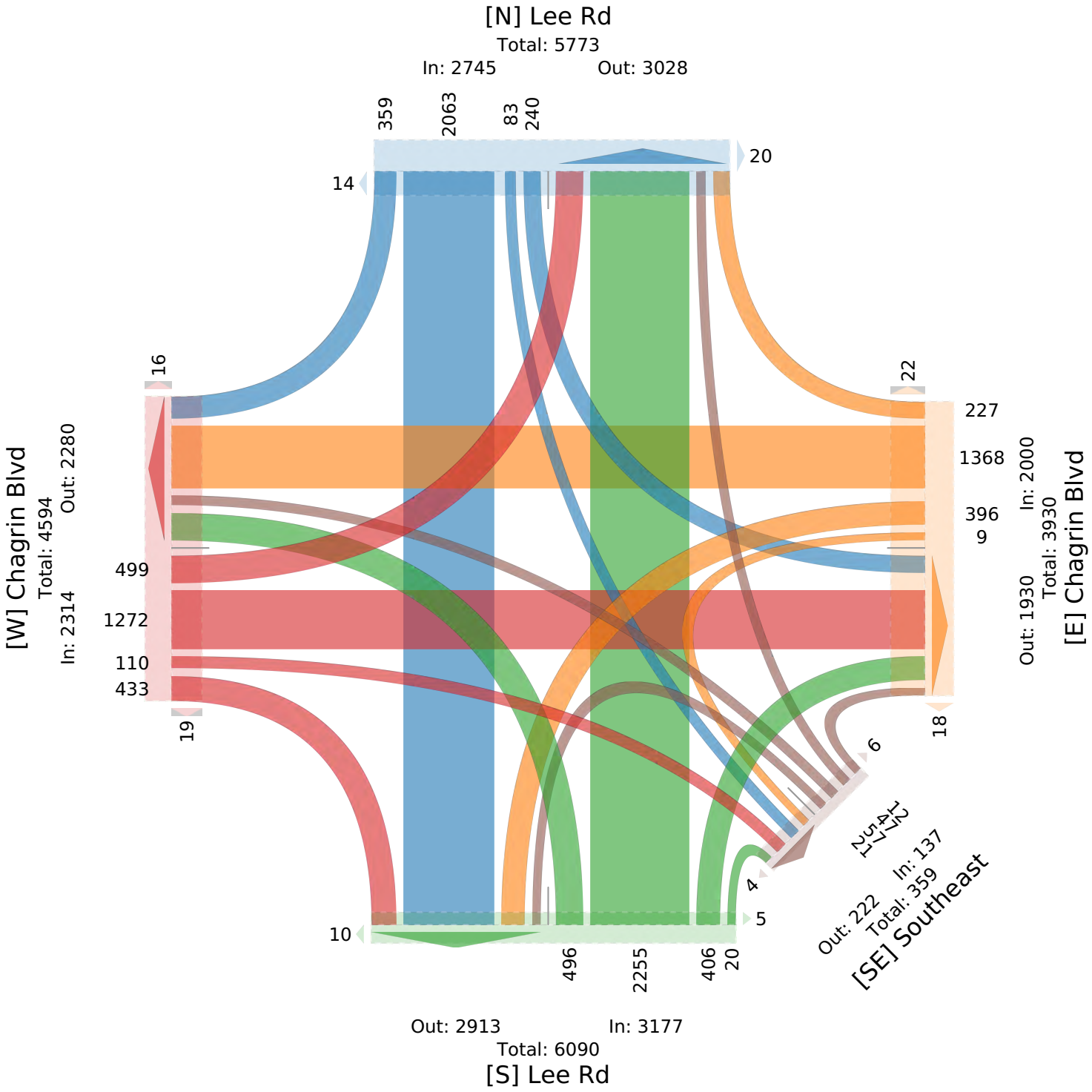
Leg	Lee Rd								Chagrin Blvd								
Direction	Northbound								Eastbound								
Time	HR	R	T	L	U	HRR	**App**	Ped*	R	BR	T	L	U	RR	**App**	Ped*	**Int**
2022-05-17 7:30AM	0	20	194	30	0	0	**244**	0	22	4	69	30	0	1	**126**	4	**587**
7:45AM	0	17	189	28	0	0	**234**	0	20	0	85	37	0	0	**142**	1	**609**
Hourly Total	0	37	383	58	0	0	**478**	0	42	4	154	67	0	1	**268**	5	**1196**
8:00AM	0	12	172	33	0	0	**217**	0	25	3	71	27	0	0	**126**	1	**624**
8:15AM	1	14	147	21	0	0	**183**	0	21	1	73	33	0	0	**128**	1	**544**
8:30AM	0	18	147	28	0	0	**193**	2	22	5	88	26	0	0	**141**	2	**592**
8:45AM	0	21	149	26	0	0	**196**	0	19	5	76	33	0	0	**133**	2	**576**
Hourly Total	1	65	615	108	0	0	**789**	2	87	14	308	119	0	0	**528**	6	**2336**
9:00AM	3	16	120	32	0	0	**171**	0	31	3	61	30	0	0	**125**	2	**531**
9:15AM	2	22	113	31	0	0	**168**	1	20	5	40	14	0	0	**79**	2	**464**
9:30AM	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	**2**
Hourly Total	5	38	233	63	0	0	**339**	1	51	8	101	44	0	0	**204**	4	**997**
4:00PM	2	35	142	36	0	0	**215**	1	27	7	74	38	0	0	**146**	12	**737**
4:15PM	2	38	118	36	0	0	**194**	1	27	9	98	31	0	1	**166**	3	**721**
4:30PM	2	35	125	39	0	0	**201**	4	36	10	81	34	0	0	**161**	1	**750**
4:45PM	2	26	123	30	0	1	**182**	1	26	14	94	35	0	0	**169**	1	**721**
Hourly Total	8	134	508	141	0	1	**792**	7	116	40	347	138	0	1	**642**	17	**2929**
5:00PM	0	40	120	25	0	0	**185**	0	35	10	81	41	0	0	**167**	1	**702**
5:15PM	1	34	151	38	0	0	**224**	0	34	11	86	26	0	0	**157**	0	**790**
5:30PM	0	33	130	36	0	0	**199**	2	39	12	99	34	0	0	**184**	2	**741**
5:45PM	3	25	115	27	0	1	**171**	3	26	11	96	30	0	1	**164**	0	**681**
Hourly Total	4	132	516	126	0	1	**779**	5	134	44	362	131	0	1	**672**	3	**2914**
6:00PM	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	**1**
Hourly Total	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**	0	**1**
Total	18	406	2255	496	0	2	**3177**	15	430	110	1272	499	0	3	**2314**	35	**10373**
% Approach	0.6%	12.8%	71.0%	15.6%	0%	0.1%	**-**	-	18.6%	4.8%	55.0%	21.6%	0%	0.1%	**-**	-	-
% Total	0.2%	3.9%	21.7%	4.8%	0%	0%	**30.6%**	-	4.1%	1.1%	12.3%	4.8%	0%	0%	**22.3%**	-	-
Lights	18	398	2182	477	0	2	**3077**	-	420	108	1239	481	0	3	**2251**	-	10094
% Lights	100%	98.0%	96.8%	96.2%	0%	100%	**96.9%**	-	97.7%	98.2%	97.4%	96.4%	0%	100%	**97.3%**	-	97.3%
Articulated Trucks and Single-Unit Trucks	0	8	46	15	0	0	**69**	-	8	1	16	13	0	0	**38**	-	173
% Articulated Trucks and Single-Unit Trucks	0%	2.0%	2.0%	3.0%	0%	0%	**2.2%**	-	1.9%	0.9%	1.3%	2.6%	0%	0%	**1.6%**	-	1.7%
Buses	0	0	26	4	0	0	**30**	-	2	1	17	4	0	0	**24**	-	104
% Buses	0%	0%	1.2%	0.8%	0%	0%	**0.9%**	-	0.5%	0.9%	1.3%	0.8%	0%	0%	**1.0%**	-	1.0%
Bicycles on Road	0	0	1	0	0	0	**1**	-	0	0	0	1	0	0	**1**	-	2
% Bicycles on Road	0%	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0.2%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	-	-	15	-	-	-	-	-	-	-	31	
% Pedestrians	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	88.6%	-
Bicycles on Crosswalk	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	4	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	11.4%	-

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, HRR: Hard right on red, L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

Lee Rd/Chagrin Blvd - TMC

Tue May 17, 2022
Full Length (7:30 AM-9:30 AM, 4 PM-6 PM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 953140, Location: 41.464465, -81.564946

Provided by: Tri-State Traffic Data, Inc.
184 Baker Road,
Coatesville, PA, 19320, US



Lee Rd/Chagrin Blvd - TMC

Tue May 17, 2022
AM Peak (7:45 AM - 8:45 AM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 953140, Location: 41.464465, -81.564946

Provided by: Tri-State Traffic Data, Inc.
184 Baker Road,
Coatesville, PA, 19320, US

Leg	Lee Rd								Chagrin Blvd								Southeast							
Direction	Southbound								Westbound								Northwestbound							
Time	R	T	BL	L	U	RR	App	Ped*	R	T	L	HL	U	RR	App	Ped*	HR	BR	BL	HL	U	HRR	App	Ped*
2022-05-17 7:45AM	15	98	3	7	0	0	**123**	2	17	72	14	0	0	1	**104**	1	0	2	3	1	0	0	**6**	0
8:00AM	27	135	3	12	0	0	**177**	0	15	72	11	0	0	0	**98**	0	0	1	5	0	0	0	**6**	0
8:15AM	20	96	2	11	0	0	**129**	1	18	62	20	0	0	1	**101**	7	0	3	0	0	0	0	**3**	2
8:30AM	18	116	2	21	0	0	**157**	1	12	62	16	2	0	2	**94**	1	0	3	3	1	0	0	**7**	0
Total	80	445	10	51	0	0	**586**	4	62	268	61	2	0	4	**397**	9	0	9	11	2	0	0	**22**	2
% Approach	13.7%	75.9%	1.7%	8.7%	0%	0%	**-**	-	15.6%	67.5%	15.4%	0.5%	0%	1.0%	**-**	-	0%	40.9%	50.0%	9.1%	0%	0%	**-**	-
% Total	3.4%	18.8%	0.4%	2.2%	0%	0%	**24.7%**	-	2.6%	11.3%	2.6%	0.1%	0%	0.2%	**16.8%**	-	0%	0.4%	0.5%	0.1%	0%	0%	**0.9%**	-
PHF	0.741	0.824	0.833	0.607	-	-	**0.828**	-	0.861	0.931	0.763	0.250	-	0.500	**0.954**	-	-	0.750	0.550	0.500	-	-	**0.786**	-
Lights	77	434	10	51	0	0	**572**	-	61	257	59	2	0	4	**383**	-	0	9	11	1	0	0	**21**	-
% Lights	96.3%	97.5%	100%	100%	0%	0%	**97.6%**	-	98.4%	95.9%	96.7%	100%	0%	100%	**96.5%**	-	0%	100%	100%	50.0%	0%	0%	**95.5%**	-
Articulated Trucks and Single-Unit Trucks	1	6	0	0	0	0	**7**	-	1	4	2	0	0	0	**7**	-	0	0	0	0	0	0	**0**	-
% Articulated Trucks and Single-Unit Trucks	1.3%	1.3%	0%	0%	0%	0%	**1.2%**	-	1.6%	1.5%	3.3%	0%	0%	0%	**1.8%**	-	0%	0%	0%	0%	0%	0%	**0%**	-
Buses	2	5	0	0	0	0	**7**	-	0	7	0	0	0	0	**7**	-	0	0	0	1	0	0	**1**	-
% Buses	2.5%	1.1%	0%	0%	0%	0%	**1.2%**	-	0%	2.6%	0%	0%	0%	0%	**1.8%**	-	0%	0%	0%	50.0%	0%	0%	**4.5%**	-
Bicycles on Road	0	0	0	0	0	0	**0**	-	0	0	0	0	0	0	**0**	-	0	0	0	0	0	0	**0**	-
% Bicycles on Road	0%	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	0%	**0%**	-
Pedestrians	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	2
% Pedestrians	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	88.9%	-	-	-	-	-	-	-	100%
Bicycles on Crosswalk	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	11.1%	-	-	-	-	-	-	-	0%

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, HRR: Hard right on red, L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

Lee Rd/Chagrin Blvd - TMC

Tue May 17, 2022
AM Peak (7:45 AM - 8:45 AM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 953140, Location: 41.464465, -81.564946

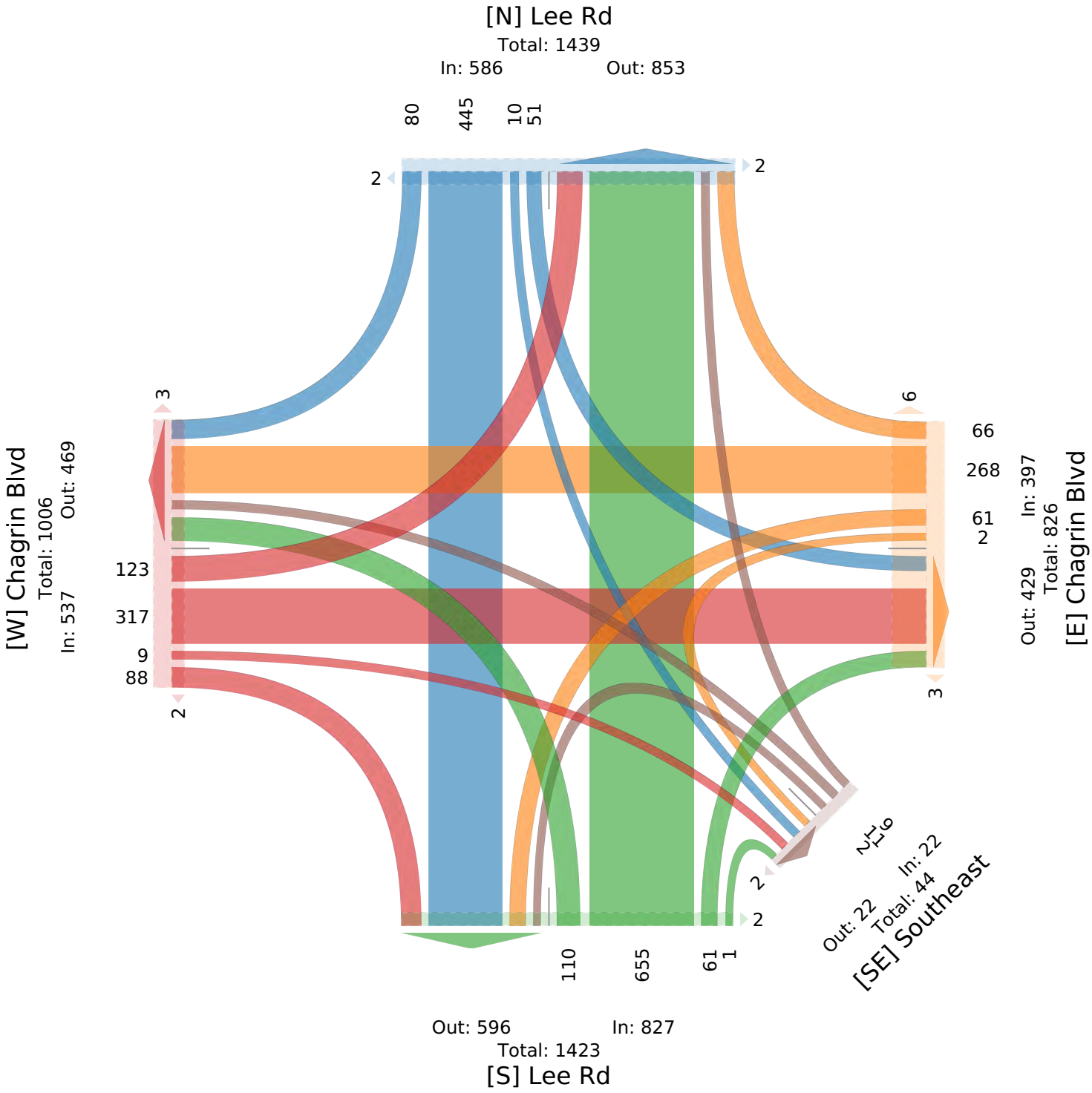
Provided by: Tri-State Traffic Data, Inc.
184 Baker Road,
Coatesville, PA, 19320, US

Leg	Lee Rd								Chagrin Blvd								
Direction	Northbound								Eastbound								
Time	HR	R	T	L	U	HRR	**App**	Ped*	R	BR	T	L	U	RR	**App**	Ped*	**Int**
2022-05-17 7:45AM	0	17	189	28	0	0	**234**	0	20	0	85	37	0	0	**142**	1	**609**
8:00AM	0	12	172	33	0	0	**217**	0	25	3	71	27	0	0	**126**	1	**624**
8:15AM	1	14	147	21	0	0	**183**	0	21	1	73	33	0	0	**128**	1	**544**
8:30AM	0	18	147	28	0	0	**193**	2	22	5	88	26	0	0	**141**	2	**592**
Total	1	61	655	110	0	0	**827**	2	88	9	317	123	0	0	**537**	5	**2369**
% Approach	0.1%	7.4%	79.2%	13.3%	0%	0%	**-**	-	16.4%	1.7%	59.0%	22.9%	0%	0%	**-**	-	-
% Total	0%	2.6%	27.6%	4.6%	0%	0%	**34.9%**	-	3.7%	0.4%	13.4%	5.2%	0%	0%	**22.7%**	-	-
PHF	0.250	0.847	0.866	0.833	-	-	**0.884**	-	0.880	0.450	0.901	0.831	-	-	**0.945**	-	0.949
Lights	1	58	632	106	0	0	**797**	-	88	8	303	117	0	0	**516**	-	2289
% Lights	100%	95.1%	96.5%	96.4%	0%	0%	**96.4%**	-	100%	88.9%	95.6%	95.1%	0%	0%	**96.1%**	-	96.6%
Articulated Trucks and Single-Unit Trucks	0	3	17	2	0	0	**22**	-	0	0	8	5	0	0	**13**	-	49
% Articulated Trucks and Single-Unit Trucks	0%	4.9%	2.6%	1.8%	0%	0%	**2.7%**	-	0%	0%	2.5%	4.1%	0%	0%	**2.4%**	-	2.1%
Buses	0	0	6	2	0	0	**8**	-	0	1	6	1	0	0	**8**	-	31
% Buses	0%	0%	0.9%	1.8%	0%	0%	**1.0%**	-	0%	11.1%	1.9%	0.8%	0%	0%	**1.5%**	-	1.3%
Bicycles on Road	0	0	0	0	0	0	**0**	-	0	0	0	0	0	0	**0**	-	0
% Bicycles on Road	0%	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	5	
% Pedestrians	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, HRR: Hard right on red, L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

Lee Rd/Chagrin Blvd - TMC
Tue May 17, 2022
AM Peak (7:45 AM - 8:45 AM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 953140, Location: 41.464465, -81.564946

Provided by: Tri-State Traffic Data, Inc.
184 Baker Road,
Coatesville, PA, 19320, US



Lee Rd/Chagrin Blvd - TMC

Tue May 17, 2022
PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 953140, Location: 41.464465, -81.564946

Provided by: Tri-State Traffic Data, Inc.
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Coatesville, PA, 19320, US

Leg	Lee Rd								Chagrin Blvd								Southeast							
Direction	Southbound								Westbound								Northwestbound							
Time	R	T	BL	L	U	RR	App	Ped*	R	T	L	HL	U	RR	App	Ped*	HR	BR	BL	HL	U	HRR	App	Ped*
2022-05-17 4:30PM	31	158	7	28	0	0	**224**	0	19	99	36	1	0	2	**157**	3	1	2	2	2	0	0	**7**	2
4:45PM	25	165	8	14	0	0	**212**	3	18	94	31	0	0	0	**143**	6	0	5	8	2	0	0	**15**	0
5:00PM	17	149	4	22	0	0	**192**	3	16	92	36	0	0	0	**144**	6	1	3	6	4	0	0	**14**	0
5:15PM	37	158	10	16	0	0	**221**	3	11	121	45	2	0	0	**179**	5	0	4	4	1	0	0	**9**	1
Total	110	630	29	80	0	0	**849**	9	64	406	148	3	0	2	**623**	20	2	14	20	9	0	0	**45**	3
% Approach	13.0%	74.2%	3.4%	9.4%	0%	0%	**-**	-	10.3%	65.2%	23.8%	0.5%	0%	0.3%	**-**	-	4.4%	31.1%	44.4%	20.0%	0%	0%	**-**	-
% Total	3.7%	21.3%	1.0%	2.7%	0%	0%	**28.7%**	-	2.2%	13.7%	5.0%	0.1%	0%	0.1%	**21.0%**	-	0.1%	0.5%	0.7%	0.3%	0%	0%	**1.5%**	-
PHF	0.743	0.955	0.725	0.714	-	-	**0.948**	-	0.842	0.839	0.822	0.375	-	0.250	**0.870**	-	0.500	0.700	0.625	0.563	-	-	**0.750**	-
Lights	110	613	29	80	0	0	**832**	-	64	399	147	3	0	2	**615**	-	2	14	19	9	0	0	**44**	-
% Lights	100%	97.3%	100%	100%	0%	0%	**98.0%**	-	100%	98.3%	99.3%	100%	0%	100%	**98.7%**	-	100%	100%	95.0%	100%	0%	0%	**97.8%**	-
Articulated Trucks and Single-Unit Trucks	0	15	0	0	0	0	**15**	-	0	2	1	0	0	0	**3**	-	0	0	1	0	0	0	**1**	-
% Articulated Trucks and Single-Unit Trucks	0%	2.4%	0%	0%	0%	0%	**1.8%**	-	0%	0.5%	0.7%	0%	0%	0%	**0.5%**	-	0%	0%	5.0%	0%	0%	0%	**2.2%**	-
Buses	0	2	0	0	0	0	**2**	-	0	5	0	0	0	0	**5**	-	0	0	0	0	0	0	**0**	-
% Buses	0%	0.3%	0%	0%	0%	0%	**0.2%**	-	0%	1.2%	0%	0%	0%	0%	**0.8%**	-	0%	0%	0%	0%	0%	0%	**0%**	-
Bicycles on Road	0	0	0	0	0	0	**0**	-	0	0	0	0	0	0	**0**	-	0	0	0	0	0	0	**0**	-
% Bicycles on Road	0%	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	0%	0%	**0%**	-
Pedestrians	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	20	-	-	-	-	-	-	-	3
% Pedestrians	-	-	-	-	-	-	-	88.9%	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	100%
Bicycles on Crosswalk	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0
% Bicycles on Crosswalk	-	-	-	-	-	-	-	11.1%	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	0%

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, HRR: Hard right on red, L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

Lee Rd/Chagrin Blvd - TMC

Tue May 17, 2022
PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 953140, Location: 41.464465, -81.564946

Provided by: Tri-State Traffic Data, Inc.
184 Baker Road,
Coatesville, PA, 19320, US

