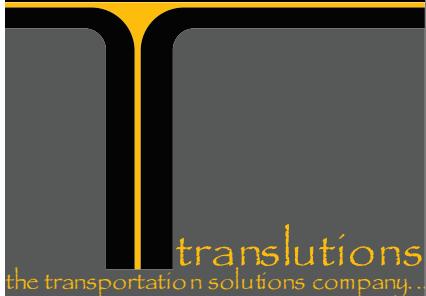


APPENDIX C:

MULTIMODAL TRAFFIC ANALYSIS

prepared by Translutions



memorandum

DATE: January 27, 2020
TO: Frank Barrera, KOA
FROM: Sandipan Bhattacharjee, P.E., T.E., AICP, ENV-SP
SUBJECT: Garden Grove Active Downtown Plan Multimodal Traffic Analyses

Translutions, Inc. (Translutions) is pleased to provide this memorandum discussing the multimodal traffic analysis for the recommended bicycle and pedestrian facilities proposed in the City of Garden Grove Active Downtown Plan (ADP) and the potential these new facilities may have to reduce vehicle trips and Vehicle Miles Traveled (VMT) by shifting trips from automobiles to bicycles and walking. The ADP includes recommended bicycle and pedestrian facilities with the goal of improving connectivity to activity areas that are likely to use bicycles or walk including areas such as parks, schools, and commercial areas. In addition, connectivity between the existing and recommended bicycle and pedestrian facilities is also a goal of the ADP since there are many gaps within the existing network that may deter drivers from changing mode of travel from their automobiles. This analysis includes an evaluation of the existing and recommended facilities within the area of concentration for automobiles, pedestrians, and bicyclists. The levels of service for automobiles, pedestrians, and bicyclists were evaluated using the Highway Capacity Manual 6th Edition motorized vehicle, pedestrian and bicycle modes. The study area of concentration is illustrated in Figure 1 and includes the following 9 study area intersections:

1. Main Street/Acacia Parkway
2. Main Street/Garden Grove Boulevard
3. Euclid Street/Main Street-College Avenue
4. Euclid Street/Stanford Avenue
5. Euclid Street/Acacia Parkway
6. Euclid Street/Garden Grove Boulevard
7. 9th Street/Stanford Avenue
8. 9th Street/Acacia Parkway
9. 9th Street/Garden Grove Boulevard

EXISTING CONDITIONS

Automobile Operations Analysis

The existing peak hour traffic volumes at study area intersections are based on intersection turn movement counts collected by Counts Unlimited Inc. in May 2019. The existing turning volumes during the a.m. and p.m. peak hours at the study area intersection for automobiles are shown in Figure 2. The existing intersection geometrics and stop controls are shown in Figure 3.

Level of service (LOS) is a measure of the quality of operational conditions within a traffic stream, and is generally expressed in terms of such measures as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. Levels range from A to F, with LOS A representing excellent (free-flow) conditions and LOS F representing extreme congestion. The analysis was conducted according to the Highway Capacity Manual 6th Edition (HCM) delay methodologies, which is described in the Highway Capacity Manual (Transportation Research Board, Washington, D.C., December 2016).