Leg	Lee Rd								Chagrin Blvd								
Direction	Northbound								Eastbound								
Time	HR	R	T	L	U	HRR	**App**	Ped*	R	BR	T	L	U	RR	**App**	Ped*	**Int**
2022-05-17 4:30PM	2	35	125	39	0	0	**201**	4	36	10	81	34	0	0	**161**	1	**750**
4:45PM	2	26	123	30	0	1	**182**	1	26	14	94	35	0	0	**169**	1	**721**
5:00PM	0	40	120	25	0	0	**185**	0	35	10	81	41	0	0	**167**	1	**702**
5:15PM	1	34	151	38	0	0	**224**	0	34	11	86	26	0	0	**157**	0	**790**
Total	5	135	519	132	0	1	**792**	5	131	45	342	136	0	0	**654**	3	**2963**
% Approach	0.6%	17.0%	65.5%	16.7%	0%	0.1%	**-**	-	20.0%	6.9%	52.3%	20.8%	0%	0%	**-**	-	-
% Total	0.2%	4.6%	17.5%	4.5%	0%	0%	**26.7%**	-	4.4%	1.5%	11.5%	4.6%	0%	0%	**22.1%**	-	-
PHF	0.625	0.844	0.858	0.846	-	0.250	**0.883**	-	0.910	0.804	0.910	0.823	-	-	**0.972**	-	0.937
Lights	5	133	510	122	0	1	**771**	-	129	45	339	134	0	0	**647**	-	2909
% Lights	100%	98.5%	98.3%	92.4%	0%	100%	**97.3%**	-	98.5%	100%	99.1%	98.5%	0%	0%	**98.9%**	-	98.2%
Articulated Trucks and Single-Unit Trucks	0	2	1	9	0	0	**12**	-	2	0	0	0	0	0	**2**	-	33
% Articulated Trucks and Single-Unit Trucks	0%	1.5%	0.2%	6.8%	0%	0%	**1.5%**	-	1.5%	0%	0%	0%	0%	0%	**0.3%**	-	1.1%
Buses	0	0	7	1	0	0	**8**	-	0	0	3	1	0	0	**4**	-	19
% Buses	0%	0%	1.3%	0.8%	0%	0%	**1.0%**	-	0%	0%	0.9%	0.7%	0%	0%	**0.6%**	-	0.6%
Bicycles on Road	0	0	1	0	0	0	**1**	-	0	0	0	1	0	0	**1**	-	2
% Bicycles on Road	0%	0%	0.2%	0%	0%	0%	**0.1%**	-	0%	0%	0%	0.7%	0%	0%	**0.2%**	-	0.1%
Pedestrians	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	2	
% Pedestrians	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	66.7%	-
Bicycles on Crosswalk	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	1	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	33.3%	-

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, HRR: Hard right on red, L: Left, R: Right, RR: Right on red, T: Thru, U: U-Turn

Lee Rd/Chagrin Blvd - TMC
Tue May 17, 2022
PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 953140, Location: 41.464465, -81.564946

Provided by: Tri-State Traffic Data, Inc.
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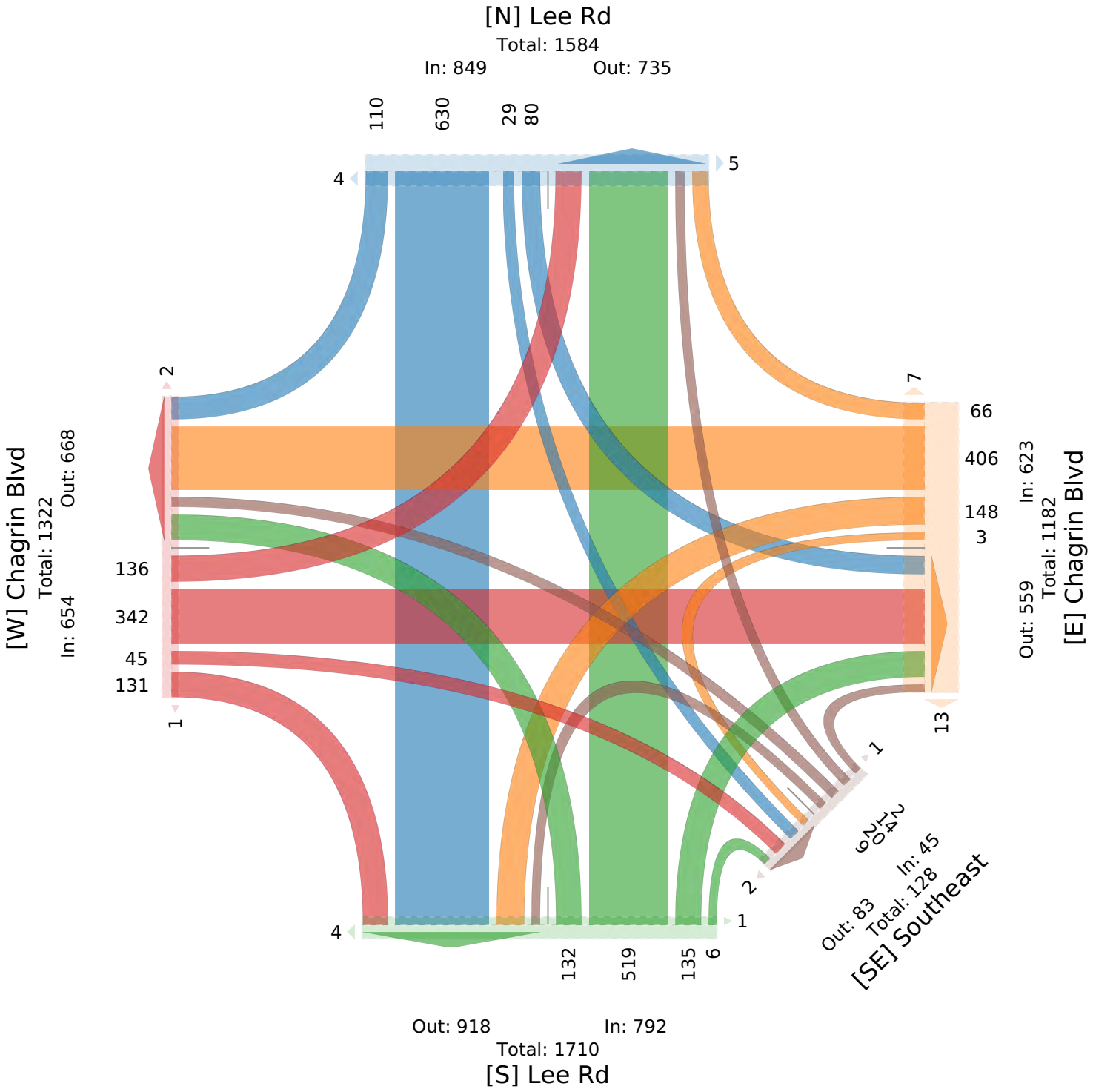

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Shaker Heights, OH
Lee Rd & Lemond Blvd
Tuesday, May 17, 2022
Location: 41.463006, -81.564888

Count Name: Lee Rd/Lemond Blvd
Site Code:
Start Date: 05/17/2022

Turning Movement Data

Start Time	Lomond Blvd Westbound						Lee Rd Northbound						Lee Rd Southbound					
	Left	Right	Right on Red	U-Turn	Peds	App. Total	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Int. Total
7:30 AM	6	8	9	0	1	23	224	10	2	0	0	236	10	114	0	0	124	383
7:45 AM	4	7	7	0	0	18	222	17	2	0	0	241	16	114	0	0	130	389
Hourly Total	10	15	16	0	1	41	446	27	4	0	0	477	26	228	0	0	254	772
8:00 AM	3	10	8	0	0	21	205	14	2	0	0	221	20	153	0	0	173	415
8:15 AM	5	10	6	0	3	21	163	8	1	0	0	172	16	127	0	0	143	336
8:30 AM	4	10	5	0	5	19	173	11	1	0	0	185	13	146	0	0	159	363
8:45 AM	3	10	7	0	0	20	185	19	1	0	0	205	13	140	0	0	153	378
Hourly Total	15	40	26	0	8	81	726	52	5	0	0	783	62	566	0	0	628	1492
9:00 AM	3	4	6	0	2	13	164	13	0	0	0	177	20	122	0	0	142	332
9:15 AM	3	3	5	0	0	11	160	18	1	0	0	179	8	113	0	0	121	311
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	6	7	11	0	2	24	324	31	1	0	0	356	28	235	0	0	263	643
4:00 PM	5	10	7	0	4	22	188	28	1	0	0	217	20	195	0	1	215	454
4:15 PM	7	13	5	0	1	25	188	20	1	0	0	209	16	190	0	0	206	440
4:30 PM	10	10	11	0	2	31	179	17	1	0	0	197	27	193	0	2	220	448
4:45 PM	3	8	9	0	1	20	175	34	3	0	0	212	20	197	0	1	217	449
Hourly Total	25	41	32	0	8	98	730	99	6	0	0	835	83	775	0	4	858	1791
5:00 PM	5	8	7	0	1	20	169	19	4	1	0	193	28	193	0	1	221	434
5:15 PM	7	4	12	0	4	23	184	26	1	0	3	211	19	205	0	0	224	458
5:30 PM	6	5	11	0	2	22	188	25	2	0	3	215	30	178	0	0	208	445
5:45 PM	13	5	9	0	0	27	146	10	3	0	1	159	20	175	0	0	195	381
Hourly Total	31	22	39	0	7	92	687	80	10	1	7	778	97	751	0	1	848	1718
Grand Total	87	125	124	0	26	336	2913	289	26	1	7	3229	296	2555	0	5	2851	6416
Approach %	25.9	37.2	36.9	0.0	-	-	90.2	9.0	0.8	0.0	-	-	10.4	89.6	0.0	-	-	-
Total %	1.4	1.9	1.9	0.0	-	5.2	45.4	4.5	0.4	0.0	-	50.3	4.6	39.8	0.0	-	44.4	-
Lights	85	122	119	0	-	326	2828	275	25	1	-	3129	286	2496	0	-	2782	6237
% Lights	97.7	97.6	96.0	-	-	97.0	97.1	95.2	96.2	100.0	-	96.9	96.6	97.7	-	-	97.6	97.2
Buses	0	1	0	0	-	1	27	5	1	0	-	33	7	15	0	-	22	56
% Buses	0.0	0.8	0.0	-	-	0.3	0.9	1.7	3.8	0.0	-	1.0	2.4	0.6	-	-	0.8	0.9
Trucks	2	2	5	0	-	9	58	9	0	0	-	67	2	44	0	-	46	122
% Trucks	2.3	1.6	4.0	-	-	2.7	2.0	3.1	0.0	0.0	-	2.1	0.7	1.7	-	-	1.6	1.9
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	1	0	0	-	1	1
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.3	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	20.0	-	-
Pedestrians	-	-	-	-	26	-	-	-	-	-	7	-	-	-	-	4	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	80.0	-	-

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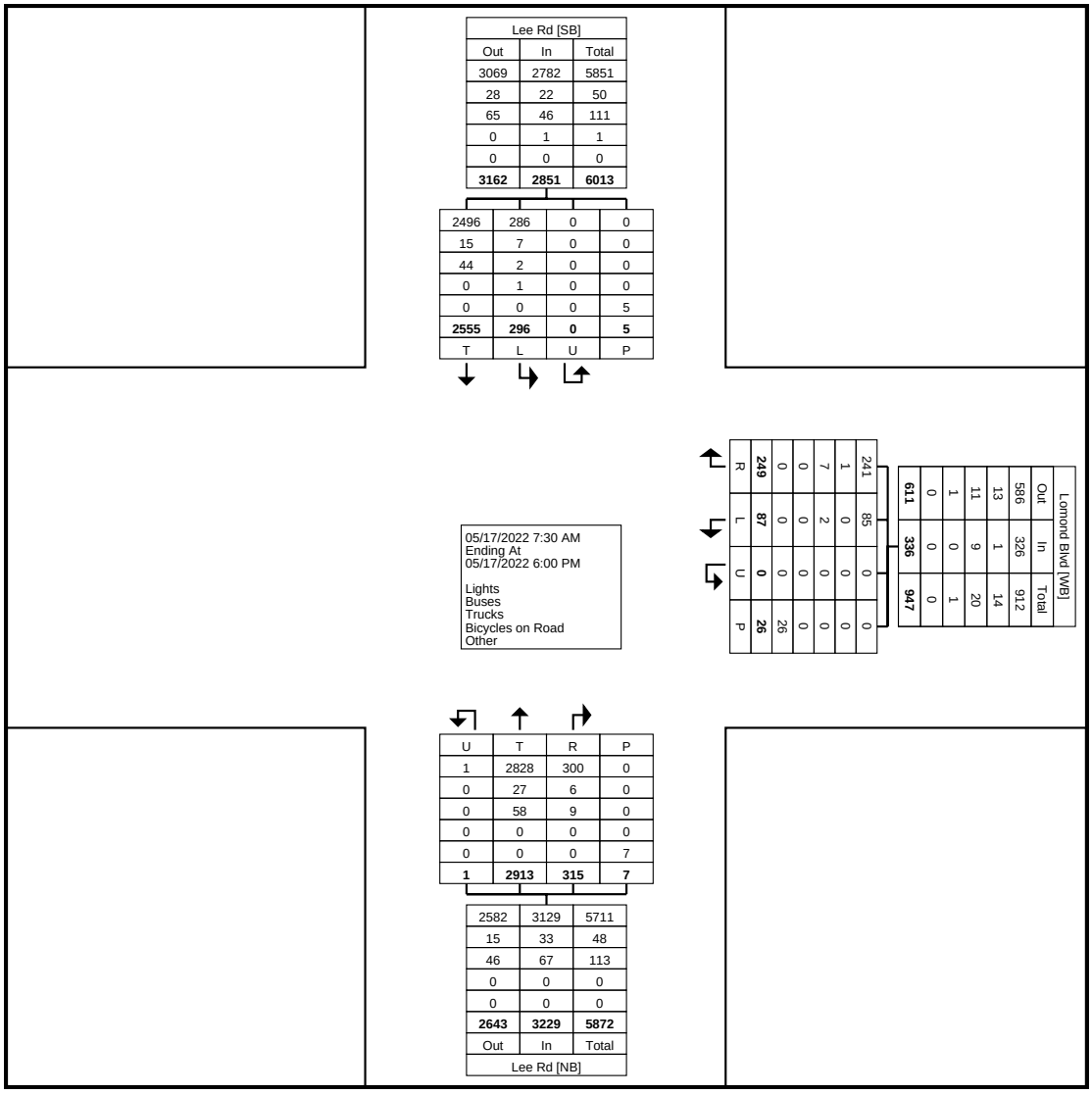
Shaker Heights, OH
Lee Rd & Lemond Blvd
Tuesday, May 17, 2022
Location: 41.463006, -81.564888

Count Name: Lee Rd/Lemond Blvd
Site Code:
Start Date: 05/17/2022



Turning Movement Data Plot

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Shaker Heights, OH
Lee Rd & Lemond Blvd
Tuesday, May 17, 2022
Location: 41.463006, -81.564888

Count Name: Lee Rd/Lemond Blvd
Site Code:
Start Date: 05/17/2022

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Lomond Blvd Westbound						Lee Rd Northbound						Lee Rd Southbound					
	Left	Right	Right on Red	U-Turn	Peds	App. Total	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Int. Total
7:30 AM	6	8	9	0	1	23	224	10	2	0	0	236	10	114	0	0	124	383
7:45 AM	4	7	7	0	0	18	222	17	2	0	0	241	16	114	0	0	130	389
8:00 AM	3	10	8	0	0	21	205	14	2	0	0	221	20	153	0	0	173	415
8:15 AM	5	10	6	0	3	21	163	8	1	0	0	172	16	127	0	0	143	336
Total	18	35	30	0	4	83	814	49	7	0	0	870	62	508	0	0	570	1523
Approach %	21.7	42.2	36.1	0.0	-	-	93.6	5.6	0.8	0.0	-	-	10.9	89.1	0.0	-	-	-
Total %	1.2	2.3	2.0	0.0	-	5.4	53.4	3.2	0.5	0.0	-	57.1	4.1	33.4	0.0	-	37.4	-
PHF	0.750	0.875	0.833	0.000	-	0.902	0.908	0.721	0.875	0.000	-	0.902	0.775	0.830	0.000	-	0.824	0.917
Lights	18	34	30	0	-	82	786	46	7	0	-	839	59	498	0	-	557	1478
% Lights	100.0	97.1	100.0	-	-	98.8	96.6	93.9	100.0	-	-	96.4	95.2	98.0	-	-	97.7	97.0
Buses	0	1	0	0	-	1	9	3	0	0	-	12	2	4	0	-	6	19
% Buses	0.0	2.9	0.0	-	-	1.2	1.1	6.1	0.0	-	-	1.4	3.2	0.8	-	-	1.1	1.2
Trucks	0	0	0	0	-	0	19	0	0	0	-	19	0	6	0	-	6	25
% Trucks	0.0	0.0	0.0	-	-	0.0	2.3	0.0	0.0	-	-	2.2	0.0	1.2	-	-	1.1	1.6
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	1	0	0	-	1	1
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	1.6	0.0	-	-	0.2	0.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-

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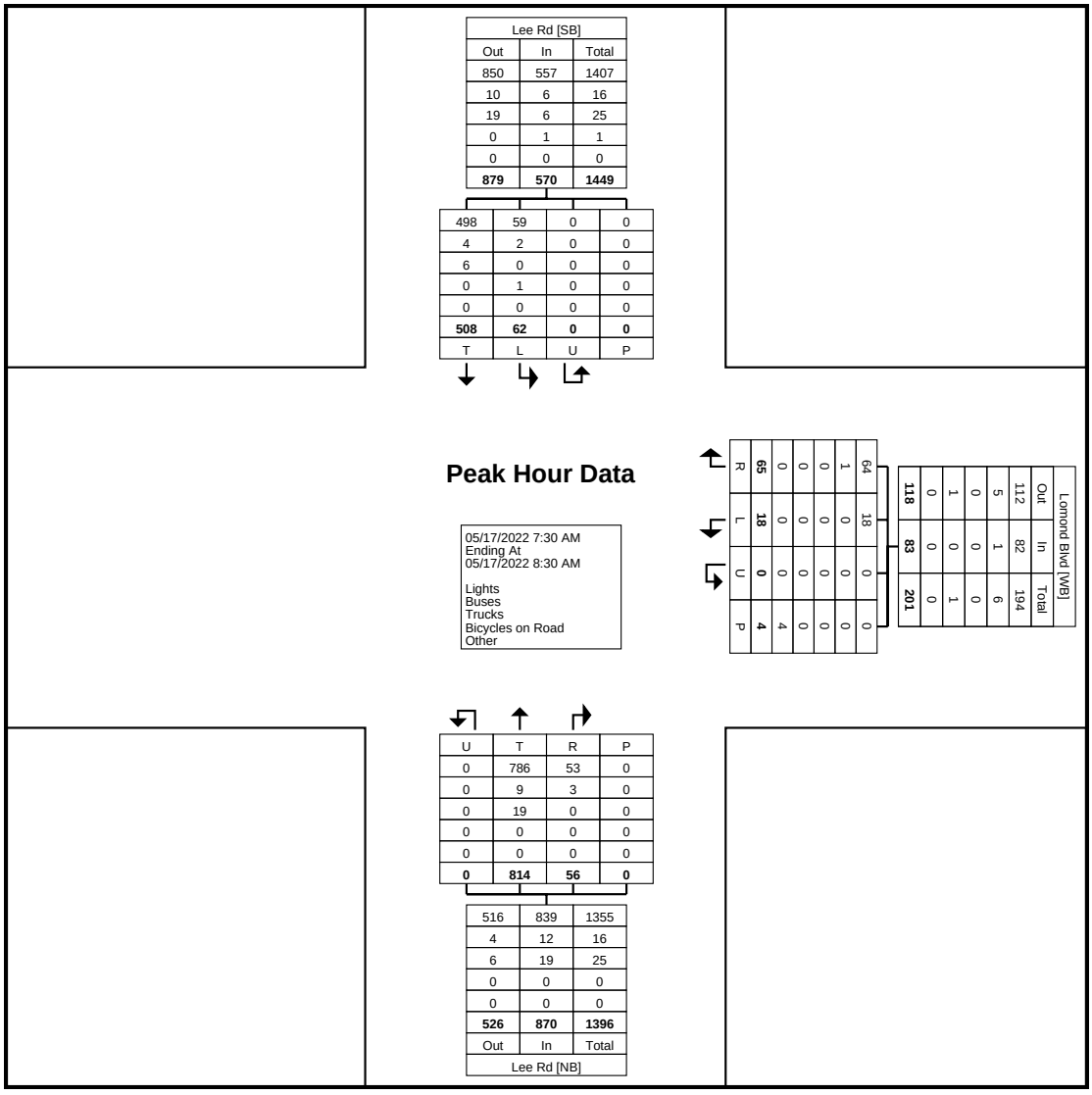
Shaker Heights, OH
Lee Rd & Lemond Blvd
Tuesday, May 17, 2022
Location: 41.463006, -81.564888

Count Name: Lee Rd/Lemond Blvd
Site Code:
Start Date: 05/17/2022



Turning Movement Peak Hour Data Plot (7:30 AM)

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Shaker Heights, OH
Lee Rd & Lemond Blvd
Tuesday, May 17, 2022
Location: 41.463006, -81.564888

Count Name: Lee Rd/Lemond Blvd
Site Code:
Start Date: 05/17/2022

Turning Movement Peak Hour Data (4:00 PM)

Start Time	Lomond Blvd Westbound						Lee Rd Northbound						Lee Rd Southbound					
	Left	Right	Right on Red	U-Turn	Peds	App. Total	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	U-Turn	Peds	App. Total	Int. Total
4:00 PM	5	10	7	0	4	22	188	28	1	0	0	217	20	195	0	1	215	454
4:15 PM	7	13	5	0	1	25	188	20	1	0	0	209	16	190	0	0	206	440
4:30 PM	10	10	11	0	2	31	179	17	1	0	0	197	27	193	0	2	220	448
4:45 PM	3	8	9	0	1	20	175	34	3	0	0	212	20	197	0	1	217	449
Total	25	41	32	0	8	98	730	99	6	0	0	835	83	775	0	4	858	1791
Approach %	25.5	41.8	32.7	0.0	-	-	87.4	11.9	0.7	0.0	-	-	9.7	90.3	0.0	-	-	-
Total %	1.4	2.3	1.8	0.0	-	5.5	40.8	5.5	0.3	0.0	-	46.6	4.6	43.3	0.0	-	47.9	-
PHF	0.625	0.788	0.727	0.000	-	0.790	0.971	0.728	0.500	0.000	-	0.962	0.769	0.984	0.000	-	0.975	0.986
Lights	24	40	30	0	-	94	714	92	6	0	-	812	78	755	0	-	833	1739
% Lights	96.0	97.6	93.8	-	-	95.9	97.8	92.9	100.0	-	-	97.2	94.0	97.4	-	-	97.1	97.1
Buses	0	0	0	0	-	0	6	2	0	0	-	8	3	3	0	-	6	14
% Buses	0.0	0.0	0.0	-	-	0.0	0.8	2.0	0.0	-	-	1.0	3.6	0.4	-	-	0.7	0.8
Trucks	1	1	2	0	-	4	10	5	0	0	-	15	2	17	0	-	19	38
% Trucks	4.0	2.4	6.3	-	-	4.1	1.4	5.1	0.0	-	-	1.8	2.4	2.2	-	-	2.2	2.1
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	1	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	25.0	-	-
Pedestrians	-	-	-	-	8	-	-	-	-	-	0	-	-	-	-	3	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	75.0	-	-

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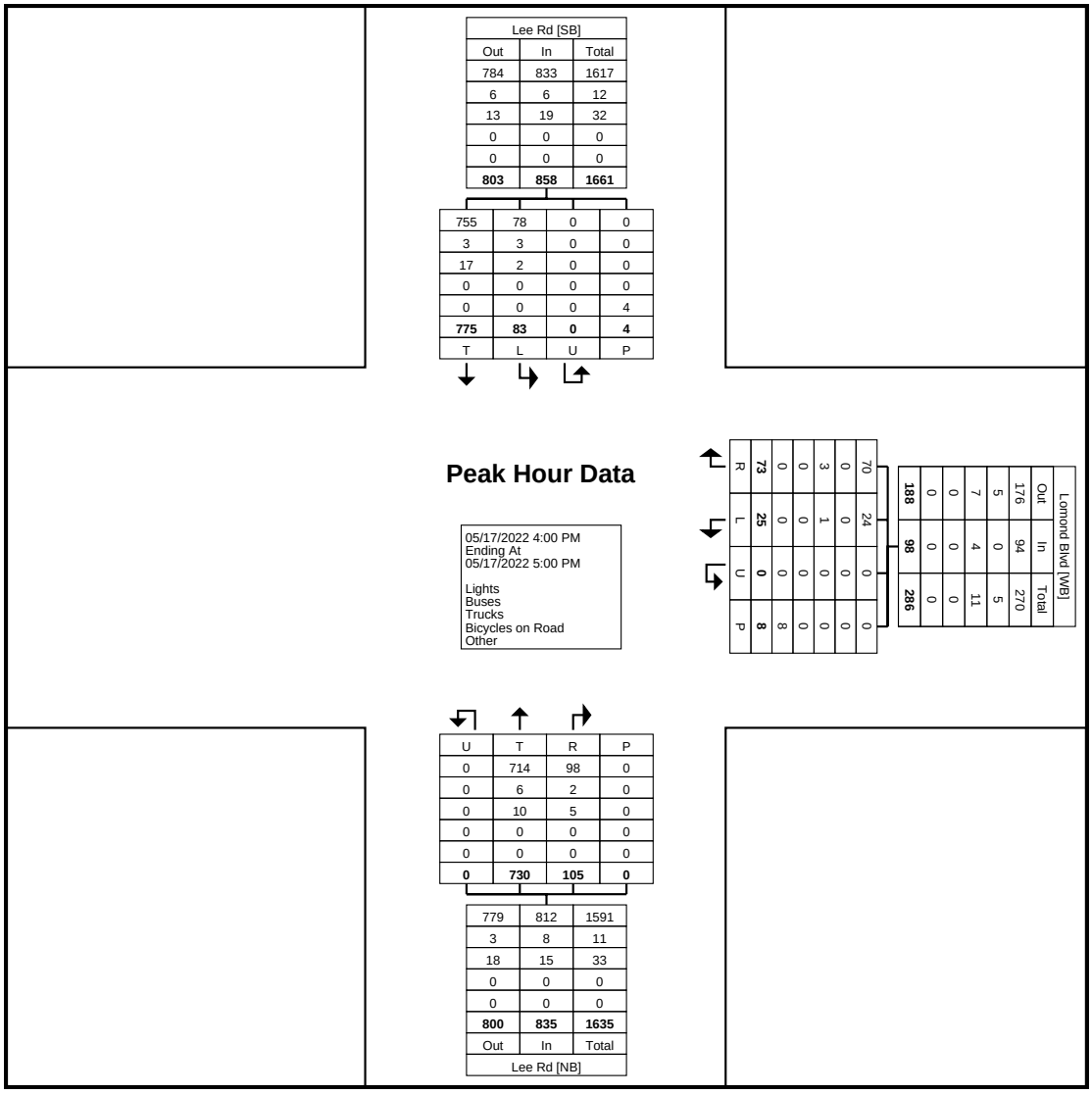
Shaker Heights, OH
Lee Rd & Lemond Blvd
Tuesday, May 17, 2022
Location: 41.463006, -81.564888

Count Name: Lee Rd/Lemond Blvd
Site Code:
Start Date: 05/17/2022



Turning Movement Peak Hour Data Plot (4:00 PM)

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Shaker Heights, OH
Lee Rd & Scottsdale Blvd
Tuesday, May 17, 2022
Location: 41.457642, -81.564917

Count Name: Lee Rd/Scottsdale Blvd
Site Code:
Start Date: 05/17/2022

Turning Movement Data

Start Time	Scottsdale Blvd Eastbound							Scottsdale Blvd Westbound							Lee Rd Northbound							Lee Rd Southbound							Int. Total
	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	
7:30 AM	5	0	8	9	0	0	22	7	5	4	6	0	1	22	1	239	3	0	0	1	243	0	125	1	0	0	1	126	413
7:45 AM	14	0	15	6	0	2	35	13	4	7	3	0	0	27	1	215	1	1	0	0	218	0	109	4	0	0	0	113	393
Hourly Total	19	0	23	15	0	2	57	20	9	11	9	0	1	49	2	454	4	1	0	1	461	0	234	5	0	0	1	239	806
8:00 AM	4	1	8	6	0	0	19	9	7	3	1	0	0	20	1	218	1	0	0	0	220	0	137	2	2	0	0	141	400
8:15 AM	5	0	14	7	0	1	26	12	5	0	5	0	0	22	1	191	1	0	0	0	193	0	120	2	0	0	0	122	363
8:30 AM	5	0	2	6	0	1	13	11	6	8	1	0	0	26	2	184	0	1	0	0	187	2	139	5	0	0	0	146	372
8:45 AM	10	0	21	4	0	0	35	12	5	0	1	0	1	18	2	178	1	0	0	0	181	0	129	2	0	0	3	131	365
Hourly Total	24	1	45	23	0	2	93	44	23	11	8	0	1	86	6	771	3	1	0	0	781	2	525	11	2	0	3	540	1500
9:00 AM	13	0	9	1	0	0	23	11	9	8	3	0	0	31	3	177	5	0	0	0	185	0	115	0	1	0	0	116	355
9:15 AM	8	1	10	4	0	1	23	13	4	3	3	0	0	23	8	160	4	1	0	0	173	0	111	4	0	0	0	115	334
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	21	1	19	5	0	1	46	24	13	11	6	0	0	54	11	337	9	1	0	0	358	0	226	4	1	0	0	231	689
4:00 PM	11	3	16	11	0	0	41	24	10	7	1	0	1	42	3	223	4	1	0	1	231	0	195	10	2	0	0	207	521
4:15 PM	13	1	9	8	0	3	31	22	7	7	7	0	0	43	2	183	4	2	0	0	191	7	185	7	1	0	0	200	465
4:30 PM	12	2	19	4	0	0	37	23	11	4	1	0	1	39	1	182	3	0	0	1	186	0	221	6	2	0	0	229	491
4:45 PM	10	1	13	5	0	0	29	25	11	5	2	0	0	43	6	199	2	0	0	1	207	1	207	9	0	0	0	217	496
Hourly Total	46	7	57	28	0	3	138	94	39	23	11	0	2	167	12	787	13	3	0	3	815	8	808	32	5	0	0	853	1973
5:00 PM	14	0	18	3	0	3	35	17	11	2	0	0	2	30	5	165	3	0	0	1	173	3	206	3	2	0	0	214	452
5:15 PM	17	0	12	6	0	1	35	25	5	3	3	0	2	36	5	194	3	0	0	0	202	1	202	8	1	0	1	212	485
5:30 PM	19	2	12	5	0	0	38	25	14	4	2	0	0	45	9	212	7	0	0	1	228	0	180	4	0	0	0	184	495
5:45 PM	8	1	9	11	0	0	29	16	5	0	2	0	0	23	6	153	6	0	0	0	165	1	186	5	0	0	0	192	409
Hourly Total	58	3	51	25	0	4	137	83	35	9	7	0	4	134	25	724	19	0	0	2	768	5	774	20	3	0	1	802	1841
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
Grand Total	168	12	195	96	0	12	471	265	119	65	41	0	8	490	56	3073	48	6	0	6	3183	15	2568	72	11	0	5	2666	6810
Approach %	35.7	2.5	41.4	20.4	0.0	-	-	54.1	24.3	13.3	8.4	0.0	-	-	1.8	96.5	1.5	0.2	0.0	-	-	0.6	96.3	2.7	0.4	0.0	-	-	-
Total %	2.5	0.2	2.9	1.4	0.0	-	6.9	3.9	1.7	1.0	0.6	0.0	-	7.2	0.8	45.1	0.7	0.1	0.0	-	46.7	0.2	37.7	1.1	0.2	0.0	-	39.1	-
Lights	156	12	194	95	0	-	457	262	114	44	30	0	-	450	56	2987	47	6	0	-	3096	15	2513	69	11	0	-	2608	6611
% Lights	92.9	100.0	99.5	99.0	-	-	97.0	98.9	95.8	67.7	73.2	-	-	91.8	100.0	97.2	97.9	100.0	-	-	97.3	100.0	97.9	95.8	100.0	-	-	97.8	97.1
Buses	11	0	1	0	0	-	12	0	3	19	11	0	-	33	0	21	0	0	0	-	21	0	11	2	0	0	-	13	79
% Buses	6.5	0.0	0.5	0.0	-	-	2.5	0.0	2.5	29.2	26.8	-	-	6.7	0.0	0.7	0.0	0.0	-	-	0.7	0.0	0.4	2.8	0.0	-	-	0.5	1.2
Trucks	1	0	0	1	0	-	2	3	1	2	0	0	-	6	0	65	1	0	0	-	66	0	44	1	0	0	-	45	119
% Trucks	0.6	0.0	0.0	1.0	-	-	0.4	1.1	0.8	3.1	0.0	-	-	1.2	0.0	2.1	2.1	0.0	-	-	2.1	0.0	1.7	1.4	0.0	-	-	1.7	1.7
Bicycles on Road	0	0	0	0	0	-	0	0	1	0	0	0	-	1	0	0	0	0	0	-	0	0	0	0	0	0	-	0	1
% Bicycles on Road	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.8	0.0	0.0	-	-	0.2	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	-	2	-	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	16.7	-	-	-	-	-	-	0.0	-	-	-	-	-	-	16.7	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	-	10	-	-	-	-	-	-	8	-	-	-	-	-	-	5	-	-	-	-	-	-	5	-	-
% Pedestrians	-	-	-	-	-	83.3	-	-	-	-	-	-	100.0	-	-	-	-	-	-	83.3	-	-	-	-	-	-	100.0	-	-

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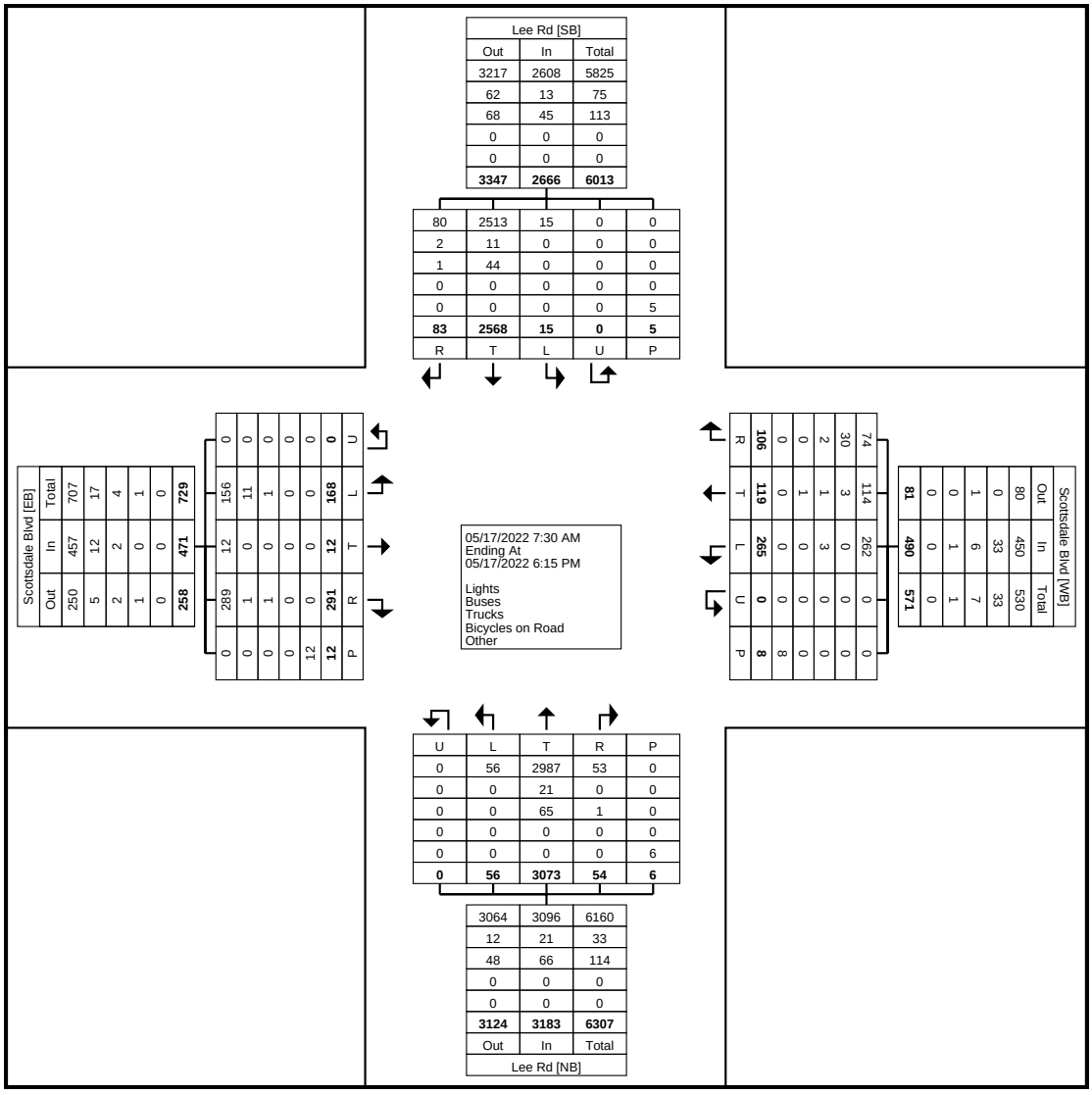
Shaker Heights, OH
Lee Rd & Scottsdale Blvd
Tuesday, May 17, 2022
Location: 41.457642, -81.564917

Count Name: Lee Rd/Scottsdale Blvd
Site Code:
Start Date: 05/17/2022



Turning Movement Data Plot

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Shaker Heights, OH
Lee Rd & Scottsdale Blvd
Tuesday, May 17, 2022
Location: 41.457642, -81.564917

Count Name: Lee Rd/Scottsdale Blvd
Site Code:
Start Date: 05/17/2022

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Scottsdale Blvd Eastbound							Scottsdale Blvd Westbound							Lee Rd Northbound							Lee Rd Southbound							Int. Total
	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	
7:30 AM	5	0	8	9	0	0	22	7	5	4	6	0	1	22	1	239	3	0	0	1	243	0	125	1	0	0	1	126	413
7:45 AM	14	0	15	6	0	2	35	13	4	7	3	0	0	27	1	215	1	1	0	0	218	0	109	4	0	0	0	113	393
8:00 AM	4	1	8	6	0	0	19	9	7	3	1	0	0	20	1	218	1	0	0	0	220	0	137	2	2	0	0	141	400
8:15 AM	5	0	14	7	0	1	26	12	5	0	5	0	0	22	1	191	1	0	0	0	193	0	120	2	0	0	0	122	363
Total	28	1	45	28	0	3	102	41	21	14	15	0	1	91	4	863	6	1	0	1	874	0	491	9	2	0	1	502	1569
Approach %	27.5	1.0	44.1	27.5	0.0	-	-	45.1	23.1	15.4	16.5	0.0	-	-	0.5	98.7	0.7	0.1	0.0	-	-	0.0	97.8	1.8	0.4	0.0	-	-	-
Total %	1.8	0.1	2.9	1.8	0.0	-	6.5	2.6	1.3	0.9	1.0	0.0	-	5.8	0.3	55.0	0.4	0.1	0.0	-	55.7	0.0	31.3	0.6	0.1	0.0	-	32.0	-
PHF	0.500	0.250	0.750	0.778	0.000	-	0.729	0.788	0.750	0.500	0.625	0.000	-	0.843	1.000	0.903	0.500	0.250	0.000	-	0.899	0.000	0.896	0.563	0.250	0.000	-	0.890	0.950
Lights	28	1	45	28	0	-	102	40	20	13	12	0	-	85	4	836	6	1	0	-	847	0	482	7	2	0	-	491	1525
% Lights	100.0	100.0	100.0	100.0	-	-	100.0	97.6	95.2	92.9	80.0	-	-	93.4	100.0	96.9	100.0	100.0	-	-	96.9	-	98.2	77.8	100.0	-	-	97.8	97.2
Buses	0	0	0	0	0	-	0	0	0	1	3	0	-	4	0	7	0	0	0	-	7	0	3	2	0	0	-	5	16
% Buses	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	7.1	20.0	-	-	4.4	0.0	0.8	0.0	0.0	-	-	0.8	-	0.6	22.2	0.0	-	-	1.0	1.0
Trucks	0	0	0	0	0	-	0	1	1	0	0	0	-	2	0	20	0	0	0	-	20	0	6	0	0	0	-	6	28
% Trucks	0.0	0.0	0.0	0.0	-	-	0.0	2.4	4.8	0.0	0.0	-	-	2.2	0.0	2.3	0.0	0.0	-	-	2.3	-	1.2	0.0	0.0	-	-	1.2	1.8
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	-	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	-	3	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-

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Shaker Heights, OH
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Tuesday, May 17, 2022
Location: 41.457642, -81.564917

Count Name: Lee Rd/Scottsdale Blvd
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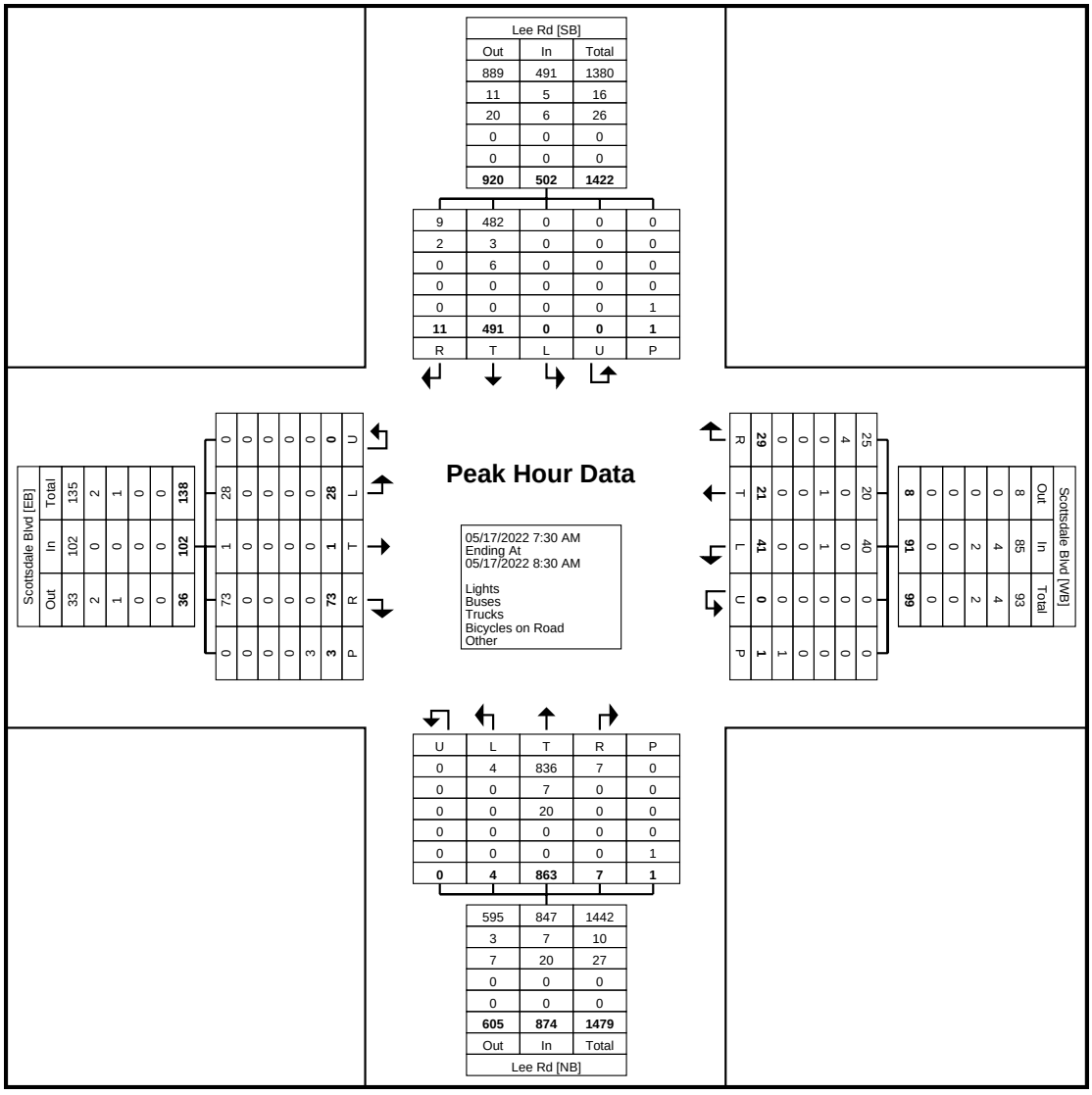

Turning Movement Peak Hour Data Plot (7:30 AM)

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Shaker Heights, OH
Lee Rd & Scottsdale Blvd
Tuesday, May 17, 2022
Location: 41.457642, -81.564917

Count Name: Lee Rd/Scottsdale Blvd
Site Code:
Start Date: 05/17/2022

Turning Movement Peak Hour Data (4:00 PM)

Start Time	Scottsdale Blvd Eastbound							Scottsdale Blvd Westbound							Lee Rd Northbound							Lee Rd Southbound							Int. Total
	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	Left	Thru	Right	Right on Red	U-Turn	Peds	App. Total	
4:00 PM	11	3	16	11	0	0	41	24	10	7	1	0	1	42	3	223	4	1	0	1	231	0	195	10	2	0	0	207	521
4:15 PM	13	1	9	8	0	3	31	22	7	7	7	0	0	43	2	183	4	2	0	0	191	7	185	7	1	0	0	200	465
4:30 PM	12	2	19	4	0	0	37	23	11	4	1	0	1	39	1	182	3	0	0	1	186	0	221	6	2	0	0	229	491
4:45 PM	10	1	13	5	0	0	29	25	11	5	2	0	0	43	6	199	2	0	0	1	207	1	207	9	0	0	0	217	496
Total	46	7	57	28	0	3	138	94	39	23	11	0	2	167	12	787	13	3	0	3	815	8	808	32	5	0	0	853	1973
Approach %	33.3	5.1	41.3	20.3	0.0	-	-	56.3	23.4	13.8	6.6	0.0	-	-	1.5	96.6	1.6	0.4	0.0	-	-	0.9	94.7	3.8	0.6	0.0	-	-	-
Total %	2.3	0.4	2.9	1.4	0.0	-	7.0	4.8	2.0	1.2	0.6	0.0	-	8.5	0.6	39.9	0.7	0.2	0.0	-	41.3	0.4	41.0	1.6	0.3	0.0	-	43.2	-
PHF	0.885	0.583	0.750	0.636	0.000	-	0.841	0.940	0.886	0.821	0.393	0.000	-	0.971	0.500	0.882	0.813	0.375	0.000	-	0.882	0.286	0.914	0.800	0.625	0.000	-	0.931	0.947
Lights	41	7	57	27	0	-	132	92	36	13	7	0	-	148	12	771	12	3	0	-	798	8	790	31	5	0	-	834	1912
% Lights	89.1	100.0	100.0	96.4	-	-	95.7	97.9	92.3	56.5	63.6	-	-	88.6	100.0	98.0	92.3	100.0	-	-	97.9	100.0	97.8	96.9	100.0	-	-	97.8	96.9
Buses	5	0	0	0	0	-	5	0	3	8	4	0	-	15	0	4	0	0	0	-	4	0	2	0	0	0	-	2	26
% Buses	10.9	0.0	0.0	0.0	-	-	3.6	0.0	7.7	34.8	36.4	-	-	9.0	0.0	0.5	0.0	0.0	-	-	0.5	0.0	0.2	0.0	0.0	-	-	0.2	1.3
Trucks	0	0	0	1	0	-	1	2	0	2	0	0	-	4	0	12	1	0	0	-	13	0	16	1	0	0	-	17	35
% Trucks	0.0	0.0	0.0	3.6	-	-	0.7	2.1	0.0	8.7	0.0	-	-	2.4	0.0	1.5	7.7	0.0	-	-	1.6	0.0	2.0	3.1	0.0	-	-	2.0	1.8
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Crosswalk	-	-	-	-	-	2	-	-	-	-	-	-	0	-	-	-	-	-	-	1	-	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	66.7	-	-	-	-	-	-	0.0	-	-	-	-	-	-	33.3	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	-	2	-	-	-	-	-	-	2	-	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	33.3	-	-	-	-	-	-	100.0	-	-	-	-	-	-	66.7	-	-	-	-	-	-	-	-	-