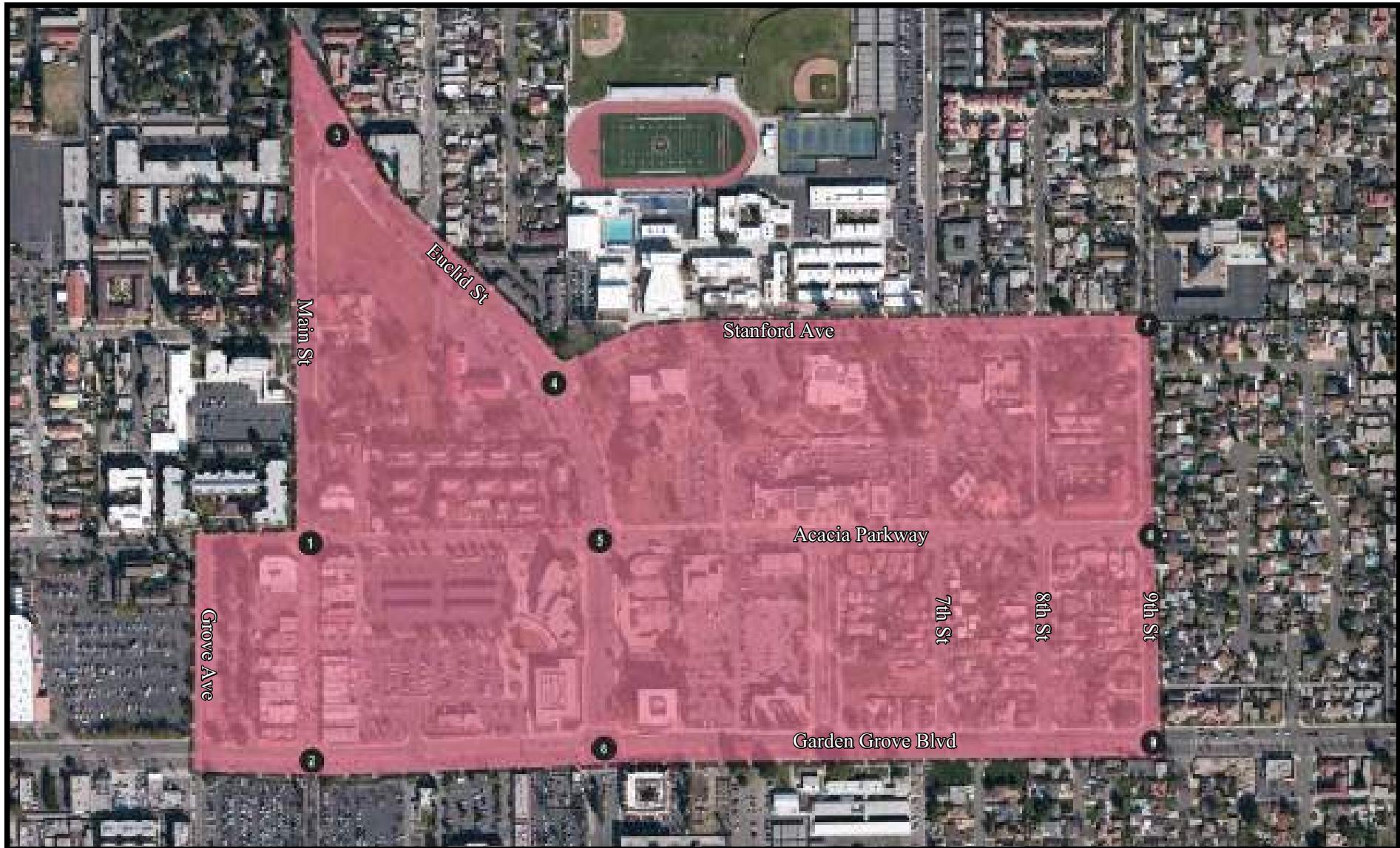
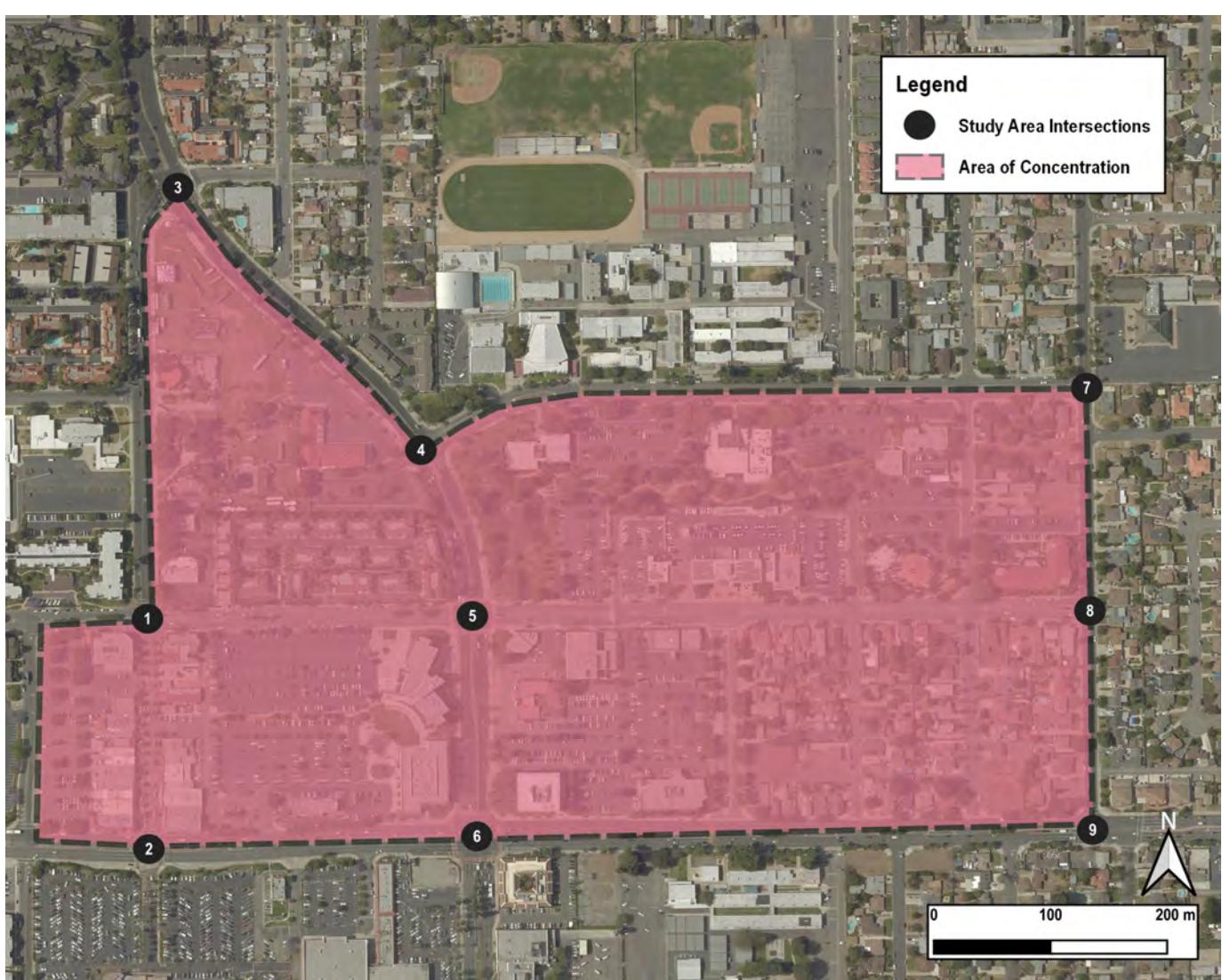


FIGURE 1

Legend

Area of Concentration Study Area Intersections

Garden Grove ADP Multimodal Traffic Analysis
Study Area of Concentration



Bike 0 (0) Ped 53(78)	Bike 0 (0) Ped 46(58)	Bike 0 (0) Ped 33(18)	Bike 29(8) Ped 251(102)	Bike 12(7) Ped 62(0)
1 Main St/Acacia Pkwy	2 Main St/Garden Grove Blvd	3 Euclid St/Main St-College Ave	4 Euclid St/Stanford Ave	5 Euclid St/Acacia Pkwy
110(113) 1335(842) 140(220) 719(764) 96(156) Bike 15(15) Ped 52(61)	193(159) 258(269) 203(189) 970(1199) 238(253) Bike 6(11) Ped 85(28)	132(217) 522(946) 153(46) 459(307) 58(43) 85(41) 104(38) 230(571) Bike 3(4) Ped 26(11)	27(331) 1395(892) 34(11) 56(21) 22(15) 1110(1612) 25(17) Bike 27(4) Ped 47(10) 22(13) 973(1499) 193(96) Bike 12(3) Ped 47(10) 22(13) 179(78) 3(3) 194(92) Bike 44(37) Ped 75(53) 65(47) 60(72) 41(76) 1042(1478) 67(34) Bike 44(13) Ped 56(45) 91(41) 48(47)	130(153) 109(67) 9(13) 52(37) 21(24) 32(120) 9(39) 8(80) 23(115) 1085(929) 100(90) 17(8) 39(16) 35(13) 132(201) 34(11) 56(21) 9(14) 276(331) 1395(892) 34(11) 56(21) 22(15) 1110(1612) 25(17) 27(4) 3(1) 22(13) 973(1499) 193(96) 179(78) 3(3) 194(92) 147(985) 44(13) 56(45) 91(41) 48(47)
6 Euclid St/Garden Grove Blvd	7 9th St/Stanford Ave	8 9th St/Acacia Pkwy	9 9th St/Garden Grove Blvd	

FIGURE 2

XX(YY) AM(PM) Volumes

Garden Grove ADP Multimodal Traffic Analysis Existing Intersection, Pedestrian, and Bicycle Volumes