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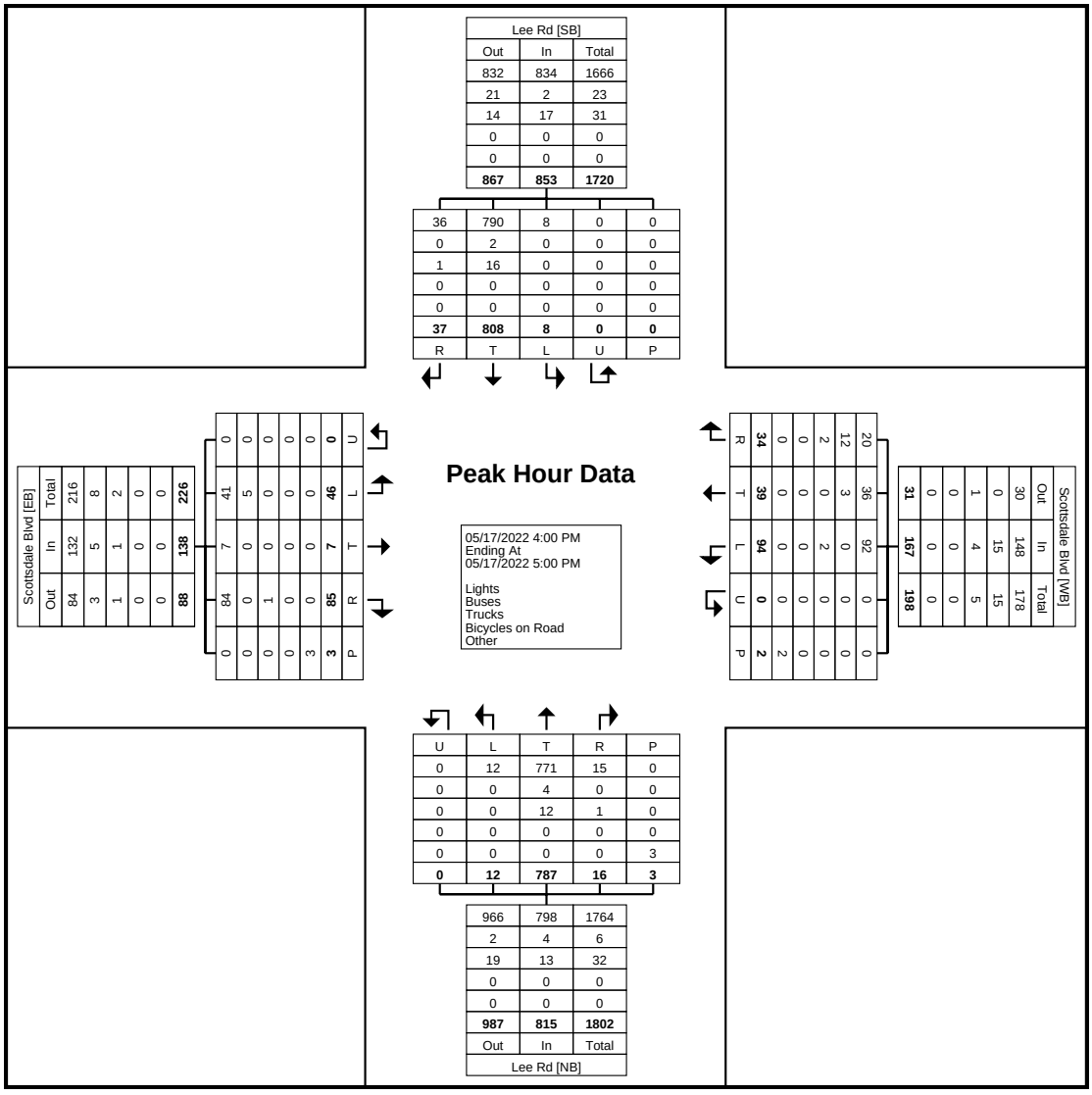
Shaker Heights, OH
Lee Rd & Scottsdale Blvd
Tuesday, May 17, 2022
Location: 41.457642, -81.564917

Count Name: Lee Rd/Scottsdale Blvd
Site Code:
Start Date: 05/17/2022



Turning Movement Peak Hour Data Plot (4:00 PM)

ATTACHMENT B
GROWTH RATE CALCULATIONS

TFMS - Segment Forecast Report

Username	Email	Script Import Date	Script Version	Model Version
bferrell	bferrell@gpdgroup.com	4/14/2020 5:30:19 PM	2020.001	2022.1900

Forecast Summary

Project ID	Project Name	Opening Year	Design Year
		2027	2047

Project Description

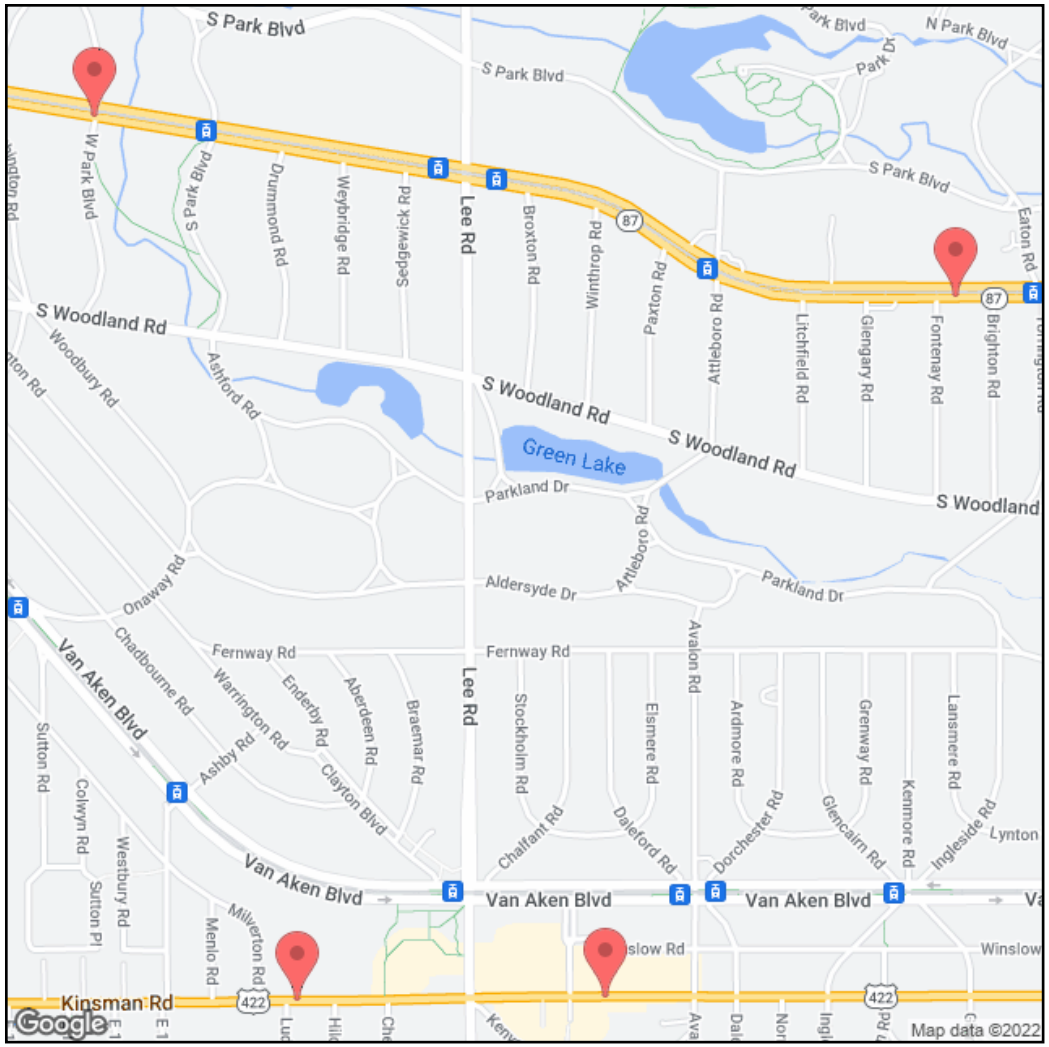
*Users of this data need to be aware that there are limitations to the forecasts generated by this product that make it suitable only for roadway design projects which are low risk.

Segment Information

Segment ID	LRS ID	BMP	EMP	Length	Latitude	Longitude
1526506	SCUYUS00422**C	6.882	7.238	0.356	-81.5695637478585	41.4644408862083
1526510	SCUYUS00422**C	7.238	7.727	0.489	-81.5614201848806	41.4645131496623
1526514	SCUYSR00087**C	5.955	6.993	1.038	-81.574927815134	41.4819688680005
1526553	SCUYSR00087**C	6.993	8.408	1.415	-81.5521463494108	41.4783788490321

Forecast Information

Segment ID	2027 AADT	2047 AADT	DHV-30	K%	D%	T24%	TD%
1526506	14,500	14,500	1,900	13.0	70.0	1	1
1526510	14,500	14,500	1,700	12.0	65.8	1	1
1526514	5,600	5,600	750	13.0	62.5	1	1
1526553	15,500	18,500	2,400	13.0	70.0	1	0



Definitions:

- AADT – Annual Average Daily Traffic
- DHV30 – Design Hour Volume for 30th highest hour of the year
- DHV30 – K * AADT
- K % – Design Hour Factor
- D % – Peak Direction Factor
- T24 % – Percent Daily Trucks
- TD % – Percent Design Hour Trucks

Forecast Segment ID	Route	BMP	EMP
1526506	SCUYUS00422**C	6.882	7.238

Forecast

Year	K %	T24 %	PA AADT	PA Method	PA Growth Rate %	PA Calculated Rate %
2050	13.0	1	14,000	Average	-0.800	0.000

AADT	D %	TD %	BC AADT	BC Method	BC Growth Rate %	BC Calculated Rate %
14,190	70.0	1	190	Model	-0.500	0.000

Warning: The growth rate was negative and was capped.

Regression

Method Number	PA AADT	BC AADT	AADT
2	10,917	-341	10,576

95% Confidence Min/Max

PA Min	PA Max	BC Min	BC Max	Year
4784	23555	-5016	4204	2050

Method Number	PA Growth %	BC Growth %	PA Drop Count	BC Drop Count	PA AADT	BC AADT	PA Adjustment	PA Adjustment
1	-0.27	1.77	0	0	13,622	656	13,064	286
2	-0.79	-9.67	2	5	11,320	-230	10,917	-341
3	0.27	-3.34	0	0	16,073	341	15,243	6
4	-0.90	-16.13	2	5	10,817	-631	10,464	-695
5	-0.90	-13.41	0	0	10,817	-266	10,464	-546
6	-1.11	-25.62	5	5	9,624	-1,202	9,611	-1,215

Adjustment Info

ID	Adjustment Methods Name	Model vs Count AADT	Adjusted AADT	Model vs Count BC	Adjusted BC	PA Growth Rate %	BC Growth Rate %
1	DIF	-19,539	5,913	-530	91	-2.03	-1.79
2	RAT	0.42	10,773	0.26	163	-0.86	-0.47
3	MRAT	0.75	10,773	0.86	163	-0.86	-0.47
4	RAF		8,343		127	-1.45	-1.13

Adjust Method AADT	Adjust Method BC	Selected PA Growth Rate %	Selected BC Growth Rate %
Ratio	Ratio	-0.900	-0.500

Method 1 - 4 Volume

PA Min Volume	PA Max Volume	BC Min Volume	BC Max Volume	Total Min Volume	Total MaxVolume
5822	10610	91	163	5913	10773

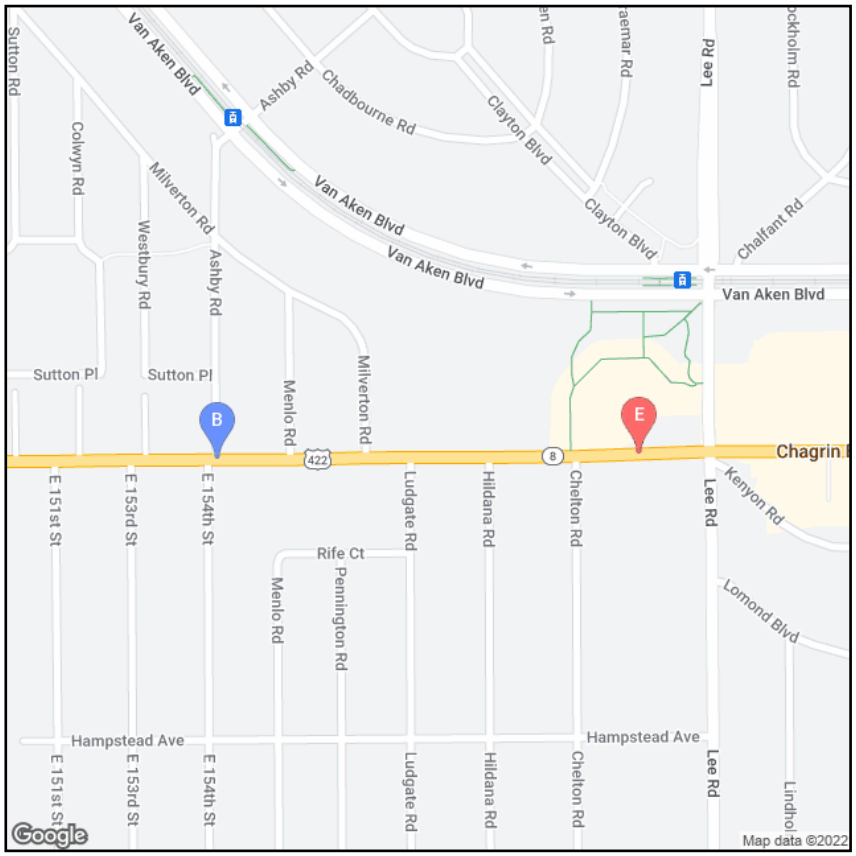
Process Flag: Adjusted model to counts with process per ODOT 255 spreadsheet

Comment: No Comment

Historical Count

Year	All	Cars	Trucks
2008	16,360	15,940	420
2010	14,160	13,670	490
2013	15,930	15,379	551
2015	15,698	15,155	543
2018	16,523	15,498	1,025
* 2021	14,341	14,152	189

* Pivot Point



Segment ID	LRS ID	BMP	EMP	Length	Yr 2027 AADT	Yr 2047 AADT	DHV30	K %	D %	T24 %	TD %
1526506	SCUYUS00422**C	6.882	7.238	0.356	14,500	14,500	1900	13.0	70.0	1	1

Forecast Segment ID	Route	BMP	EMP
1526510	SCUYUS00422**C	7.238	7.727

Forecast

Year	K %	T24 %	PA AADT	PA Method	PA Growth Rate %	PA Calculated Rate %
2050	12.0	1	14,000	Average	-0.600	0.000

AADT	D %	TD %	BC AADT	BC Method	BC Growth Rate %	BC Calculated Rate %
14,190	65.8	1	190	Model	0.100	0.100

Warning: The growth rate was negative and was capped.

Regression

Method Number	PA AADT	BC AADT	AADT
2	10,917	-341	10,576

95% Confidence Min/Max

PA Min	PA Max	BC Min	BC Max	Year
4784	23555	-5016	4204	2050

Method Number	PA Growth %	BC Growth %	PA Drop Count	BC Drop Count	PA AADT	BC AADT	PA Adjustment	PA Adjustment
1	-0.27	1.77	0	0	13,622	656	13,064	286
2	-0.79	-9.67	2	5	11,320	-230	10,917	-341
3	0.27	-3.34	0	0	16,073	341	15,243	6
4	-0.90	-16.13	2	5	10,817	-631	10,464	-695
5	-0.90	-13.41	0	0	10,817	-266	10,464	-546
6	-1.11	-25.62	5	5	9,624	-1,202	9,611	-1,215

Adjustment Info

ID	Adjustment Methods Name	Model vs Count AADT	Adjusted AADT	Model vs Count BC	Adjusted BC	PA Growth Rate %	BC Growth Rate %
1	DIF	-20,890	10,434	-593	206	-0.96	0.31
2	RAT	0.41	12,751	0.24	193	-0.39	0.07
3	MRAT	0.89	12,751	1.02	193	-0.39	0.07
4	RAF		11,592		200	-0.67	0.20

Adjust Method AADT	Adjust Method BC	Selected PA Growth Rate %	Selected BC Growth Rate %
Ratio	Model Ratio	-0.400	0.100

Method 1 - 4 Volume

PA Min Volume	PA Max Volume	BC Min Volume	BC Max Volume	Total Min Volume	Total MaxVolume
10228	12558	193	206	10421	12764

Process Flag: Adjusted model to counts with process per ODOT 255 spreadsheet

Comment: No Comment

Historical Count

Year	All	Cars	Trucks
2008	16,360	15,940	420
2010	14,160	13,670	490
2013	15,930	15,379	551
2015	15,698	15,155	543
2018	16,523	15,498	1,025
* 2021	14,341	14,152	189

* Pivot Point

Segment ID	LRS ID	BMP	EMP	Length	Yr 2027 AADT	Yr 2047 AADT	DHV30	K %	D %	T24 %	TD %
1526510	SCUYUS00422**C	7.238	7.727	0.489	14,500	14,500	1700	12.0	65.8	1	1

Forecast Segment ID	Route	BMP	EMP
1526514	SCUYSR00087**C	5.955	6.993

Forecast

Year	K %	T24 %	PA AADT	PA Method	PA Growth Rate %	PA Calculated Rate %
2050	13.0	1	5,600	Average	-4.800	0.000

AADT	D %	TD %	BC AADT	BC Method	BC Growth Rate %	BC Calculated Rate %
5,650	62.5	1	50	Average	-12.500	0.000

Warning: The growth rate was negative and was capped.

Regression

Method Number	PA AADT	BC AADT	AADT
1	-10,231	-338	-10,569

95% Confidence Min/Max

PA Min	PA Max	BC Min	BC Max	Year
-27162	19229	-860	607	2050

Method Number	PA Growth %	BC Growth %	PA Drop Count	BC Drop Count	PA AADT	BC AADT	PA Adjustment	PA Adjustment
1	-9.80	-25.03	0	0	-10,872	-354	-10,231	-338
2	-10.43	-7.28	3	1	-11,535	-41	-11,250	-60
3	-8.23	-7.28	0	0	-8,038	-41	-7,711	-60
4	-10.33	-12.32	3	5	-11,356	-151	-11,088	-139
5	-0.70	0.57	0	0	5,311	95	4,428	63
6	-1.98	-4.28	5	5	2,413	-12	2,358	-13

Adjustment Info

ID	Adjustment Methods Name	Model vs Count AADT	Adjusted AADT	Model vs Count BC	Adjusted BC	PA Growth Rate %	BC Growth Rate %
1	DIF	-31,332	8,009	-961	82	1.47	1.79
2	RAT	0.15	5,973	0.05	55	0.23	0.06
3	MRAT	1.06	6,098	1.03	56	0.30	0.13
4	RAF		7,053		69	0.89	0.96

Adjust Method AADT	Adjust Method BC	Selected PA Growth Rate %	Selected BC Growth Rate %
Model Ratio	Model Ratio	0.300	0.100

Method 1 - 4 Volume

PA Min Volume	PA Max Volume	BC Min Volume	BC Max Volume	Total Min Volume	Total MaxVolume
5918	7927	55	82	5973	8009

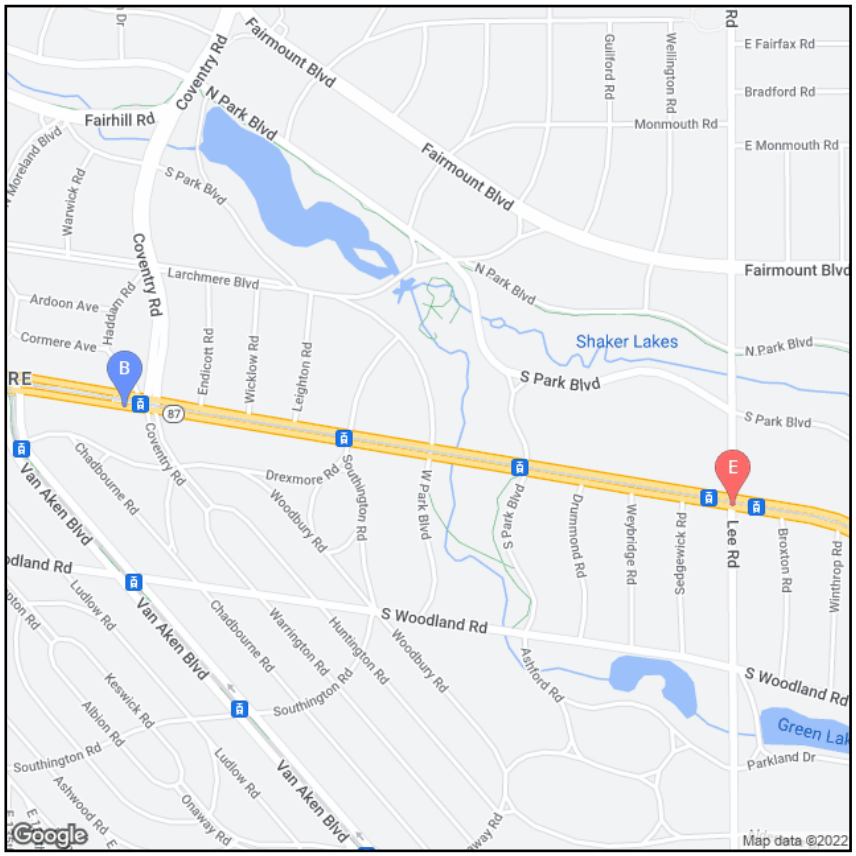
Process Flag: Adjusted model to counts with process per ODOT 255 spreadsheet

Comment: No Comment

Historical Count

Year	All	Cars	Trucks
2008	13,160	12,850	310
2010	12,680	12,540	140
2013	6,398	6,327	71
2015	6,563	6,491	72
2018	8,179	8,039	140
* 2021	5,609	5,555	54

* Pivot Point



Segment ID	LRS ID	BMP	EMP	Length	Yr 2027 AADT	Yr 2047 AADT	DHV30	K %	D %	T24 %	TD %
1526514	SCUYSR00087**C	5.955	6.993	1.038	5,600	5,600	750	13.0	62.5	1	1

Forecast Segment ID	Route	BMP	EMP
1526553	SCUYSR00087**C	6.993	8.408

Forecast

Year	K %	T24 %	PA AADT	PA Method	PA Growth Rate %	PA Calculated Rate %
2050	13.0	1	19,000	Average	1.000	1.000

AADT	D %	TD %	BC AADT	BC Method	BC Growth Rate %	BC Calculated Rate %
19,180	70.0	0	180	Average	-2.900	0.000

Warning: The growth rate was negative and was capped.