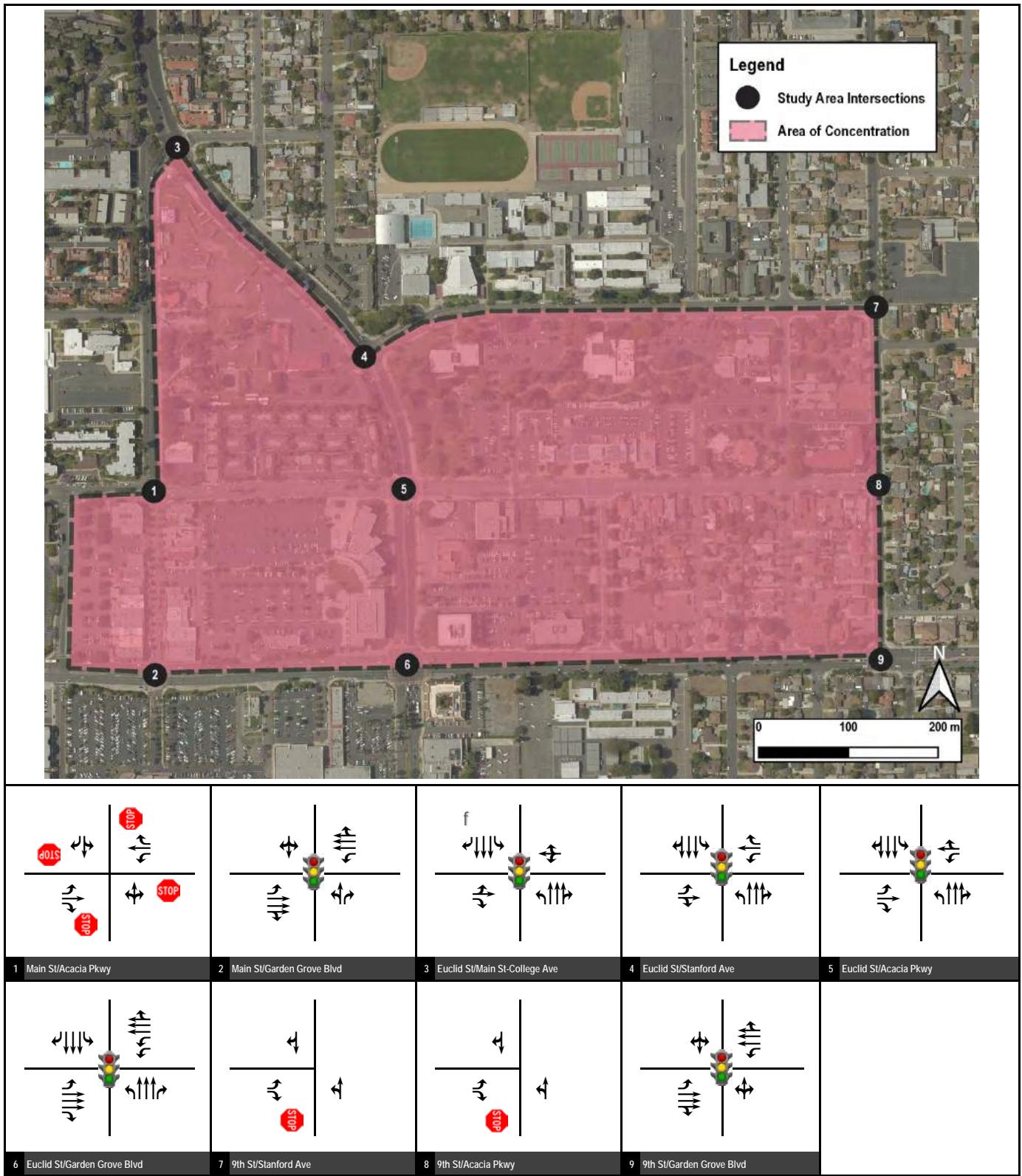


FIGURE 3

Legend



Garden Grove ADP Multimodal Traffic Analysis
Existing Intersection Geometrics and Stop Control

Under the HCM methodology, LOS for signalized intersections is based on the average delay experienced by vehicles traveling through an intersection. Table A presents a brief description of each level of service letter grade.

Table A: Intersection Automobile LOS Criteria

LOS	Description of Drivers' Perception and Traffic Operation	Delay in Seconds Unsignalized	Delay in Seconds Signalized
A	This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.	≤ 10	≤ 10
B	This level is assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.	$> 10 \text{ and } \leq 15$	$> 10 \text{ and } \leq 20$
C	This level is typically assigned when progression is favorable or the cycle length is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	$> 15 \text{ and } \leq 25$	$> 20 \text{ and } \leq 35$
D	This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.	$> 25 \text{ and } \leq 35$	$> 35 \text{ and } \leq 55$
E	This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.	$> 35 \text{ and } \leq 50$	$> 55 \text{ and } \leq 80$
F	This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.	> 50	> 80

Source: *Highway Capacity Manual, 6th Edition*

The City of Garden Grove maintains LOS D as the minimum level of service standard for intersection operations.

An intersection level of service analysis was conducted for existing conditions to determine current circulation system performance. The existing levels of service for the study area intersections are summarized in Table B. As shown in Table B, all study area intersections are currently operating at satisfactory levels of service, with the exception of 9th Street and Stanford Avenue in the a.m. peak hour.

Pedestrian and Bicycle Operation Analyses

The existing pedestrian and bicycle volumes at study area intersections are based on collected by Counts Unlimited Inc. in May 2019. The existing pedestrian and bicycle volumes during the a.m. and p.m. peak hours at the study area intersections are shown in previously referenced Figure 2. The existing pedestrian sidewalks in the study area of concentration are shown in Figure 4. As shown in Figure 4, most major roadways within the study area include sidewalks on both sides of the street. The total length of the existing pedestrian sidewalks within the study area is approximately 5.391 miles.

There are currently no existing bicycle facilities within the study area. The bicycle facility classifications are described below:

- Class I Shared-Use Paths: Bikeways or Bike Paths, which provide a completely separated right-of-way designated for the exclusive use of bicycles and pedestrians for the exclusive use of bicycles and pedestrians with crossflows by motorists minimized.
- Class II Bike Lanes: Bike lanes which provide a restricted right-of-way designated for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and crossflows by pedestrians and motorists permitted.

Table B: Existing Automobile Intersection Levels of Service

Intersection	Jurisdiction	LOS Standard	Control	Existing Conditions			
				AM Peak Hour		PM Peak Hour	
				Delay	LOS	Delay	LOS
1 . Main Street/Acacia Parkway	Garden Grove	D	AWSC	15.0	B	11.4	B
2 . Main Street/Garden Grove Boulevard	Garden Grove	D	Signal	26.3	C	27.6	C
3 . Euclid Street/Main Street-College Avenue	Garden Grove	D	Signal	8.2	A	13.7	B
4 . Euclid Street/Stanford Avenue	Garden Grove	D	Signal	14.0	B	21.4	C
5 . Euclid Street/Acacia Parkway	Garden Grove	D	Signal	19.4	B	14.6	B
6 . Euclid Street/Garden Grove Boulevard	Garden Grove	D	Signal	20.1	C	28.8	C
7 . 9th Street/Stanford Avenue	Garden Grove	D	TWSC	42.7	E *	25.3	D
8 . 9th Street/Acacia Parkway	Garden Grove	D	TWSC	20.3	C	22.5	C
9 . 9th Street/Garden Grove Boulevard	Garden Grove	D	Signal	22.0	C	21.5	C

Notes:

* Exceeds LOS Standard

AWSC = All-Way Stop Control; TWSC = Two-Way Stop Control; For TWSC intersections, reported delay is for worst-case approach/movement.