Regression

Method Number	PA AADT	BC AADT	AADT
2	24,630	-106	24,524

95% Confidence Min/Max

PA Min	PA Max	BC Min	BC Max	Year
-10598	64818	-516	181	2050

Method Number	PA Growth %	BC Growth %	PA Drop Count	BC Drop Count	PA AADT	BC AADT	PA Adjustment	PA Adjustment
1	1.59	-6.03	0	0	20,092	-138	21,477	-131
2	2.33	-5.54	3	3	24,507	-104	24,630	-106
3	3.03	-6.66	0	0	26,608	-172	27,612	-163
4	-999999.00	-999999.00	0	0				
5	-999999.00	-999999.00	0	0				
6	-999999.00	-999999.00	0	0				

Adjustment Info

ID	Adjustment Methods Name	Model vs Count AADT	Adjusted AADT	Model vs Count BC	Adjusted BC	PA Growth Rate %	BC Growth Rate %
1	DIF	-21,588	10,603	-735	110	-0.98	-1.28
2	RAT	0.41	13,126	0.19	163	-0.40	-0.24
3	MRAT	0.88	13,126	0.93	163	-0.40	-0.24
4	RAF		11,864		136	-0.69	-0.77

Adjust Method AADT	Adjust Method BC	Selected PA Growth Rate %	Selected BC Growth Rate %
Ratio	Ratio	-0.400	-0.200

Method 1 - 4 Volume

PA Min Volume	PA Max Volume	BC Min Volume	BC Max Volume	Total Min Volume	Total MaxVolume
10493	12963	110	163	10603	13126

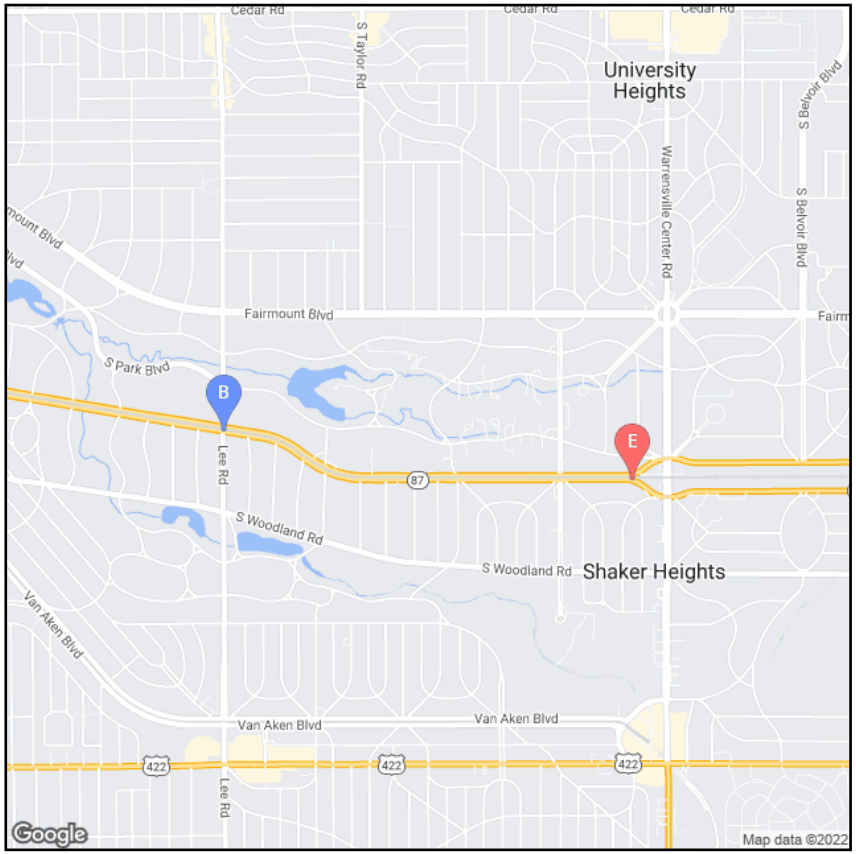
Process Flag: Adjusted model to counts with process per ODOT 255 spreadsheet

Comment: No Comment

Historical Count

Year	All	Cars	Trucks
2013	12,440	12,192	248
2015	12,259	12,014	245
2018	10,521	10,339	182
* 2021	14,863	14,688	175

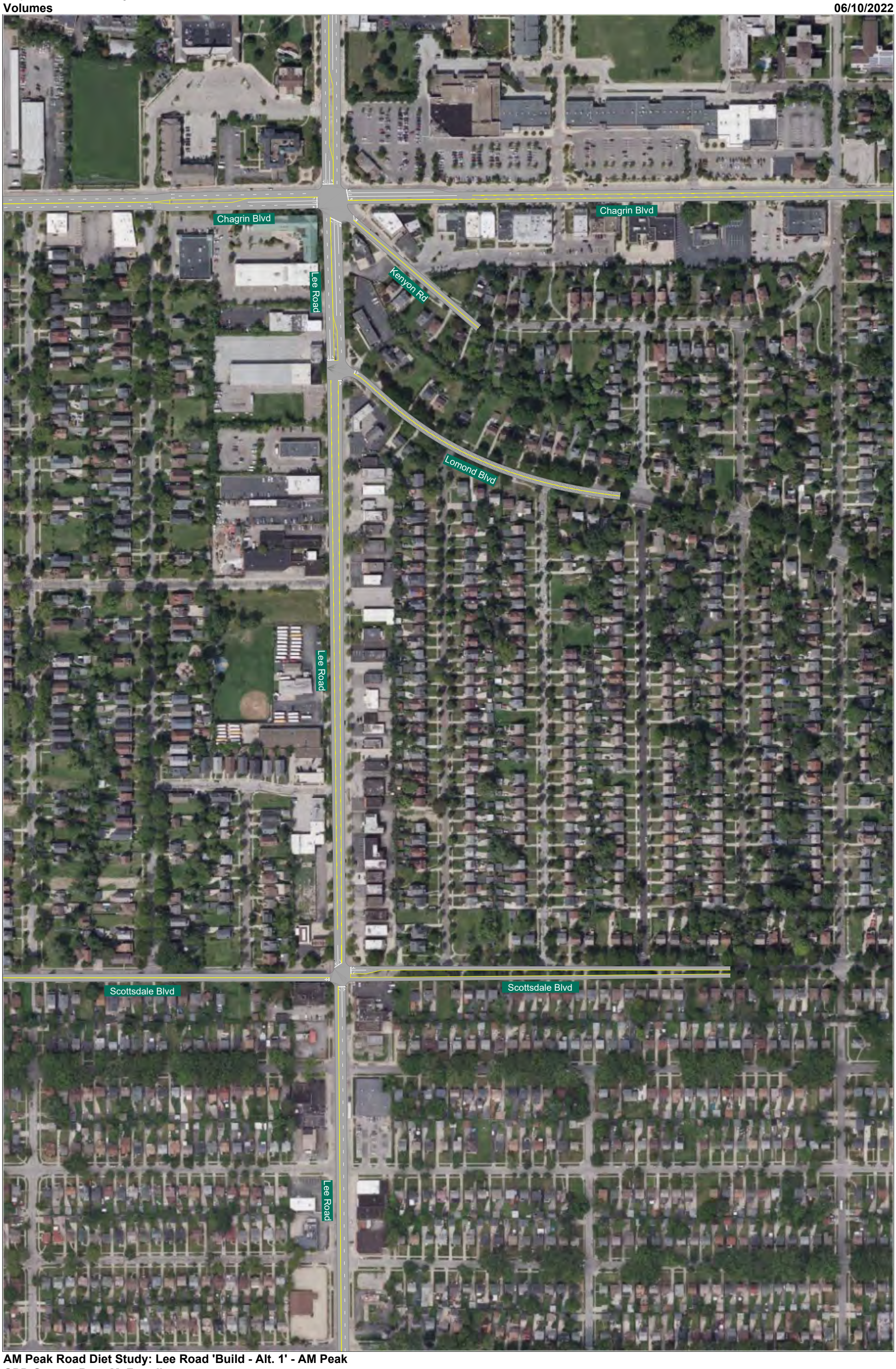
* Pivot Point



Segment ID	LRS ID	BMP	EMP	Length	Yr 2027 AADT	Yr 2047 AADT	DHV30	K %	D %	T24 %	TD %
1526553	SCUYSR00087**C	6.993	8.408	1.415	15,500	18,500	2400	13.0	70.0	1	0

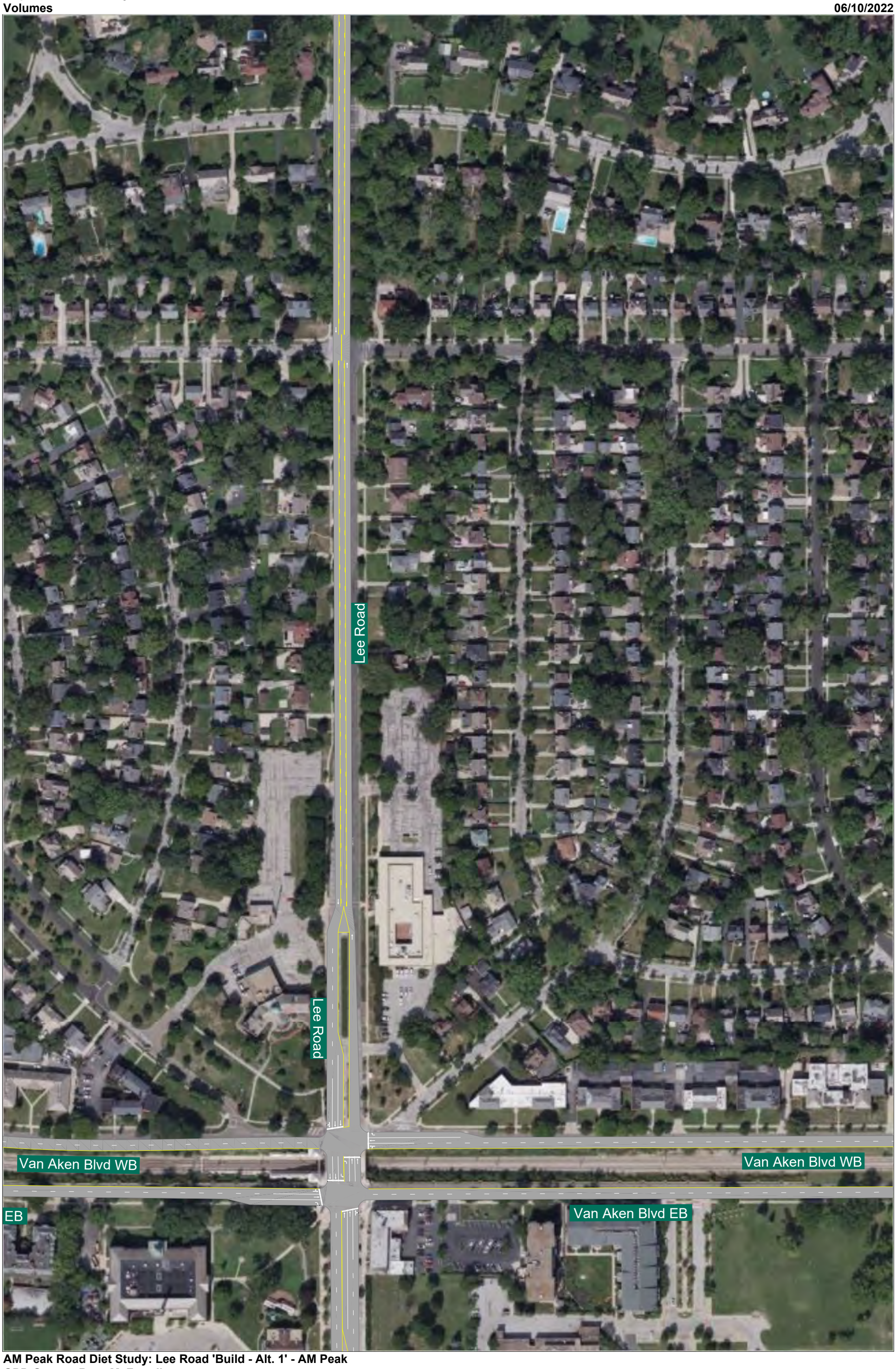
ATTACHMENT C
'BUILD' SYNCHRO TRAFFIC MODEL

Map - Road Diet Study: Lee Road
Volumes **06/10/2022**



AM Peak Road Diet Study: Lee Road 'Build - Alt. 1' - AM Peak
GPD Group - Brett M. Ferrell

Map - Road Diet Study: Lee Road
Volumes **06/10/2022**



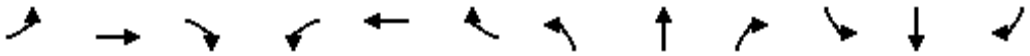
AM Peak Road Diet Study: Lee Road 'Build - Alt. 1' - AM Peak
GPD Group - Brett M. Ferrell

Map - Road Diet Study: Lee Road
Volumes **06/10/2022**

AM Peak Road Diet Study: Lee Road 'Build - Alt. 1' - AM Peak
GPD Group - Brett M. Ferrell

ATTACHMENT D
HCM INTERSECTION CAPACITY ANALYSIS

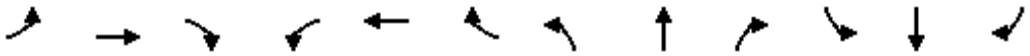
FUTURE YEAR 2047 'NO-BUILD' CONDITIONS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	70	770	90	60	830	0	0	640	30
Future Volume (vph)	0	0	0	70	770	90	60	830	0	0	640	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				5.0	6.0			5.0			5.0	
Lane Util. Factor				1.00	0.95			0.95			0.95	
Frt				1.00	0.98			1.00			0.99	
Flt Protected				0.95	1.00			1.00			1.00	
Satd. Flow (prot)				1787	3518			3527			3550	
Flt Permitted				0.95	1.00			0.64			1.00	
Satd. Flow (perm)				1787	3518			2281			3550	
Peak-hour factor, PHF	0.92	0.92	0.92	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	74	811	95	63	874	0	0	674	32
RTOR Reduction (vph)	0	0	0	0	8	0	0	0	0	0	4	0
Lane Group Flow (vph)	0	0	0	74	898	0	0	937	0	0	702	0
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Turn Type				Prot	NA		Perm	NA			NA	
Protected Phases				1!	6			5 8!			4	
Permitted Phases							5 8!					
Actuated Green, G (s)				8.2	43.6			50.4			31.0	
Effective Green, g (s)				8.2	43.6			50.4			31.0	
Actuated g/C Ratio				0.08	0.42			0.48			0.30	
Clearance Time (s)				5.0	6.0						5.0	
Vehicle Extension (s)				3.0	3.0						3.0	
Lane Grp Cap (vph)				139	1460			1094			1048	
v/s Ratio Prot				0.04	c0.26						0.20	
v/s Ratio Perm								c0.41				
v/c Ratio				0.53	0.61			0.86			0.67	
Uniform Delay, d1				46.6	24.1			24.1			32.5	
Progression Factor				1.00	1.00			0.79			1.00	
Incremental Delay, d2				3.9	1.9			3.6			1.7	
Delay (s)				50.4	26.1			22.7			34.2	
Level of Service				D	C			C			C	
Approach Delay (s)		0.0			27.9			22.7			34.2	
Approach LOS		A			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	27.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	80.8%	ICU Level of Service	D
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

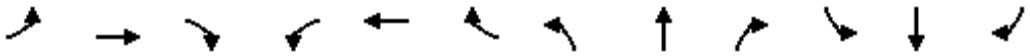


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	440	30	0	0	0	0	840	50	70	640	0
Future Volume (vph)	50	440	30	0	0	0	0	840	50	70	640	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0						5.0			5.0	
Lane Util. Factor	1.00	0.95						0.95			0.95	
Frt	1.00	0.99						0.99			1.00	
Flt Protected	0.95	1.00						1.00			1.00	
Satd. Flow (prot)	1805	3575						3510			3522	
Flt Permitted	0.95	1.00						1.00			0.62	
Satd. Flow (perm)	1805	3575						3510			2194	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	53	468	32	0	0	0	0	894	53	74	681	0
RTOR Reduction (vph)	0	4	0	0	0	0	0	4	0	0	0	0
Lane Group Flow (vph)	53	496	0	0	0	0	0	943	0	0	755	0
Heavy Vehicles (%)	0%	0%	0%	1%	1%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot	NA						NA		Perm	NA	
Protected Phases	5!	2						8			4 1!	
Permitted Phases										4 1!		
Actuated Green, G (s)	14.4	49.8						31.0			44.2	
Effective Green, g (s)	14.4	49.8						31.0			44.2	
Actuated g/C Ratio	0.14	0.47						0.30			0.42	
Clearance Time (s)	5.0	6.0						5.0				
Vehicle Extension (s)	3.0	3.0						3.0				
Lane Grp Cap (vph)	247	1695						1036			923	
v/s Ratio Prot	0.03	c0.14						c0.27				
v/s Ratio Perm											c0.34	
v/c Ratio	0.21	0.29						0.91			0.82	
Uniform Delay, d1	40.3	16.8						35.7			26.8	
Progression Factor	1.00	1.00						1.00			0.25	
Incremental Delay, d2	0.4	0.4						11.7			4.6	
Delay (s)	40.7	17.3						47.3			11.2	
Level of Service	D	B						D			B	
Approach Delay (s)		19.5			0.0			47.3			11.2	
Approach LOS		B			A			D			B	

Intersection Summary			
HCM 2000 Control Delay	28.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		

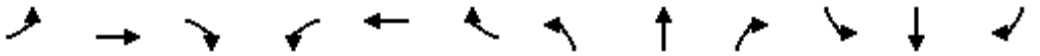
! Phase conflict between lane groups.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	50	370	90	340	840	0	0	560	20
Future Volume (vph)	0	0	0	50	370	90	340	840	0	0	560	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					5.0	5.0	5.0	5.0			5.0	
Lane Util. Factor					0.95	1.00	1.00	0.95			0.91	
Frt					1.00	0.85	1.00	1.00			0.99	
Flt Protected					0.99	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					3553	1599	1770	3539			5109	
Flt Permitted					0.99	1.00	0.38	1.00			1.00	
Satd. Flow (perm)					3553	1599	703	3539			5109	
Peak-hour factor, PHF	0.92	0.92	0.92	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	0	0	53	394	96	362	894	0	0	596	21
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	447	96	362	894	0	0	617	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Turn Type				Split	NA	Perm	pm+pt	NA			NA	
Protected Phases				4	4		1 8	6 8			2	
Permitted Phases						4	6 8					
Actuated Green, G (s)					20.4	20.4	74.6	79.6			48.2	
Effective Green, g (s)					20.4	20.4	74.6	79.6			48.2	
Actuated g/C Ratio					0.19	0.19	0.68	0.72			0.44	
Clearance Time (s)					5.0	5.0					5.0	
Vehicle Extension (s)					3.0	3.0					3.0	
Lane Grp Cap (vph)					658	296	684	2560			2238	
v/s Ratio Prot					c0.13		c0.10	0.25			0.12	
v/s Ratio Perm						0.06	c0.26					
v/c Ratio					0.68	0.32	0.53	0.35			0.28	
Uniform Delay, d1					41.8	38.8	7.3	5.6			19.7	
Progression Factor					1.00	1.00	2.67	0.05			1.00	
Incremental Delay, d2					2.8	0.6	0.7	0.1			0.3	
Delay (s)					44.5	39.5	20.1	0.4			20.1	
Level of Service					D	D	C	A			C	
Approach Delay (s)		0.0			43.7			6.1			20.1	
Approach LOS		A			D			A			C	

Intersection Summary			
HCM 2000 Control Delay	18.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	68.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	250	170	0	0	0	0	1110	50	50	560	0
Future Volume (vph)	70	250	170	0	0	0	0	1110	50	50	560	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0					5.0		5.0	5.0	
Lane Util. Factor		0.95	1.00					0.91		1.00	0.95	
Frt		1.00	0.85					0.99		1.00	1.00	
Flt Protected		0.99	1.00					1.00		0.95	1.00	
Satd. Flow (prot)		3535	1599					5052		1787	3574	
Flt Permitted		0.99	1.00					1.00		0.17	1.00	
Satd. Flow (perm)		3535	1599					5052		312	3574	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	74	263	179	0	0	0	0	1168	53	53	589	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	337	179	0	0	0	0	1221	0	53	589	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Turn Type	Split	NA	Perm					NA		custom	NA	
Protected Phases	8	8						6		4	2 1 4	
Permitted Phases			8							2 1		
Actuated Green, G (s)		19.4	19.4					55.2		75.6	80.6	
Effective Green, g (s)		19.4	19.4					55.2		75.6	80.6	
Actuated g/C Ratio		0.18	0.18					0.50		0.69	0.73	
Clearance Time (s)		5.0	5.0					5.0		5.0		
Vehicle Extension (s)		3.0	3.0					3.0		3.0		
Lane Grp Cap (vph)		623	282					2535		487	2618	
v/s Ratio Prot		0.10						c0.24		0.02	c0.16	
v/s Ratio Perm			c0.11							0.05		
v/c Ratio		0.54	0.63					0.48		0.11	0.22	
Uniform Delay, d1		41.2	42.0					18.0		11.8	4.7	
Progression Factor		1.00	1.00					1.71		0.48	0.17	
Incremental Delay, d2		1.0	4.6					0.3		0.1	0.0	
Delay (s)		42.2	46.6					31.0		5.7	0.8	
Level of Service		D	D					C		A	A	
Approach Delay (s)		43.7			0.0			31.0			1.2	
Approach LOS		D			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	25.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	68.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	160	370	10	120	10	70	340	80	140	910	80	10
Future Volume (vph)	160	370	10	120	10	70	340	80	140	910	80	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0			5.0	5.0		5.0	5.0		
Lane Util. Factor	1.00	1.00	1.00			1.00	0.95		1.00	0.95		
Frt	1.00	1.00	0.85			1.00	0.97		1.00	0.99		
Flt Protected	0.95	1.00	1.00			0.95	1.00		0.95	1.00		
Satd. Flow (prot)	1770	1863	1583			1787	3472		1770	3491		
Flt Permitted	0.38	1.00	1.00			0.30	1.00		0.19	1.00		
Satd. Flow (perm)	705	1863	1583			562	3472		363	3491		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	168	389	11	126	11	74	358	84	147	958	84	11
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	168	389	137	0	0	85	442	0	147	1053	0	0
Heavy Vehicles (%)	2%	2%	2%	2%	1%	1%	1%	1%	2%	2%	2%	2%
Turn Type	pm+pt	NA	Perm		custom	pm+pt	NA		pm+pt	NA		
Protected Phases	5	2				1	6		3	8		
Permitted Phases	2		2		1	6			8			
Actuated Green, G (s)	41.4	34.2	34.2			38.2	32.6		41.2	34.0		
Effective Green, g (s)	41.4	34.2	34.2			38.2	32.6		41.2	34.0		
Actuated g/C Ratio	0.38	0.31	0.31			0.35	0.30		0.37	0.31		
Clearance Time (s)	5.0	5.0	5.0			5.0	5.0		5.0	5.0		
Vehicle Extension (s)	3.0	3.0	3.0			3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)	335	579	492			257	1028		228	1079		
v/s Ratio Prot	c0.03	c0.21				0.02	0.13		c0.04	c0.30		
v/s Ratio Perm	0.16		0.09			0.10			0.20			
v/c Ratio	0.50	0.67	0.28			0.33	0.43		0.64	0.98		
Uniform Delay, d1	24.0	33.0	28.6			25.6	31.2		25.1	37.6		
Progression Factor	1.00	1.00	1.00			1.00	1.00		1.15	0.88		
Incremental Delay, d2	1.2	6.1	1.4			0.8	1.3		5.5	20.2		
Delay (s)	25.2	39.1	30.0			26.4	32.5		34.5	53.4		
Level of Service	C	D	C			C	C		C	D		
Approach Delay (s)		33.9					31.5			51.1		
Approach LOS		C					C			D		

Intersection Summary			
HCM 2000 Control Delay	40.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	82.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