LOS = Level of Service

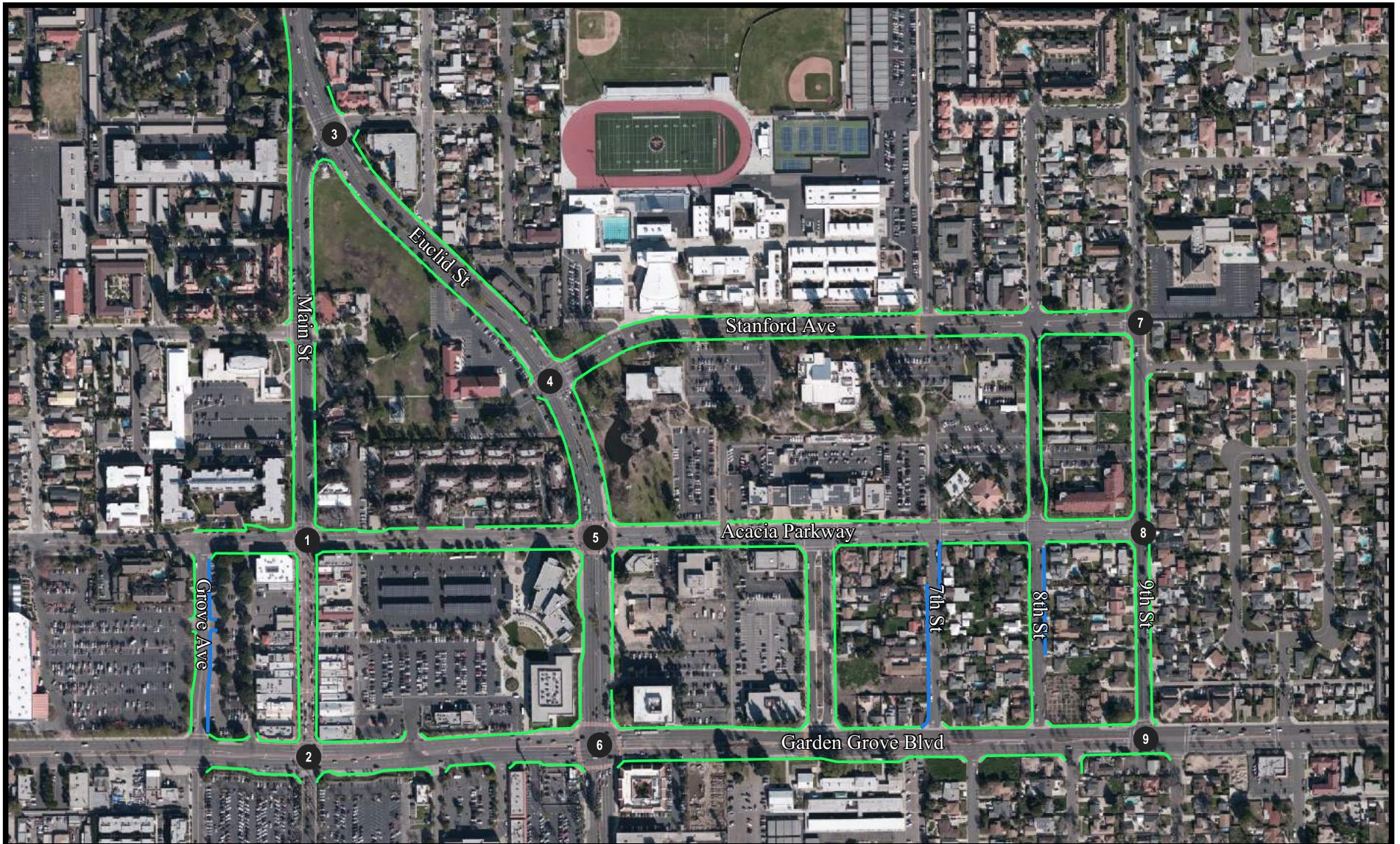


FIGURE 4

Legend

Area of Concentration Existing Sidewalks Proposed Sidewalks

Garden Grove Active Downtown Plan
Pedestrian Sidewalks



- Class III Bicycle Routes: On-street or off-street Bike Route, which provides a right-of-way designated by signs or permanent markings and shared with pedestrians or motorists.

The HCM has historically used a single performance measure as the basis for defining LOS. However, research has shown that travelers consider many factors in assessing the quality of service provided to them. These factors include performance measures (e.g., speed) and others can be descriptors of the intersection characteristics (e.g., sidewalk width). The methodologies for evaluating the pedestrian and bicycle modes combine these factors into a score. This score is then used to determine the LOS that is provided below in Table C. Table C lists the range of scores corresponding with each LOS for the pedestrian and bicycle travel modes. The score value is based on traveler perception research where they were asked to rate the quality of service associated with a specific trip through an intersection. LOS "A" represents the best quality of service, and LOS "F" represents the worst quality of service.

Table C: Pedestrian and Bicycle Modes LOS Criteria

LOS	LOS Score
A	≤ 1.50
B	$> 1.50 - 2.50$
C	$> 2.50 - 3.50$
D	$> 3.50 - 4.50$
E	$> 4.50 - 5.50$
F	> 5.50

Source: *Highway Capacity Manual, 6th Edition*

The City of Garden Grove does not have LOS thresholds or performance measures for non-automobile modes. However, to identify intersection crossings and intersections approach legs that pedestrians and bicyclists may perceive as unsafe, LOS analyses for pedestrians and bicyclists using the HCM 6th Edition pedestrian and bicycle modes has been conducted to determine the traveler's perception of service quality.

An intersection level of service analysis for each crosswalk for pedestrians was conducted for existing conditions to determine current circulation system performance. The existing pedestrian levels of service at each crosswalk for the study area intersections are summarized in Table D. As shown in Table D, all crosswalks at the study area intersections are currently operating at satisfactory levels of service.

An intersection level of service analysis for bicyclists was conducted for existing conditions to determine current circulation system performance. The existing bicycle levels of service for the study area intersections are summarized in Table E. As shown in Table E, all bicyclists at the study area intersections are currently operating at satisfactory levels of service.

PROPOSED PROJECT IMPROVEMENTS

The list of proposed improvements including roundabouts, bicycle lanes, and pedestrian sidewalks are:

- Bicycle Lane on Nelson Street from Stanford Avenue to Acacia Parkway;
- Bicycle Lane on Acacia Parkway from Nelson Street 9th Street;
- Bicycle Lane on Stanford Avenue from Euclid Street to 9th Street;
- Bicycle Lane on 9th Street from Garden Grove Boulevard to north of College Avenue;
- New pedestrian sidewalk on Grove Avenue from Acacia Parkway to Garden Grove Boulevard;
- New pedestrian sidewalk on 7th Street from Acacia Parkway to Garden Grove Boulevard;
- New pedestrian sidewalk on 8th Street from Acacia Parkway to Garden Grove Boulevard;

Table D: Existing Pedestrian Levels of Service

Intersection	Control	Existing Conditions									
		AM Peak Hour				PM Peak Hour					
		EB	WB	NB	SB	EB	WB	NB	SB	Score	LOS
1 . Main Street/Acacia Parkway	AWSC	-	-	-	-	-	-	-	-	-	-
2 . Main Street/Garden Grove Boulevard	Signal	2.990	C	3.000	C	2.070	B	1.800	B	2.990	C
3 . Euclid Street/Main Street-College Avenue	Signal	2.340	B	1.810	B	3.150	C	3.190	C	2.370	B
4 . Euclid Street/Stanford Avenue	Signal	2.010	C	2.560	C	3.150	C	3.130	C	1.950	B
5 . Euclid Street/Acacia Parkway	Signal	2.210	B	2.040	B	3.140	C	3.140	C	2.190	B
6 . Euclid Street/Garden Grove Boulevard	Signal	3.230	C	3.450	C	3.550	D	3.360	C	3.420	C
7 . 9th Street/Stanford Avenue ¹	TWSC	-	-	-	B	-	B	-	-	-	B
8 . 9th Street/Acacia Parkway ¹	TWSC	-	-	-	B	-	B	-	-	-	B
9 . 9th Street/Garden Grove Boulevard	Signal	3.100	C	3.110	C	1.820	B	2.730	C	3.200	C