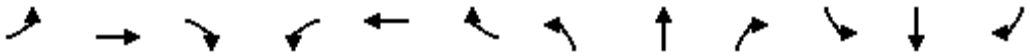
Movement	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	50	10	570	100	10	10	10	10
Future Volume (vph)	50	10	570	100	10	10	10	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0			5.0		
Lane Util. Factor		1.00	0.95			1.00		
Frt		1.00	0.98			0.93		
Flt Protected		0.95	1.00			0.98		
Satd. Flow (prot)		1770	3460			1695		
Flt Permitted		0.12	1.00			0.87		
Satd. Flow (perm)		230	3460			1514		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	53	11	600	105	11	11	11	11
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	64	705	0	0	44	0	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt	pm+pt	NA		Perm	Prot		
Protected Phases	7	7	4			9		
Permitted Phases	4	4			9			
Actuated Green, G (s)		38.0	32.4			5.6		
Effective Green, g (s)		38.0	32.4			5.6		
Actuated g/C Ratio		0.35	0.29			0.05		
Clearance Time (s)		5.0	5.0			5.0		
Vehicle Extension (s)		3.0	3.0			3.0		
Lane Grp Cap (vph)		157	1019			77		
v/s Ratio Prot		0.02	0.20					
v/s Ratio Perm		0.12				c0.03		
v/c Ratio		0.41	0.69			0.57		
Uniform Delay, d1		28.0	34.4			51.0		
Progression Factor		0.70	0.95			1.00		
Incremental Delay, d2		1.7	2.0			9.8		
Delay (s)		21.4	34.7			60.9		
Level of Service		C	C			E		
Approach Delay (s)			33.5			60.9		
Approach LOS			C			E		

Intersection Summary

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	20	80	1060	70	80	690
Future Volume (veh/h)	20	80	1060	70	80	690
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1870	1870	1870	1870
Adj Flow Rate, veh/h	22	87	1152	76	87	750
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	2	2	2	2
Cap, veh/h	28	112	2425	160	430	2919
Arrive On Green	0.09	0.09	0.72	0.72	0.12	1.00
Sat Flow, veh/h	322	1274	3477	223	1781	3647
Grp Volume(v), veh/h	110	0	604	624	87	750
Grp Sat Flow(s),veh/h/ln	1610	0	1777	1830	1781	1777
Q Serve(g_s), s	7.4	0.0	16.1	16.1	1.1	0.0
Cycle Q Clear(g_c), s	7.4	0.0	16.1	16.1	1.1	0.0
Prop In Lane	0.20	0.79		0.12	1.00	
Lane Grp Cap(c), veh/h	141	0	1273	1312	430	2919
V/C Ratio(X)	0.78	0.00	0.47	0.48	0.20	0.26
Avail Cap(c_a), veh/h	439	0	1273	1312	502	2919
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.84	0.84	0.69	0.69
Uniform Delay (d), s/veh	49.1	0.0	6.7	6.7	4.0	0.0
Incr Delay (d2), s/veh	8.9	0.0	1.1	1.0	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	5.9	6.0	0.3	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	58.0	0.0	7.8	7.7	4.2	0.1
LnGrp LOS	E	A	A	A	A	A
Approach Vol, veh/h	110		1228			837
Approach Delay, s/veh	58.0		7.7			0.6
Approach LOS	E		A			A

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.5	83.8		14.7		95.3
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0
Max Green Setting (Gmax), s	11.0	54.0		30.0		70.0
Max Q Clear Time (g_c+I1), s	3.1	0.0		9.4		0.0
Green Ext Time (p_c), s	0.1	0.0		0.3		0.0

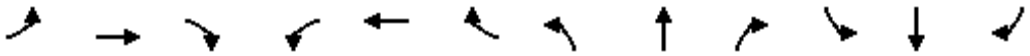
Intersection Summary						
HCM 6th Ctrl Delay			7.5			
HCM 6th LOS			A			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	10	90	60	20	30	10	1070	10	10	690	10
Future Volume (veh/h)	30	10	90	60	20	30	10	1070	10	10	690	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	32	11	95	63	21	32	11	1126	11	11	726	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	78	25	119	284	141	214	48	2383	23	53	2345	35
Arrive On Green	0.11	0.11	0.11	0.04	0.21	0.21	0.68	0.68	0.68	0.68	0.68	0.68
Sat Flow, veh/h	263	232	1093	1795	674	1027	11	3504	34	17	3447	52
Grp Volume(v), veh/h	138	0	0	63	0	53	600	0	548	388	0	360
Grp Sat Flow(s),veh/h/ln	1587	0	0	1795	0	1700	1853	0	1696	1823	0	1693
Q Serve(g_s), s	4.9	0.0	0.0	2.7	0.0	2.3	0.0	0.0	13.8	0.0	0.0	7.8
Cycle Q Clear(g_c), s	7.6	0.0	0.0	2.7	0.0	2.3	13.6	0.0	13.8	7.5	0.0	7.8
Prop In Lane	0.23		0.69	1.00		0.60	0.02		0.02	0.03		0.03
Lane Grp Cap(c), veh/h	223	0	0	284	0	355	1301	0	1153	1281	0	1151
V/C Ratio(X)	0.62	0.00	0.00	0.22	0.00	0.15	0.46	0.00	0.48	0.30	0.00	0.31
Avail Cap(c_a), veh/h	485	0	0	404	0	756	1301	0	1153	1281	0	1151
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.97	0.00	0.97
Uniform Delay (d), s/veh	39.0	0.0	0.0	31.7	0.0	29.1	6.8	0.0	6.8	5.8	0.0	5.8
Incr Delay (d2), s/veh	2.8	0.0	0.0	0.4	0.0	0.2	1.2	0.0	1.4	0.6	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.0	0.0	1.2	0.0	1.0	5.1	0.0	4.8	2.8	0.0	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.8	0.0	0.0	32.1	0.0	29.3	8.0	0.0	8.2	6.4	0.0	6.5
LnGrp LOS	D	A	A	C	A	C	A	A	A	A	A	A
Approach Vol, veh/h		138			116			1148			748	
Approach Delay, s/veh		41.8			30.8			8.1			6.5	
Approach LOS		D			C			A			A	

Timer - Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		66.2		23.8		66.2	9.0	14.8				
Change Period (Y+Rc), s		5.0		5.0		5.0	5.0	5.0				
Max Green Setting (Gmax), s		40.0		40.0		40.0	10.0	25.0				
Max Q Clear Time (g_c+I1), s		15.8		4.3		9.8	4.7	9.6				
Green Ext Time (p_c), s		4.1		0.1		2.5	0.0	0.3				

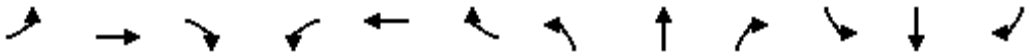
Intersection Summary												
HCM 6th Ctrl Delay			10.9									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	80	440	100	30	810	0	0	860	50
Future Volume (vph)	0	0	0	80	440	100	30	810	0	0	860	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				5.0	6.0			5.0			5.0	
Lane Util. Factor				1.00	0.95			0.95			0.95	
Frt				1.00	0.97			1.00			0.99	
Flt Protected				0.95	1.00			1.00			1.00	
Satd. Flow (prot)				1787	3475			3533			3545	
Flt Permitted				0.95	1.00			0.69			1.00	
Satd. Flow (perm)				1787	3475			2454			3545	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	0	0	0	81	444	101	30	818	0	0	869	51
RTOR Reduction (vph)	0	0	0	0	16	0	0	0	0	0	4	0
Lane Group Flow (vph)	0	0	0	81	529	0	0	848	0	0	916	0
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Turn Type				Prot	NA		Perm	NA			NA	
Protected Phases				1!	6			5 8!			4	
Permitted Phases							5 8!					
Actuated Green, G (s)				8.5	47.7			46.3			30.5	
Effective Green, g (s)				8.5	47.7			46.3			30.5	
Actuated g/C Ratio				0.08	0.45			0.44			0.29	
Clearance Time (s)				5.0	6.0						5.0	
Vehicle Extension (s)				3.0	3.0						3.0	
Lane Grp Cap (vph)				144	1578			1082			1029	
v/s Ratio Prot				c0.05	c0.15						c0.26	
v/s Ratio Perm								c0.35				
v/c Ratio				0.56	0.33			0.78			0.89	
Uniform Delay, d1				46.5	18.4			25.1			35.6	
Progression Factor				1.00	1.00			0.47			1.00	
Incremental Delay, d2				5.0	0.6			2.2			9.6	
Delay (s)				51.4	19.0			13.9			45.2	
Level of Service				D	B			B			D	
Approach Delay (s)		0.0			23.2			13.9			45.2	
Approach LOS		A			C			B			D	

Intersection Summary			
HCM 2000 Control Delay	28.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

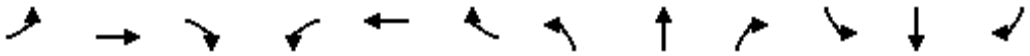


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	750	100	0	0	0	0	810	50	100	840	0
Future Volume (vph)	30	750	100	0	0	0	0	810	50	100	840	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0						5.0			5.0	
Lane Util. Factor	1.00	0.95						0.95			0.95	
Frt	1.00	0.98						0.99			1.00	
Flt Protected	0.95	1.00						1.00			0.99	
Satd. Flow (prot)	1787	3511						3508			3555	
Flt Permitted	0.95	1.00						1.00			0.58	
Satd. Flow (perm)	1787	3511						3508			2080	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	31	781	104	0	0	0	0	844	52	104	875	0
RTOR Reduction (vph)	0	9	0	0	0	0	0	4	0	0	0	0
Lane Group Flow (vph)	31	876	0	0	0	0	0	892	0	0	979	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	1%	1%	1%
Turn Type	Prot	NA						NA		Perm	NA	
Protected Phases	5!	2						8			4 1!	
Permitted Phases										4 1!		
Actuated Green, G (s)	10.8	50.0						30.5			44.0	
Effective Green, g (s)	10.8	50.0						30.5			44.0	
Actuated g/C Ratio	0.10	0.48						0.29			0.42	
Clearance Time (s)	5.0	6.0						5.0				
Vehicle Extension (s)	3.0	3.0						3.0				
Lane Grp Cap (vph)	183	1671						1018			871	
v/s Ratio Prot	0.02	c0.25						0.25				
v/s Ratio Perm											c0.47	
v/c Ratio	0.17	0.52						0.88			1.12	
Uniform Delay, d1	43.0	19.2						35.5			30.5	
Progression Factor	1.00	1.00						1.00			0.26	
Incremental Delay, d2	0.4	1.2						8.6			65.3	
Delay (s)	43.4	20.4						44.0			73.3	
Level of Service	D	C						D			E	
Approach Delay (s)		21.2			0.0			44.0			73.3	
Approach LOS		C			A			D			E	

Intersection Summary			
HCM 2000 Control Delay	46.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	87.4%	ICU Level of Service	E
Analysis Period (min)	15		

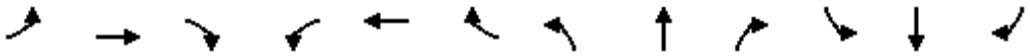
! Phase conflict between lane groups.

c Critical Lane Group



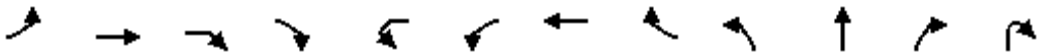
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	60	300	60	240	770	0	0	870	30
Future Volume (vph)	0	0	0	60	300	60	240	770	0	0	870	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					5.0	5.0	5.0	5.0			5.0	
Lane Util. Factor					0.95	1.00	1.00	0.95			0.91	
Frt					1.00	0.85	1.00	1.00			0.99	
Flt Protected					0.99	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					3545	1599	1770	3539			5060	
Flt Permitted					0.99	1.00	0.24	1.00			1.00	
Satd. Flow (perm)					3545	1599	456	3539			5060	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	61	306	61	245	786	0	0	888	31
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	367	61	245	786	0	0	919	0
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	2%	2%	2%
Turn Type				Split	NA	Perm	pm+pt	NA			NA	
Protected Phases				4	4		1 8	6 8			2	
Permitted Phases						4	6 8					
Actuated Green, G (s)					20.3	20.3	84.7	89.7			53.0	
Effective Green, g (s)					20.3	20.3	84.7	89.7			53.0	
Actuated g/C Ratio					0.17	0.17	0.71	0.75			0.44	
Clearance Time (s)					5.0	5.0					5.0	
Vehicle Extension (s)					3.0	3.0					3.0	
Lane Grp Cap (vph)					599	270	614	2645			2234	
v/s Ratio Prot					c0.10		c0.09	c0.22			0.18	
v/s Ratio Perm						0.04	c0.19					
v/c Ratio					0.61	0.23	0.40	0.30			0.41	
Uniform Delay, d1					46.2	43.1	6.8	4.9			22.9	
Progression Factor					1.00	1.00	3.73	0.04			1.00	
Incremental Delay, d2					1.9	0.4	0.4	0.1			0.6	
Delay (s)					48.1	43.5	25.9	0.3			23.4	
Level of Service					D	D	C	A			C	
Approach Delay (s)		0.0			47.4			6.4			23.4	
Approach LOS		A			D			A			C	

Intersection Summary			
HCM 2000 Control Delay	20.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	76.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	390	270	0	0	0	0	950	50	70	860	0
Future Volume (vph)	60	390	270	0	0	0	0	950	50	70	860	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0					5.0		5.0	5.0	
Lane Util. Factor		0.95	1.00					0.91		1.00	0.95	
Frt		1.00	0.85					0.99		1.00	1.00	
Flt Protected		0.99	1.00					1.00		0.95	1.00	
Satd. Flow (prot)		3551	1599					5047		1770	3539	
Flt Permitted		0.99	1.00					1.00		0.21	1.00	
Satd. Flow (perm)		3551	1599					5047		386	3539	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	64	415	287	0	0	0	0	1011	53	74	915	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	479	287	0	0	0	0	1064	0	74	915	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Split	NA	Perm					NA		custom	NA	
Protected Phases	8	8						6		4	2 1 4	
Permitted Phases			8							2 1		
Actuated Green, G (s)		24.7	24.7					60.0		80.3	85.3	
Effective Green, g (s)		24.7	24.7					60.0		80.3	85.3	
Actuated g/C Ratio		0.21	0.21					0.50		0.67	0.71	
Clearance Time (s)		5.0	5.0					5.0		5.0		
Vehicle Extension (s)		3.0	3.0					3.0		3.0		
Lane Grp Cap (vph)		730	329					2523		492	2515	
v/s Ratio Prot		0.13						c0.21		0.03	c0.26	
v/s Ratio Perm			c0.18							0.08		
v/c Ratio		0.66	0.87					0.42		0.15	0.36	
Uniform Delay, d1		43.8	46.1					19.0		13.0	6.8	
Progression Factor		1.00	1.00					1.34		0.25	0.26	
Incremental Delay, d2		2.1	21.5					0.2		0.1	0.1	
Delay (s)		45.9	67.7					25.6		3.4	1.9	
Level of Service		D	E					C		A	A	
Approach Delay (s)		54.0			0.0			25.6			2.0	
Approach LOS		D			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	25.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	76.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	190	440	60	180	10	180	500	70	160	720	170	10
Future Volume (vph)	190	440	60	180	10	180	500	70	160	720	170	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0			5.0	5.0		5.0	5.0		
Lane Util. Factor	1.00	1.00	1.00			1.00	0.95		1.00	0.95		
Frt	1.00	1.00	0.85			1.00	0.98		1.00	0.97		
Flt Protected	0.95	1.00	1.00			0.95	1.00		0.95	1.00		
Satd. Flow (prot)	1770	1863	1583			1787	3509		1770	3433		
Flt Permitted	0.27	1.00	1.00			0.17	1.00		0.11	1.00		
Satd. Flow (perm)	505	1863	1583			311	3509		207	3433		
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	204	473	65	194	11	194	538	75	172	774	183	11
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	204	473	259	0	0	205	613	0	172	968	0	0
Heavy Vehicles (%)	2%	2%	2%	2%	1%	1%	1%	1%	2%	2%	2%	2%
Turn Type	pm+pt	NA	Perm		custom	pm+pt	NA		pm+pt	NA		
Protected Phases	5	2				1	6		3	8		
Permitted Phases	2		2		1	6			8			
Actuated Green, G (s)	44.0	37.0	37.0			44.0	37.0		44.0	36.0		
Effective Green, g (s)	44.0	37.0	37.0			44.0	37.0		44.0	36.0		
Actuated g/C Ratio	0.37	0.31	0.31			0.37	0.31		0.37	0.30		
Clearance Time (s)	5.0	5.0	5.0			5.0	5.0		5.0	5.0		
Vehicle Extension (s)	3.0	3.0	3.0			3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)	258	574	488			200	1081		180	1029		
v/s Ratio Prot	0.05	0.25				c0.06	0.17		c0.06	0.28		
v/s Ratio Perm	0.24		0.16			c0.32			0.29			
v/c Ratio	0.79	0.82	0.53			1.02	0.57		0.96	0.94		
Uniform Delay, d1	31.9	38.5	34.3			35.9	34.8		31.9	41.0		
Progression Factor	1.00	1.00	1.00			1.00	1.00		1.80	1.33		
Incremental Delay, d2	15.1	12.7	4.1			70.3	2.2		51.3	14.9		
Delay (s)	47.1	51.1	38.4			106.2	36.9		108.8	69.3		
Level of Service	D	D	D			F	D		F	E		
Approach Delay (s)		46.7					54.3			75.3		
Approach LOS		D					D			E		

Intersection Summary			
HCM 2000 Control Delay	65.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	95.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

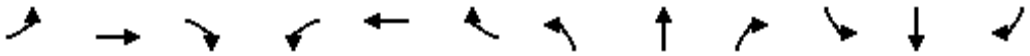
Movement	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	90	50	840	150	10	30	20	10
Future Volume (vph)	90	50	840	150	10	30	20	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0			5.0		
Lane Util. Factor		1.00	0.95			1.00		
Frt		1.00	0.98			0.94		
Flt Protected		0.95	1.00			0.97		
Satd. Flow (prot)		1787	3493			1705		
Flt Permitted		0.11	1.00			0.90		
Satd. Flow (perm)		209	3493			1571		
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	97	54	903	161	11	32	22	11
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	151	1064	0	0	76	0	0
Heavy Vehicles (%)	1%	1%	1%	1%	2%	2%	2%	2%
Turn Type	pm+pt	pm+pt	NA		Perm	Prot		
Protected Phases	7	7	4			9		
Permitted Phases	4	4			9			
Actuated Green, G (s)		44.0	36.0			7.0		
Effective Green, g (s)		44.0	36.0			7.0		
Actuated g/C Ratio		0.37	0.30			0.06		
Clearance Time (s)		5.0	5.0			5.0		
Vehicle Extension (s)		3.0	3.0			3.0		
Lane Grp Cap (vph)		181	1047			91		
v/s Ratio Prot		0.06	c0.30					
v/s Ratio Perm		0.25				c0.05		
v/c Ratio		0.83	1.02			0.84		
Uniform Delay, d1		30.2	42.0			55.9		
Progression Factor		1.11	1.11			1.00		
Incremental Delay, d2		24.6	30.5			45.3		
Delay (s)		58.0	77.3			101.2		
Level of Service		E	E			F		
Approach Delay (s)			74.9			101.2		
Approach LOS			E			F		

Intersection Summary

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	20	90	970	140	140	1070
Future Volume (veh/h)	20	90	970	140	140	1070
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1870	1870	1870	1870
Adj Flow Rate, veh/h	21	93	1000	144	144	1103
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	2	2	2	2
Cap, veh/h	26	114	2275	327	459	2946
Arrive On Green	0.09	0.09	0.73	0.73	0.12	1.00
Sat Flow, veh/h	293	1300	3211	449	1781	3647
Grp Volume(v), veh/h	115	0	570	574	144	1103
Grp Sat Flow(s),veh/h/ln	1607	0	1777	1790	1781	1777
Q Serve(g_s), s	8.4	0.0	15.3	15.3	2.1	0.0
Cycle Q Clear(g_c), s	8.4	0.0	15.3	15.3	2.1	0.0
Prop In Lane	0.18	0.81		0.25	1.00	
Lane Grp Cap(c), veh/h	141	0	1296	1306	459	2946
V/C Ratio(X)	0.82	0.00	0.44	0.44	0.31	0.37
Avail Cap(c_a), veh/h	402	0	1296	1306	608	2946
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.79	0.79	0.09	0.09
Uniform Delay (d), s/veh	53.8	0.0	6.5	6.5	4.0	0.0
Incr Delay (d2), s/veh	10.9	0.0	0.9	0.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.0	5.6	5.7	0.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	64.7	0.0	7.3	7.3	4.0	0.0
LnGrp LOS	E	A	A	A	A	A
Approach Vol, veh/h	115		1144			1247
Approach Delay, s/veh	64.7		7.3			0.5
Approach LOS	E		A			A

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.9	92.6		15.5		104.5
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0
Max Green Setting (Gmax), s	17.0	58.0		30.0		80.0
Max Q Clear Time (g_c+I1), s	4.1	0.0		10.4		0.0
Green Ext Time (p_c), s	0.3	0.0		0.3		0.0

Intersection Summary						
HCM 6th Ctrl Delay			6.6			
HCM 6th LOS			A			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	10	90	110	60	20	30	1010	20	10	1050	30
Future Volume (veh/h)	80	10	90	110	60	20	30	1010	20	10	1050	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	82	10	93	113	62	21	31	1041	21	10	1082	31
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	143	24	110	376	366	124	73	2042	41	47	2114	60
Arrive On Green	0.15	0.15	0.15	0.07	0.27	0.27	0.62	0.62	0.62	0.62	0.62	0.62
Sat Flow, veh/h	584	163	755	1795	1347	456	51	3308	66	10	3424	97
Grp Volume(v), veh/h	185	0	0	113	0	83	554	0	539	587	0	536
Grp Sat Flow(s),veh/h/ln	1503	0	0	1795	0	1803	1734	0	1690	1846	0	1684
Q Serve(g_s), s	9.3	0.0	0.0	4.6	0.0	3.2	0.0	0.0	16.1	0.0	0.0	16.1
Cycle Q Clear(g_c), s	10.7	0.0	0.0	4.6	0.0	3.2	14.5	0.0	16.1	15.8	0.0	16.1
Prop In Lane	0.44		0.50	1.00		0.25	0.06		0.04	0.02		0.06
Lane Grp Cap(c), veh/h	277	0	0	376	0	490	1113	0	1043	1180	0	1040
V/C Ratio(X)	0.67	0.00	0.00	0.30	0.00	0.17	0.50	0.00	0.52	0.50	0.00	0.52
Avail Cap(c_a), veh/h	472	0	0	450	0	801	1113	0	1043	1180	0	1040
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.93	0.00	0.93
Uniform Delay (d), s/veh	37.3	0.0	0.0	27.9	0.0	25.0	9.4	0.0	9.7	9.6	0.0	9.7
Incr Delay (d2), s/veh	2.8	0.0	0.0	0.4	0.0	0.2	1.6	0.0	1.8	1.4	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	0.0	0.0	2.0	0.0	1.4	5.9	0.0	6.0	6.4	0.0	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.1	0.0	0.0	28.3	0.0	25.2	11.0	0.0	11.5	11.0	0.0	11.4
LnGrp LOS	D	A	A	C	A	C	B	A	B	B	A	B
Approach Vol, veh/h		185			196			1093			1123	
Approach Delay, s/veh		40.1			27.0			11.2			11.2	
Approach LOS		D			C			B			B	