Notes:

* Exceeds LOS Standard

Pedestrian LOS is based on HCM 6th Edition Pedestrian Mode Methodology. The Crosswalk Score values and LOS are based on traveler perception research where travelers were asked to rate the quality of service associated with a specific trip through a signalized intersection.

The letter "A" represents the best quality of service and "F" represents the worst quality of service.

¹ Pedestrian LOS at two-way-stop-controlled intersections are based on the average pedestrian delay.

Table E: Existing Bicycle Levels of Service

Intersection	Control	Existing Conditions									
		AM Peak Hour				PM Peak Hour					
		EB	WB	NB	SB	EB	WB	NB	SB	Score	LOS
1 . Main Street/Acacia Parkway ¹	AWSC	-	-	-	-	-	-	-	-	-	-
2 . Main Street/Garden Grove Boulevard	Signal	2.600	C	2.690	C	3.110	C	2.940	C	2.740	C
3 . Euclid Street/Main Street-College Avenue	Signal	3.250	C	3.060	C	2.780	C	3.150	C	3.240	C
4 . Euclid Street/Stanford Avenue	Signal	3.060	C	3.520	D	3.000	C	3.020	C	2.940	C
5 . Euclid Street/Acacia Parkway	Signal	3.220	C	3.260	C	2.810	C	3.260	C	3.160	C
6 . Euclid Street/Garden Grove Boulevard	Signal	3.620	D	3.580	D	3.890	D	4.190	D	3.700	D
7 . 9th Street/Stanford Avenue ¹	TWSC	-	-	-	-	-	-	-	-	-	-
8 . 9th Street/Acacia Parkway ¹	TWSC	-	-	-	-	-	-	-	-	-	-
9 . 9th Street/Garden Grove Boulevard	Signal	2.640	C	2.530	C	3.140	C	3.880	D	2.510	C

Notes:

* Exceeds LOS Standard

Bicycle LOS Score is based on HCM 6th Edition Bicycle Mode Methodology. The LOS Score is an indication of the typical bicyclist's perception of the overall crossing experience.

The letter "A" represents the best quality of service and "F" represents the worst quality of service.

¹ As of the HCM 6th Edition, no methodology specific to bicyclists has been developed to assess the performance of bicyclists at unsignalized intersections.

- New multi-use path on Euclid Street from Stanford Avenue to Acacia Parkway; and
- Installation of a Roundabout at Main Street and Acacia Parkway;

Figure 5 illustrates the recommended bicycle facilities in the study area. As shown in Figure 5, the recommended bike lanes include 2.57 miles of new bike lanes within the study area.

Previously referenced Figure 4 illustrates the recommended pedestrian sidewalks within the study area. As shown in Figure 4, the proposed project is anticipated to add approximately 0.284 miles of new sidewalks within the study area.

Crossing Times

With the completion of the project, several locations within the study area will include traffic calming measures such as bulb-out designs. These measures can help reduce traffic speed and improve pedestrian safety. They typically extend past the parking lanes, but not into the bicycle or through lanes. They provide an entry or gateway into activity areas or where high volumes of pedestrians may be present. Also, bulb-outs can help reduce the time it takes pedestrians and bicyclists to cross a crosswalk by reducing the distance from adjacent sidewalks. These traffic calming measures are included at the following locations:

- Northbound Approach Crosswalk at the intersection of Nelson Street/Acacia Parkway;
- Eastbound Approach Crosswalk at Main Street/Stanford Avenue;
- Eastbound Approach Crosswalk at 9th Street/College Avenue;
- Westbound Approach Crosswalk at 9th Street/College Street;
- Eastbound Approach Crosswalk at 9th Street/Stanford Avenue;
- Eastbound Approach Crosswalk at 7th Street/Stanford Avenue; and
- Eastbound Approach Crosswalk at 9th Street/Acacia Parkway.

EXISTING WITH PROJECT CONDITIONS

Automobile Operations Analysis

The existing with project intersection geometrics and stop controls are shown in Figure 6.

An intersection level of service analysis was conducted for existing with project conditions to determine circulation system performance. The existing with project levels of service for the study area intersections are summarized in Table F. As shown in Table F, all study area intersections are forecast to operate at satisfactory levels of service, with the exception of 9th Street and Stanford Avenue in the a.m. peak hour.