Timer - Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		60.6		29.4		60.6	11.3	18.2				
Change Period (Y+Rc), s		5.0		5.0		5.0	5.0	5.0				
Max Green Setting (Gmax), s		40.0		40.0		40.0	10.0	25.0				
Max Q Clear Time (g_c+I1), s		18.1		5.2		18.1	6.6	12.7				
Green Ext Time (p_c), s		4.1		0.2		4.0	0.1	0.4				

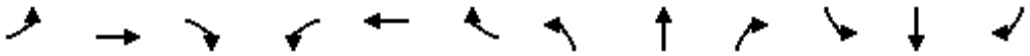
Intersection Summary												
HCM 6th Ctrl Delay			14.4									
HCM 6th LOS			B									

FUTURE YEAR 2047 'BUILD' CONDITIONS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	70	770	90	60	830	0	0	640	30
Future Volume (vph)	0	0	0	70	770	90	60	830	0	0	640	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				5.0	6.0		5.0	5.0			5.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			0.95	
Frt				1.00	0.98		1.00	1.00			0.99	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1787	3518		1770	1863			3550	
Flt Permitted				0.95	1.00		0.13	1.00			1.00	
Satd. Flow (perm)				1787	3518		237	1863			3550	
Peak-hour factor, PHF	0.92	0.92	0.92	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	74	811	95	63	874	0	0	674	32
RTOR Reduction (vph)	0	0	0	0	8	0	0	0	0	0	4	0
Lane Group Flow (vph)	0	0	0	74	898	0	63	874	0	0	702	0
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Turn Type				Prot	NA		Perm	NA			NA	
Protected Phases				1!	6			5 8!			4	
Permitted Phases							5 8!					
Actuated Green, G (s)				8.2	43.6		50.4	50.4			31.0	
Effective Green, g (s)				8.2	43.6		50.4	50.4			31.0	
Actuated g/C Ratio				0.08	0.42		0.48	0.48			0.30	
Clearance Time (s)				5.0	6.0						5.0	
Vehicle Extension (s)				3.0	3.0						3.0	
Lane Grp Cap (vph)				139	1460		113	894			1048	
v/s Ratio Prot				0.04	c0.26			c0.47			0.20	
v/s Ratio Perm							0.27					
v/c Ratio				0.53	0.61		0.56	0.98			0.67	
Uniform Delay, d1				46.6	24.1		19.4	26.7			32.5	
Progression Factor				1.00	1.00		0.72	0.95			1.00	
Incremental Delay, d2				3.9	1.9		3.0	16.3			1.7	
Delay (s)				50.4	26.1		17.0	41.7			34.2	
Level of Service				D	C		B	D			C	
Approach Delay (s)		0.0			27.9			40.1			34.2	
Approach LOS		A			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	33.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	96.9%	ICU Level of Service	F
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

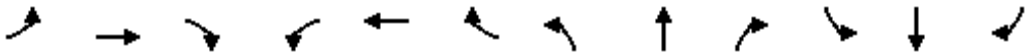


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	440	30	0	0	0	0	840	50	70	640	0
Future Volume (vph)	50	440	30	0	0	0	0	840	50	70	640	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0						5.0		5.0	5.0	
Lane Util. Factor	1.00	0.95						0.95		1.00	1.00	
Frt	1.00	0.99						0.99		1.00	1.00	
Flt Protected	0.95	1.00						1.00		0.95	1.00	
Satd. Flow (prot)	1805	3575						3510		1770	1863	
Flt Permitted	0.95	1.00						1.00		0.14	1.00	
Satd. Flow (perm)	1805	3575						3510		266	1863	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	53	468	32	0	0	0	0	894	53	74	681	0
RTOR Reduction (vph)	0	4	0	0	0	0	0	4	0	0	0	0
Lane Group Flow (vph)	53	496	0	0	0	0	0	943	0	74	681	0
Heavy Vehicles (%)	0%	0%	0%	1%	1%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot	NA						NA		Perm	NA	
Protected Phases	5!	2						8			4 1!	
Permitted Phases										4 1!		
Actuated Green, G (s)	14.4	49.8						31.0		44.2	44.2	
Effective Green, g (s)	14.4	49.8						31.0		44.2	44.2	
Actuated g/C Ratio	0.14	0.47						0.30		0.42	0.42	
Clearance Time (s)	5.0	6.0						5.0				
Vehicle Extension (s)	3.0	3.0						3.0				
Lane Grp Cap (vph)	247	1695						1036		111	784	
v/s Ratio Prot	0.03	c0.14						0.27			c0.37	
v/s Ratio Perm										0.28		
v/c Ratio	0.21	0.29						0.91		0.67	0.87	
Uniform Delay, d1	40.3	16.8						35.7		24.5	27.7	
Progression Factor	1.00	1.00						1.00		0.22	0.28	
Incremental Delay, d2	0.4	0.4						11.7		11.3	8.2	
Delay (s)	40.7	17.3						47.3		16.6	16.0	
Level of Service	D	B						D		B	B	
Approach Delay (s)		19.5			0.0			47.3			16.0	
Approach LOS		B			A			D			B	

Intersection Summary			
HCM 2000 Control Delay	30.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	96.9%	ICU Level of Service	F
Analysis Period (min)	15		

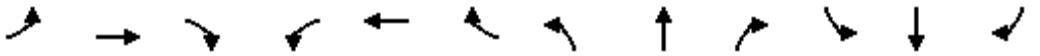
! Phase conflict between lane groups.

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	50	370	90	340	840	0	0	560	20
Future Volume (vph)	0	0	0	50	370	90	340	840	0	0	560	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					5.0	5.0	5.0	5.0			5.0	
Lane Util. Factor					0.95	1.00	1.00	0.95			0.91	
Frt					1.00	0.85	1.00	1.00			0.99	
Flt Protected					0.99	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					3553	1599	1770	3539			5109	
Flt Permitted					0.99	1.00	0.38	1.00			1.00	
Satd. Flow (perm)					3553	1599	703	3539			5109	
Peak-hour factor, PHF	0.92	0.92	0.92	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	0	0	53	394	96	362	894	0	0	596	21
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	447	96	362	894	0	0	617	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Turn Type				Split	NA	Perm	pm+pt	NA			NA	
Protected Phases				4	4		1 8	6 8			2	
Permitted Phases						4	6 8					
Actuated Green, G (s)					20.4	20.4	74.6	79.6			48.2	
Effective Green, g (s)					20.4	20.4	74.6	79.6			48.2	
Actuated g/C Ratio					0.19	0.19	0.68	0.72			0.44	
Clearance Time (s)					5.0	5.0					5.0	
Vehicle Extension (s)					3.0	3.0					3.0	
Lane Grp Cap (vph)					658	296	684	2560			2238	
v/s Ratio Prot					c0.13		c0.10	0.25			0.12	
v/s Ratio Perm						0.06	c0.26					
v/c Ratio					0.68	0.32	0.53	0.35			0.28	
Uniform Delay, d1					41.8	38.8	7.3	5.6			19.7	
Progression Factor					1.00	1.00	2.67	0.05			1.00	
Incremental Delay, d2					2.8	0.6	0.7	0.1			0.3	
Delay (s)					44.5	39.5	20.2	0.4			20.1	
Level of Service					D	D	C	A			C	
Approach Delay (s)		0.0			43.7			6.1			20.1	
Approach LOS		A			D			A			C	

Intersection Summary			
HCM 2000 Control Delay	18.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	68.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	250	170	0	0	0	0	1110	50	50	560	0
Future Volume (vph)	70	250	170	0	0	0	0	1110	50	50	560	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0					5.0		5.0	5.0	
Lane Util. Factor		0.95	1.00					0.91		1.00	0.95	
Frt		1.00	0.85					0.99		1.00	1.00	
Flt Protected		0.99	1.00					1.00		0.95	1.00	
Satd. Flow (prot)		3535	1599					5052		1787	3574	
Flt Permitted		0.99	1.00					1.00		0.17	1.00	
Satd. Flow (perm)		3535	1599					5052		312	3574	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	74	263	179	0	0	0	0	1168	53	53	589	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	337	179	0	0	0	0	1221	0	53	589	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Turn Type	Split	NA	Perm					NA		custom	NA	
Protected Phases	8	8						6		4	2 1 4	
Permitted Phases			8							2 1		
Actuated Green, G (s)		19.4	19.4					55.2		75.6	80.6	
Effective Green, g (s)		19.4	19.4					55.2		75.6	80.6	
Actuated g/C Ratio		0.18	0.18					0.50		0.69	0.73	
Clearance Time (s)		5.0	5.0					5.0		5.0		
Vehicle Extension (s)		3.0	3.0					3.0		3.0		
Lane Grp Cap (vph)		623	282					2535		487	2618	
v/s Ratio Prot		0.10						c0.24		0.02	c0.16	
v/s Ratio Perm			c0.11							0.05		
v/c Ratio		0.54	0.63					0.48		0.11	0.22	
Uniform Delay, d1		41.2	42.0					18.0		11.8	4.7	
Progression Factor		1.00	1.00					1.71		0.48	0.17	
Incremental Delay, d2		1.0	4.6					0.3		0.1	0.0	
Delay (s)		42.2	46.6					31.2		5.7	0.8	
Level of Service		D	D					C		A	A	
Approach Delay (s)		43.7			0.0			31.2			1.2	
Approach LOS		D			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	25.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	68.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	160	370	10	120	10	70	340	80	140	910	80	10
Future Volume (vph)	160	370	10	120	10	70	340	80	140	910	80	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0			5.0	5.0		5.0	5.0		
Lane Util. Factor	1.00	1.00	1.00			1.00	0.95		1.00	0.95		
Frt	1.00	1.00	0.85			1.00	0.97		1.00	0.99		
Flt Protected	0.95	1.00	1.00			0.95	1.00		0.95	1.00		
Satd. Flow (prot)	1770	1863	1583			1787	3472		1770	3491		
Flt Permitted	0.38	1.00	1.00			0.30	1.00		0.19	1.00		
Satd. Flow (perm)	705	1863	1583			562	3472		363	3491		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	168	389	11	126	11	74	358	84	147	958	84	11
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	168	389	137	0	0	85	442	0	147	1053	0	0
Heavy Vehicles (%)	2%	2%	2%	2%	1%	1%	1%	1%	2%	2%	2%	2%
Turn Type	pm+pt	NA	Perm		custom	pm+pt	NA		pm+pt	NA		
Protected Phases	5	2				1	6		3	8		
Permitted Phases	2		2		1	6			8			
Actuated Green, G (s)	41.4	34.2	34.2			38.2	32.6		41.2	34.0		
Effective Green, g (s)	41.4	34.2	34.2			38.2	32.6		41.2	34.0		
Actuated g/C Ratio	0.38	0.31	0.31			0.35	0.30		0.37	0.31		
Clearance Time (s)	5.0	5.0	5.0			5.0	5.0		5.0	5.0		
Vehicle Extension (s)	3.0	3.0	3.0			3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)	335	579	492			257	1028		228	1079		
v/s Ratio Prot	c0.03	c0.21				0.02	0.13		c0.04	c0.30		
v/s Ratio Perm	0.16		0.09			0.10			0.20			
v/c Ratio	0.50	0.67	0.28			0.33	0.43		0.64	0.98		
Uniform Delay, d1	24.0	33.0	28.6			25.6	31.2		25.1	37.6		
Progression Factor	1.00	1.00	1.00			1.00	1.00		1.54	1.37		
Incremental Delay, d2	1.2	6.1	1.4			0.8	1.3		2.8	13.1		
Delay (s)	25.2	39.1	30.0			26.4	32.5		41.5	64.5		
Level of Service	C	D	C			C	C		D	E		
Approach Delay (s)		33.9					31.5			61.7		
Approach LOS		C					C			E		

Intersection Summary			
HCM 2000 Control Delay	44.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	82.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

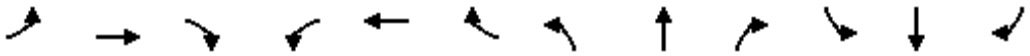
Movement	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	50	10	570	100	10	10	10	10
Future Volume (vph)	50	10	570	100	10	10	10	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0			5.0		
Lane Util. Factor		1.00	0.95			1.00		
Frt		1.00	0.98			0.93		
Flt Protected		0.95	1.00			0.98		
Satd. Flow (prot)		1770	3460			1695		
Flt Permitted		0.12	1.00			0.87		
Satd. Flow (perm)		230	3460			1514		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	53	11	600	105	11	11	11	11
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	64	705	0	0	44	0	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	pm+pt	pm+pt	NA		Perm	Prot		
Protected Phases	7	7	4			9		
Permitted Phases	4	4			9			
Actuated Green, G (s)		38.0	32.4			5.6		
Effective Green, g (s)		38.0	32.4			5.6		
Actuated g/C Ratio		0.35	0.29			0.05		
Clearance Time (s)		5.0	5.0			5.0		
Vehicle Extension (s)		3.0	3.0			3.0		
Lane Grp Cap (vph)		157	1019			77		
v/s Ratio Prot		0.02	0.20					
v/s Ratio Perm		0.12				c0.03		
v/c Ratio		0.41	0.69			0.57		
Uniform Delay, d1		28.0	34.4			51.0		
Progression Factor		0.70	0.95			1.00		
Incremental Delay, d2		1.7	2.0			9.8		
Delay (s)		21.4	34.7			60.9		
Level of Service		C	C			E		
Approach Delay (s)			33.5			60.9		
Approach LOS			C			E		

Intersection Summary

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	20	80	1060	70	80	690
Future Volume (veh/h)	20	80	1060	70	80	690
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1870	1870	1870	1870
Adj Flow Rate, veh/h	22	87	1152	76	87	750
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	2	2	2	2
Cap, veh/h	28	112	1244	82	496	1536
Arrive On Green	0.09	0.09	1.00	1.00	0.12	1.00
Sat Flow, veh/h	322	1274	1735	114	1781	1870
Grp Volume(v), veh/h	110	0	0	1228	87	750
Grp Sat Flow(s),veh/h/ln	1610	0	0	1850	1781	1870
Q Serve(g_s), s	7.4	0.0	0.0	0.0	1.1	0.0
Cycle Q Clear(g_c), s	7.4	0.0	0.0	0.0	1.1	0.0
Prop In Lane	0.20	0.79		0.06	1.00	
Lane Grp Cap(c), veh/h	141	0	0	1326	496	1536
V/C Ratio(X)	0.78	0.00	0.00	0.93	0.18	0.49
Avail Cap(c_a), veh/h	293	0	0	1326	553	1536
HCM Platoon Ratio	1.00	1.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	0.46	0.69	0.69
Uniform Delay (d), s/veh	49.1	0.0	0.0	0.0	2.3	0.0
Incr Delay (d2), s/veh	8.9	0.0	0.0	6.6	0.1	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	0.0	2.4	0.3	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	58.0	0.0	0.0	6.6	2.4	0.8
LnGrp LOS	E	A	A	A	A	A
Approach Vol, veh/h	110		1228			837
Approach Delay, s/veh	58.0		6.6			0.9
Approach LOS	E		A			A

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.5	83.8		14.7		95.3
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0
Max Green Setting (Gmax), s	10.0	65.0		20.0		80.0
Max Q Clear Time (g_c+I1), s	3.1	0.0		9.4		0.0
Green Ext Time (p_c), s	0.1	0.0		0.2		0.0

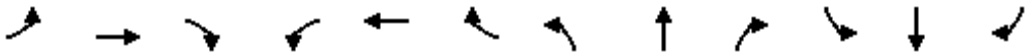
Intersection Summary	
HCM 6th Ctrl Delay	7.0
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	10	90	60	20	30	10	1070	10	10	690	10
Future Volume (veh/h)	30	10	90	60	20	30	10	1070	10	10	690	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	32	11	95	63	21	32	11	1126	11	11	726	11
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	69	24	115	247	130	198	582	1325	13	202	1317	20
Arrive On Green	0.11	0.11	0.11	0.04	0.19	0.19	0.72	0.72	0.72	1.00	1.00	1.00
Sat Flow, veh/h	268	226	1092	1795	674	1027	721	1849	18	495	1838	28
Grp Volume(v), veh/h	138	0	0	63	0	53	11	0	1137	11	0	737
Grp Sat Flow(s),veh/h/ln	1586	0	0	1795	0	1700	721	0	1867	495	0	1865
Q Serve(g_s), s	6.4	0.0	0.0	3.3	0.0	2.9	0.5	0.0	48.5	1.6	0.0	0.0
Cycle Q Clear(g_c), s	9.3	0.0	0.0	3.3	0.0	2.9	0.5	0.0	48.5	50.1	0.0	0.0
Prop In Lane	0.23		0.69	1.00		0.60	1.00		0.01	1.00		0.01
Lane Grp Cap(c), veh/h	208	0	0	247	0	327	582	0	1338	202	0	1337
V/C Ratio(X)	0.66	0.00	0.00	0.26	0.00	0.16	0.02	0.00	0.85	0.05	0.00	0.55
Avail Cap(c_a), veh/h	397	0	0	254	0	541	582	0	1338	202	0	1337
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.86	0.00	0.86
Uniform Delay (d), s/veh	48.1	0.0	0.0	39.7	0.0	37.0	4.5	0.0	11.3	15.4	0.0	0.0
Incr Delay (d2), s/veh	3.6	0.0	0.0	0.5	0.0	0.2	0.1	0.0	6.9	0.4	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.0	0.0	1.5	0.0	1.2	0.1	0.0	20.0	0.2	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.7	0.0	0.0	40.3	0.0	37.3	4.5	0.0	18.2	15.9	0.0	1.4
LnGrp LOS	D	A	A	D	A	D	A	A	B	B	A	A
Approach Vol, veh/h		138			116			1148			748	
Approach Delay, s/veh		51.7			38.9			18.1			1.6	
Approach LOS		D			D			B			A	

Timer - Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		83.8		26.2		83.8	9.6	16.6				
Change Period (Y+Rc), s		5.0		5.0		5.0	5.0	5.0				
Max Green Setting (Gmax), s		65.0		35.0		65.0	5.0	25.0				
Max Q Clear Time (g_c+I1), s		50.5		4.9		52.1	5.3	11.3				
Green Ext Time (p_c), s		4.8		0.1		2.4	0.0	0.3				

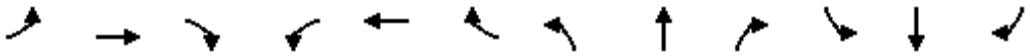
Intersection Summary												
HCM 6th Ctrl Delay			15.6									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	80	440	100	30	810	0	0	860	50
Future Volume (vph)	0	0	0	80	440	100	30	810	0	0	860	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				5.0	6.0		5.0	5.0			5.0	
Lane Util. Factor				1.00	0.95		1.00	1.00			0.95	
Frt				1.00	0.97		1.00	1.00			0.99	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1787	3475		1770	1863			3545	
Flt Permitted				0.95	1.00		0.09	1.00			1.00	
Satd. Flow (perm)				1787	3475		161	1863			3545	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	0	0	0	81	444	101	30	818	0	0	869	51
RTOR Reduction (vph)	0	0	0	0	16	0	0	0	0	0	4	0
Lane Group Flow (vph)	0	0	0	81	529	0	30	818	0	0	916	0
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Turn Type				Prot	NA		Perm	NA			NA	
Protected Phases				1!	6			5 8!			4	
Permitted Phases							5 8!					
Actuated Green, G (s)				8.5	47.7		46.3	46.3			30.5	
Effective Green, g (s)				8.5	47.7		46.3	46.3			30.5	
Actuated g/C Ratio				0.08	0.45		0.44	0.44			0.29	
Clearance Time (s)				5.0	6.0						5.0	
Vehicle Extension (s)				3.0	3.0						3.0	
Lane Grp Cap (vph)				144	1578		70	821			1029	
v/s Ratio Prot				c0.05	c0.15			c0.44			0.26	
v/s Ratio Perm							0.19					
v/c Ratio				0.56	0.33		0.43	1.00			0.89	
Uniform Delay, d1				46.5	18.4		20.2	29.3			35.6	
Progression Factor				1.00	1.00		0.53	0.79			1.00	
Incremental Delay, d2				5.0	0.6		2.4	22.5			9.6	
Delay (s)				51.4	19.0		13.0	45.5			45.2	
Level of Service				D	B		B	D			D	
Approach Delay (s)		0.0			23.2			44.4			45.2	
Approach LOS		A			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	39.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	104.8%	ICU Level of Service	G
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

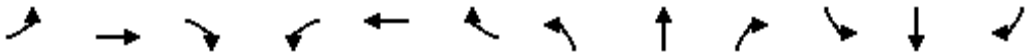


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	750	100	0	0	0	0	810	50	100	840	0
Future Volume (vph)	30	750	100	0	0	0	0	810	50	100	840	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0						5.0		5.0	5.0	
Lane Util. Factor	1.00	0.95						0.95		1.00	1.00	
Frt	1.00	0.98						0.99		1.00	1.00	
Flt Protected	0.95	1.00						1.00		0.95	1.00	
Satd. Flow (prot)	1787	3511						3508		1787	1881	
Flt Permitted	0.95	1.00						1.00		0.16	1.00	
Satd. Flow (perm)	1787	3511						3508		306	1881	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	31	781	104	0	0	0	0	844	52	104	875	0
RTOR Reduction (vph)	0	9	0	0	0	0	0	4	0	0	0	0
Lane Group Flow (vph)	31	876	0	0	0	0	0	892	0	104	875	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	1%	1%	1%
Turn Type	Prot	NA						NA		Perm	NA	
Protected Phases	5!	2						8			4 1!	
Permitted Phases										4 1!		
Actuated Green, G (s)	10.8	50.0						30.5		44.0	44.0	
Effective Green, g (s)	10.8	50.0						30.5		44.0	44.0	
Actuated g/C Ratio	0.10	0.48						0.29		0.42	0.42	
Clearance Time (s)	5.0	6.0						5.0				
Vehicle Extension (s)	3.0	3.0						3.0				
Lane Grp Cap (vph)	183	1671						1018		128	788	
v/s Ratio Prot	0.02	c0.25						0.25			c0.47	
v/s Ratio Perm										0.34		
v/c Ratio	0.17	0.52						0.88		0.81	1.11	
Uniform Delay, d1	43.0	19.2						35.5		26.9	30.5	
Progression Factor	1.00	1.00						1.00		0.19	0.26	
Incremental Delay, d2	0.4	1.2						8.6		20.3	60.8	
Delay (s)	43.4	20.4						44.0		25.3	68.8	
Level of Service	D	C						D		C	E	
Approach Delay (s)		21.2			0.0			44.0			64.1	
Approach LOS		C			A			D			E	

Intersection Summary			
HCM 2000 Control Delay	43.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	104.8%	ICU Level of Service	G
Analysis Period (min)	15		

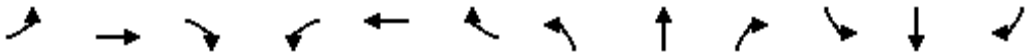
! Phase conflict between lane groups.

c Critical Lane Group



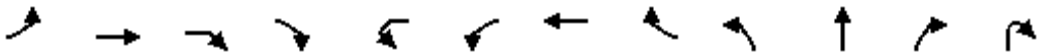
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	60	300	60	240	770	0	0	870	30
Future Volume (vph)	0	0	0	60	300	60	240	770	0	0	870	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					5.0	5.0	5.0	5.0			5.0	
Lane Util. Factor					0.95	1.00	1.00	0.95			0.91	
Frt					1.00	0.85	1.00	1.00			0.99	
Flt Protected					0.99	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					3545	1599	1770	3539			5060	
Flt Permitted					0.99	1.00	0.24	1.00			1.00	
Satd. Flow (perm)					3545	1599	456	3539			5060	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	61	306	61	245	786	0	0	888	31
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	367	61	245	786	0	0	919	0
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	2%	2%	2%
Turn Type				Split	NA	Perm	pm+pt	NA			NA	
Protected Phases				4	4		1 8	6 8			2	
Permitted Phases						4	6 8					
Actuated Green, G (s)					20.3	20.3	84.7	89.7			53.0	
Effective Green, g (s)					20.3	20.3	84.7	89.7			53.0	
Actuated g/C Ratio					0.17	0.17	0.71	0.75			0.44	
Clearance Time (s)					5.0	5.0					5.0	
Vehicle Extension (s)					3.0	3.0					3.0	
Lane Grp Cap (vph)					599	270	614	2645			2234	
v/s Ratio Prot					c0.10		c0.09	c0.22			0.18	
v/s Ratio Perm						0.04	c0.19					
v/c Ratio					0.61	0.23	0.40	0.30			0.41	
Uniform Delay, d1					46.2	43.1	6.8	4.9			22.9	
Progression Factor					1.00	1.00	3.73	0.05			1.00	
Incremental Delay, d2					1.9	0.4	0.4	0.1			0.6	
Delay (s)					48.1	43.5	25.9	0.3			23.4	
Level of Service					D	D	C	A			C	
Approach Delay (s)		0.0			47.4			6.4			23.4	
Approach LOS		A			D			A			C	

Intersection Summary			
HCM 2000 Control Delay	20.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	76.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	390	270	0	0	0	0	950	50	70	860	0
Future Volume (vph)	60	390	270	0	0	0	0	950	50	70	860	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0					5.0		5.0	5.0	
Lane Util. Factor		0.95	1.00					0.91		1.00	0.95	
Frt		1.00	0.85					0.99		1.00	1.00	
Flt Protected		0.99	1.00					1.00		0.95	1.00	
Satd. Flow (prot)		3551	1599					5047		1770	3539	
Flt Permitted		0.99	1.00					1.00		0.21	1.00	
Satd. Flow (perm)		3551	1599					5047		386	3539	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	64	415	287	0	0	0	0	1011	53	74	915	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	479	287	0	0	0	0	1064	0	74	915	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Split	NA	Perm					NA		custom	NA	
Protected Phases	8	8						6		4	2 1 4	
Permitted Phases			8							2 1		
Actuated Green, G (s)		24.7	24.7					60.0		80.3	85.3	
Effective Green, g (s)		24.7	24.7					60.0		80.3	85.3	
Actuated g/C Ratio		0.21	0.21					0.50		0.67	0.71	
Clearance Time (s)		5.0	5.0					5.0		5.0		
Vehicle Extension (s)		3.0	3.0					3.0		3.0		
Lane Grp Cap (vph)		730	329					2523		492	2515	
v/s Ratio Prot		0.13						c0.21		0.03	c0.26	
v/s Ratio Perm			c0.18							0.08		
v/c Ratio		0.66	0.87					0.42		0.15	0.36	
Uniform Delay, d1		43.8	46.1					19.0		13.0	6.8	
Progression Factor		1.00	1.00					1.34		0.25	0.26	
Incremental Delay, d2		2.1	21.5					0.2		0.1	0.1	
Delay (s)		45.9	67.7					25.7		3.4	1.9	
Level of Service		D	E					C		A	A	
Approach Delay (s)		54.0			0.0			25.7			2.0	
Approach LOS		D			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	25.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	76.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	190	440	60	180	10	180	500	70	160	720	170	10
Future Volume (vph)	190	440	60	180	10	180	500	70	160	720	170	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0			5.0	5.0		5.0	5.0		
Lane Util. Factor	1.00	1.00	1.00			1.00	0.95		1.00	0.95		
Frt	1.00	1.00	0.85			1.00	0.98		1.00	0.97		
Flt Protected	0.95	1.00	1.00			0.95	1.00		0.95	1.00		
Satd. Flow (prot)	1770	1863	1583			1787	3509		1770	3433		
Flt Permitted	0.27	1.00	1.00			0.17	1.00		0.11	1.00		
Satd. Flow (perm)	505	1863	1583			311	3509		207	3433		
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	204	473	65	194	11	194	538	75	172	774	183	11
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	204	473	259	0	0	205	613	0	172	968	0	0
Heavy Vehicles (%)	2%	2%	2%	2%	1%	1%	1%	1%	2%	2%	2%	2%
Turn Type	pm+pt	NA	Perm		custom	pm+pt	NA		pm+pt	NA		
Protected Phases	5	2				1	6		3	8		
Permitted Phases	2		2		1	6			8			
Actuated Green, G (s)	44.0	37.0	37.0			44.0	37.0		44.0	36.0		
Effective Green, g (s)	44.0	37.0	37.0			44.0	37.0		44.0	36.0		
Actuated g/C Ratio	0.37	0.31	0.31			0.37	0.31		0.37	0.30		
Clearance Time (s)	5.0	5.0	5.0			5.0	5.0		5.0	5.0		
Vehicle Extension (s)	3.0	3.0	3.0			3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)	258	574	488			200	1081		180	1029		
v/s Ratio Prot	0.05	0.25				c0.06	0.17		c0.06	0.28		
v/s Ratio Perm	0.24		0.16			c0.32			0.29			
v/c Ratio	0.79	0.82	0.53			1.02	0.57		0.96	0.94		
Uniform Delay, d1	31.9	38.5	34.3			35.9	34.8		31.9	41.0		
Progression Factor	1.00	1.00	1.00			1.00	1.00		1.59	1.25		
Incremental Delay, d2	15.1	12.7	4.1			70.3	2.2		37.9	10.1		
Delay (s)	47.1	51.1	38.4			106.2	36.9		88.5	61.2		
Level of Service	D	D	D			F	D		F	E		
Approach Delay (s)		46.7					54.3			65.3		
Approach LOS		D					D			E		

Intersection Summary			
HCM 2000 Control Delay	62.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	95.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	90	50	840	150	10	30	20	10
Future Volume (vph)	90	50	840	150	10	30	20	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	5.0			5.0		
Lane Util. Factor		1.00	0.95			1.00		
Frt		1.00	0.98			0.94		
Flt Protected		0.95	1.00			0.97		
Satd. Flow (prot)		1787	3493			1705		
Flt Permitted		0.11	1.00			0.90		
Satd. Flow (perm)		209	3493			1571		
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	97	54	903	161	11	32	22	11
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	151	1064	0	0	76	0	0
Heavy Vehicles (%)	1%	1%	1%	1%	2%	2%	2%	2%
Turn Type	pm+pt	pm+pt	NA		Perm	Prot		
Protected Phases	7	7	4			9		
Permitted Phases	4	4			9			
Actuated Green, G (s)		44.0	36.0			7.0		
Effective Green, g (s)		44.0	36.0			7.0		
Actuated g/C Ratio		0.37	0.30			0.06		
Clearance Time (s)		5.0	5.0			5.0		
Vehicle Extension (s)		3.0	3.0			3.0		
Lane Grp Cap (vph)		181	1047			91		
v/s Ratio Prot		0.06	c0.30					
v/s Ratio Perm		0.25				c0.05		
v/c Ratio		0.83	1.02			0.84		
Uniform Delay, d1		30.2	42.0			55.9		
Progression Factor		1.11	1.11			1.00		
Incremental Delay, d2		24.6	30.5			45.3		
Delay (s)		58.0	77.3			101.2		
Level of Service		E	E			F		
Approach Delay (s)			74.9			101.2		
Approach LOS			E			F		

Intersection Summary

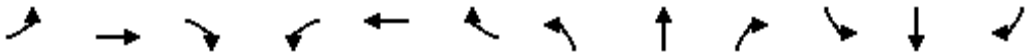
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	20	90	970	140	140	1070
Future Volume (veh/h)	20	90	970	140	140	1070
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1856	1856	1870	1870	1870	1870
Adj Flow Rate, veh/h	21	93	1000	144	144	1103
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	2	2	2	2
Cap, veh/h	25	113	1168	168	470	1552
Arrive On Green	0.09	0.09	0.97	0.97	0.12	1.00
Sat Flow, veh/h	293	1300	1599	230	1781	1870
Grp Volume(v), veh/h	115	0	0	1144	144	1103
Grp Sat Flow(s),veh/h/ln	1607	0	0	1829	1781	1870
Q Serve(g_s), s	8.4	0.0	0.0	12.8	2.1	0.0
Cycle Q Clear(g_c), s	8.4	0.0	0.0	12.8	2.1	0.0
Prop In Lane	0.18	0.81		0.13	1.00	
Lane Grp Cap(c), veh/h	139	0	0	1336	470	1552
V/C Ratio(X)	0.82	0.00	0.00	0.86	0.31	0.71
Avail Cap(c_a), veh/h	268	0	0	1336	515	1552
HCM Platoon Ratio	1.00	1.00	1.33	1.33	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	0.44	0.09	0.09
Uniform Delay (d), s/veh	53.9	0.0	0.0	0.6	3.5	0.0
Incr Delay (d2), s/veh	11.5	0.0	0.0	3.4	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.0	0.0	2.1	0.6	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	65.4	0.0	0.0	4.0	3.5	0.3
LnGrp LOS	E	A	A	A	A	A
Approach Vol, veh/h	115		1144			1247
Approach Delay, s/veh	65.4		4.0			0.6
Approach LOS	E		A			A

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.9	92.6		15.4		104.6
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0
Max Green Setting (Gmax), s	10.0	75.0		20.0		90.0
Max Q Clear Time (g_c+I1), s	4.1	0.0		10.4		0.0
Green Ext Time (p_c), s	0.2	0.0		0.2		0.0

Intersection Summary	
HCM 6th Ctrl Delay	5.1
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	10	90	110	60	20	30	1010	20	10	1050	30
Future Volume (veh/h)	80	10	90	110	60	20	30	1010	20	10	1050	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	82	10	93	113	62	21	31	1041	21	10	1082	31
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	128	20	106	284	302	102	411	1266	26	212	1253	36
Arrive On Green	0.14	0.14	0.14	0.04	0.22	0.22	0.69	0.69	0.69	1.00	1.00	1.00
Sat Flow, veh/h	602	142	752	1795	1347	456	506	1827	37	531	1809	52
Grp Volume(v), veh/h	185	0	0	113	0	83	31	0	1062	10	0	1113
Grp Sat Flow(s),veh/h/ln	1496	0	0	1795	0	1803	506	0	1864	531	0	1861
Q Serve(g_s), s	13.2	0.0	0.0	5.0	0.0	4.5	2.4	0.0	48.8	1.4	0.0	0.0
Cycle Q Clear(g_c), s	14.5	0.0	0.0	5.0	0.0	4.5	2.4	0.0	48.8	50.2	0.0	0.0
Prop In Lane	0.44		0.50	1.00		0.25	1.00		0.02	1.00		0.03
Lane Grp Cap(c), veh/h	253	0	0	284	0	404	411	0	1291	212	0	1289
V/C Ratio(X)	0.73	0.00	0.00	0.40	0.00	0.21	0.08	0.00	0.82	0.05	0.00	0.86
Avail Cap(c_a), veh/h	354	0	0	284	0	526	411	0	1291	212	0	1289
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	0.66	0.00	0.66
Uniform Delay (d), s/veh	50.5	0.0	0.0	41.2	0.0	37.9	6.0	0.0	13.2	14.7	0.0	0.0
Incr Delay (d2), s/veh	4.7	0.0	0.0	0.9	0.0	0.2	0.4	0.0	6.0	0.3	0.0	5.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	0.0	0.0	3.0	0.0	2.0	0.3	0.0	20.9	0.2	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.1	0.0	0.0	42.2	0.0	38.1	6.4	0.0	19.2	15.0	0.0	5.4
LnGrp LOS	E	A	A	D	A	D	A	A	B	B	A	A
Approach Vol, veh/h		185			196			1093			1123	
Approach Delay, s/veh		55.1			40.5			18.8			5.4	
Approach LOS		E			D			B			A	

Timer - Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		88.1		31.9		88.1	10.0	21.9				
Change Period (Y+Rc), s		5.0		5.0		5.0	5.0	5.0				
Max Green Setting (Gmax), s		75.0		35.0		75.0	5.0	25.0				
Max Q Clear Time (g_c+I1), s		50.8		6.5		52.2	7.0	16.5				
Green Ext Time (p_c), s		5.4		0.2		5.5	0.0	0.3				

Intersection Summary												
HCM 6th Ctrl Delay			17.2									
HCM 6th LOS			B									

ATTACHMENT E
TURN LANE LENGTH CALCULATIONS

STORAGE LENGTH CALCULATIONS

DESIGN YEAR 2047 'BUILD' TRAFFIC VOLUMES

LEE ROAD / SHAKER BOULEVARD WB - NORTHBOUND LEFT TURN LANE

AM PEAK HOUR

ANTICIPATED CYCLE LENGTH: 105 SEC.
DESIGN SPEED: 35 MPH

MOVEMENT:	LEFT		THRU		
VOLUME:	60		830		
% OF APPROACH VOLUME:	6.7%		93.3%		
LANE GROUP:	LEFT		THRU		
LANE GROUP VOLUME:	60		830		
NUMBER OF LANES:	1		1		
VEHICLES PER CYCLE:	2		25		
CONTROLLING LANE GROUP:			X		
TAPER LENGTH:	50				
STORAGE LENGTH:	100		825		
TOTAL TURN LANE LENGTH:	***150***		***825***		

PM PEAK HOUR

ANTICIPATED CYCLE LENGTH: 105 SEC.
DESIGN SPEED: 35 MPH

MOVEMENT:	LEFT		THRU		
VOLUME:	30		810		
% OF APPROACH VOLUME:	3.6%		96.4%		
LANE GROUP:	LEFT		THRU		
LANE GROUP VOLUME:	30		810		
NUMBER OF LANES:	1		1		
VEHICLES PER CYCLE:	1		24		
CONTROLLING LANE GROUP:			X		
TAPER LENGTH:	50				
STORAGE LENGTH:	50		800		
TOTAL TURN LANE LENGTH:	***100***		***800***		

RECOMMENDED STORAGE LENGTHS INCLUDE 50' DIVERGING TAPER

STORAGE LENGTH CALCULATIONS

DESIGN YEAR 2047 'BUILD' TRAFFIC VOLUMES

LEE ROAD / SHAKER BOULEVARD EB - SOUTHBOUND LEFT TURN LANE

AM PEAK HOUR

ANTICIPATED CYCLE LENGTH: 105 SEC.
DESIGN SPEED: 35 MPH

MOVEMENT:	LEFT		THRU		
VOLUME:	70		640		
% OF APPROACH VOLUME:	9.9%		90.1%		
LANE GROUP:	LEFT		THRU		
LANE GROUP VOLUME:	70		640		
NUMBER OF LANES:	1		1		
VEHICLES PER CYCLE:	3		19		
CONTROLLING LANE GROUP:			X		
TAPER LENGTH:	50				
STORAGE LENGTH:	150		650		
TOTAL TURN LANE LENGTH:	***200***		***650***		

PM PEAK HOUR

ANTICIPATED CYCLE LENGTH: 105 SEC.
DESIGN SPEED: 35 MPH

MOVEMENT:	LEFT		THRU		
VOLUME:	100		840		
% OF APPROACH VOLUME:	10.6%		89.4%		
LANE GROUP:	LEFT		THRU		
LANE GROUP VOLUME:	100		840		
NUMBER OF LANES:	1		1		
VEHICLES PER CYCLE:	3		25		
CONTROLLING LANE GROUP:			X		
TAPER LENGTH:	50				
STORAGE LENGTH:	150		825		
TOTAL TURN LANE LENGTH:	***200***		***825***		

RECOMMENDED STORAGE LENGTHS INCLUDE 50' DIVERGING TAPER

STORAGE LENGTH CALCULATIONS

DESIGN YEAR 2047 'BUILD' TRAFFIC VOLUMES

LEE ROAD / VAN AKEN BOULEVARD WB - NORTHBOUND LEFT TURN LANE

AM PEAK HOUR

ANTICIPATED CYCLE LENGTH: 110 SEC.
DESIGN SPEED: 25 MPH

MOVEMENT:	LEFT		THRU		
VOLUME:	340		840		
% OF APPROACH VOLUME:	28.8%		71.2%		
LANE GROUP:	LEFT		THRU		
LANE GROUP VOLUME:	340		840		
NUMBER OF LANES:	1		2		
VEHICLES PER CYCLE:	11		13		
CONTROLLING LANE GROUP:			X		
TAPER LENGTH:	50				
STORAGE LENGTH:	400		475		
TOTAL TURN LANE LENGTH:	***450***		***475***		

PM PEAK HOUR

ANTICIPATED CYCLE LENGTH: 120 SEC.
DESIGN SPEED: 25 MPH

MOVEMENT:	LEFT		THRU		
VOLUME:	240		770		
% OF APPROACH VOLUME:	23.8%		76.2%		
LANE GROUP:	LEFT		THRU		
LANE GROUP VOLUME:	240		770		
NUMBER OF LANES:	1		2		
VEHICLES PER CYCLE:	8		13		
CONTROLLING LANE GROUP:			X		
TAPER LENGTH:	50				
STORAGE LENGTH:	325		475		
TOTAL TURN LANE LENGTH:	***375***		***475***		

RECOMMENDED STORAGE LENGTHS INCLUDE 50' DIVERGING TAPER

STORAGE LENGTH CALCULATIONS

DESIGN YEAR 2047 'BUILD' TRAFFIC VOLUMES

LEE ROAD / VAN AKEN BOULEVARD EB - SOUTHBOUND LEFT TURN LANE

AM PEAK HOUR

ANTICIPATED CYCLE LENGTH: 110 SEC.
DESIGN SPEED: 25 MPH

MOVEMENT:	LEFT		THRU		
VOLUME:	50		560		
% OF APPROACH VOLUME:	8.2%		91.8%		
LANE GROUP:	LEFT		THRU		
LANE GROUP VOLUME:	50		560		
NUMBER OF LANES:	1		2		
VEHICLES PER CYCLE:	2		9		
CONTROLLING LANE GROUP:			X		
TAPER LENGTH:	50				
STORAGE LENGTH:	100		350		
TOTAL TURN LANE LENGTH:	***150***		***350***		

PM PEAK HOUR

ANTICIPATED CYCLE LENGTH: 120 SEC.
DESIGN SPEED: 25 MPH

MOVEMENT:	LEFT		THRU		
VOLUME:	70		860		
% OF APPROACH VOLUME:	7.5%		92.5%		
LANE GROUP:	LEFT		THRU		
LANE GROUP VOLUME:	70		860		
NUMBER OF LANES:	1		2		
VEHICLES PER CYCLE:	3		15		
CONTROLLING LANE GROUP:			X		
TAPER LENGTH:	50				
STORAGE LENGTH:	150		525		
TOTAL TURN LANE LENGTH:	***200***		***525***		

RECOMMENDED STORAGE LENGTHS INCLUDE 50' DIVERGING TAPER

STORAGE LENGTH CALCULATIONS

DESIGN YEAR 2047 'BUILD' TRAFFIC VOLUMES

LEE ROAD / CHAGRIN BOULEVARD / KENYON ROAD - NORTHBOUND LEFT TURN LANE

AM PEAK HOUR

ANTICIPATED CYCLE LENGTH: 110 SEC.
DESIGN SPEED: 25 MPH

MOVEMENT:	LEFT		THRU		RIGHT
VOLUME:	140		910		90
% OF APPROACH VOLUME:	12.3%		79.8%		7.9%
LANE GROUP:	LEFT		THRU/RIGHT		
LANE GROUP VOLUME:	140			1000	
NUMBER OF LANES:	1			2	
VEHICLES PER CYCLE:	5			16	
CONTROLLING LANE GROUP:				X	
TAPER LENGTH:	50				
STORAGE LENGTH:	200			550	
TOTAL TURN LANE LENGTH:	***250***			***550***	

PM PEAK HOUR

ANTICIPATED CYCLE LENGTH: 120 SEC.
DESIGN SPEED: 25 MPH

MOVEMENT:	LEFT		THRU		RIGHT
VOLUME:	160		720		180
% OF APPROACH VOLUME:	15.1%		67.9%		17.0%
LANE GROUP:	LEFT		THRU/RIGHT		
LANE GROUP VOLUME:	160			900	
NUMBER OF LANES:	1			2	
VEHICLES PER CYCLE:	6			15	
CONTROLLING LANE GROUP:				X	
TAPER LENGTH:	50				
STORAGE LENGTH:	250			525	
TOTAL TURN LANE LENGTH:	***300***			***525***	

RECOMMENDED STORAGE LENGTHS INCLUDE 50' DIVERGING TAPER

STORAGE LENGTH CALCULATIONS

DESIGN YEAR 2047 'BUILD' TRAFFIC VOLUMES

LEE ROAD / CHAGRIN BOULEVARD / KENYON ROAD - SOUTHBOUND LEFT TURN LANE

AM PEAK HOUR

ANTICIPATED CYCLE LENGTH: 110 SEC.
DESIGN SPEED: 25 MPH

MOVEMENT:	LEFT		THRU		RIGHT
VOLUME:	60		570		100
% OF APPROACH VOLUME:	8.2%		78.1%		13.7%
LANE GROUP:	LEFT		THRU/RIGHT		
LANE GROUP VOLUME:	60			670	
NUMBER OF LANES:	1			2	
VEHICLES PER CYCLE:	2			11	
CONTROLLING LANE GROUP:				X	
TAPER LENGTH:	50				
STORAGE LENGTH:	100			400	
TOTAL TURN LANE LENGTH:	***150***			***400***	

PM PEAK HOUR

ANTICIPATED CYCLE LENGTH: 120 SEC.
DESIGN SPEED: 25 MPH

MOVEMENT:	LEFT		THRU		RIGHT
VOLUME:	140		840		150
% OF APPROACH VOLUME:	12.4%		74.3%		13.3%
LANE GROUP:	LEFT		THRU/RIGHT		
LANE GROUP VOLUME:	140			990	
NUMBER OF LANES:	1			2	
VEHICLES PER CYCLE:	5			17	
CONTROLLING LANE GROUP:				X	
TAPER LENGTH:	50				
STORAGE LENGTH:	200			600	
TOTAL TURN LANE LENGTH:	***250***			***600***	

RECOMMENDED STORAGE LENGTHS INCLUDE 50' DIVERGING TAPER

STORAGE LENGTH CALCULATIONS

DESIGN YEAR 2047 'BUILD' TRAFFIC VOLUMES

LEE ROAD / SCOTTSDALE BOULEVARD - SOUTHBOUND LEFT TURN LANE

AM PEAK HOUR

ANTICIPATED CYCLE LENGTH: 110 SEC.
DESIGN SPEED: 25 MPH

MOVEMENT:	LEFT		THRU		RIGHT
VOLUME:	10		690		10
% OF APPROACH VOLUME:	1.4%		97.2%		1.4%
LANE GROUP:	LEFT		THRU/RIGHT		
LANE GROUP VOLUME:	10			700	
NUMBER OF LANES:	1			1	
VEHICLES PER CYCLE:	1			22	
CONTROLLING LANE GROUP:				X	
TAPER LENGTH:	50				
STORAGE LENGTH:	50			750	
TOTAL TURN LANE LENGTH:	***100***			***750***	

PM PEAK HOUR

ANTICIPATED CYCLE LENGTH: 120 SEC.
DESIGN SPEED: 25 MPH

MOVEMENT:	LEFT		THRU		RIGHT
VOLUME:	10		1050		30
% OF APPROACH VOLUME:	0.9%		96.3%		2.8%
LANE GROUP:	LEFT		THRU/RIGHT		
LANE GROUP VOLUME:	10			1080	
NUMBER OF LANES:	1			1	
VEHICLES PER CYCLE:	1			36	
CONTROLLING LANE GROUP:				X	
TAPER LENGTH:	50				
STORAGE LENGTH:	50			1250	
TOTAL TURN LANE LENGTH:	***100***			***1250***	

RECOMMENDED STORAGE LENGTHS INCLUDE 50' DIVERGING TAPER