Pedestrian and Bicycle Operation Analyses

An intersection level of service analysis for each crosswalk for pedestrians was conducted for existing with project conditions to determine current circulation system performance. The existing with project pedestrian levels of service at each crosswalk for the study area intersections are summarized in Table G. As shown in Table G, all crosswalks at the study area intersections are projected to operate at satisfactory levels of service. It should be noted that the with project levels of service are the same as the without project conditions. This is due to the project improvements such as bulb-outs and reducing the crosswalk lengths not having a significant effect on the levels of service. One of the major factors affecting the levels of service is the left-turning vehicles conflicting with pedestrians due to the permitted phasing. To improve the levels of service, the permitted-

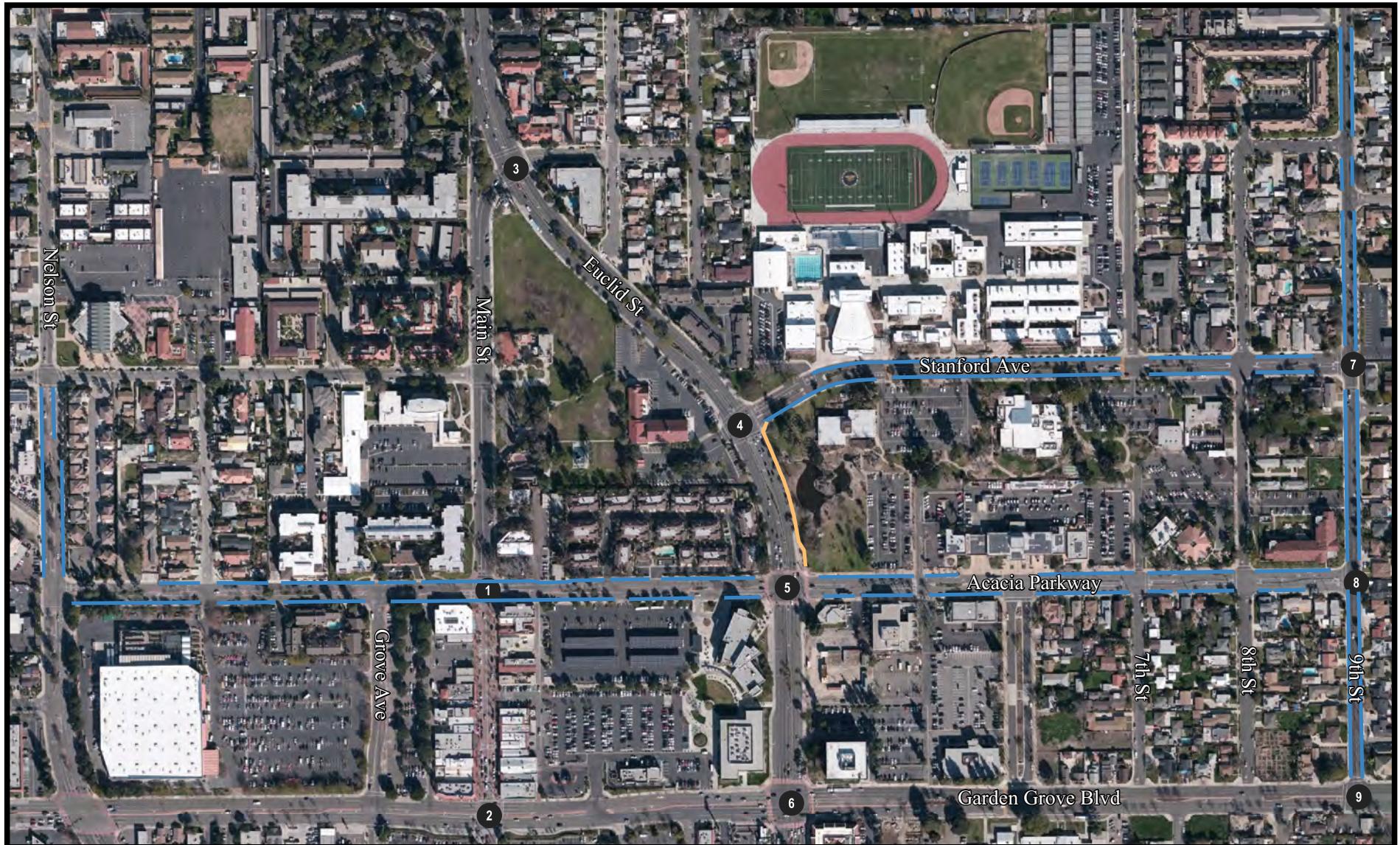


FIGURE 5

Legend

Area of Concentration Proposed Bicycle Lanes Multi-Use Path

Garden Grove ADP Multimodal Traffic Analysis
Proposed Bicycle Facilities

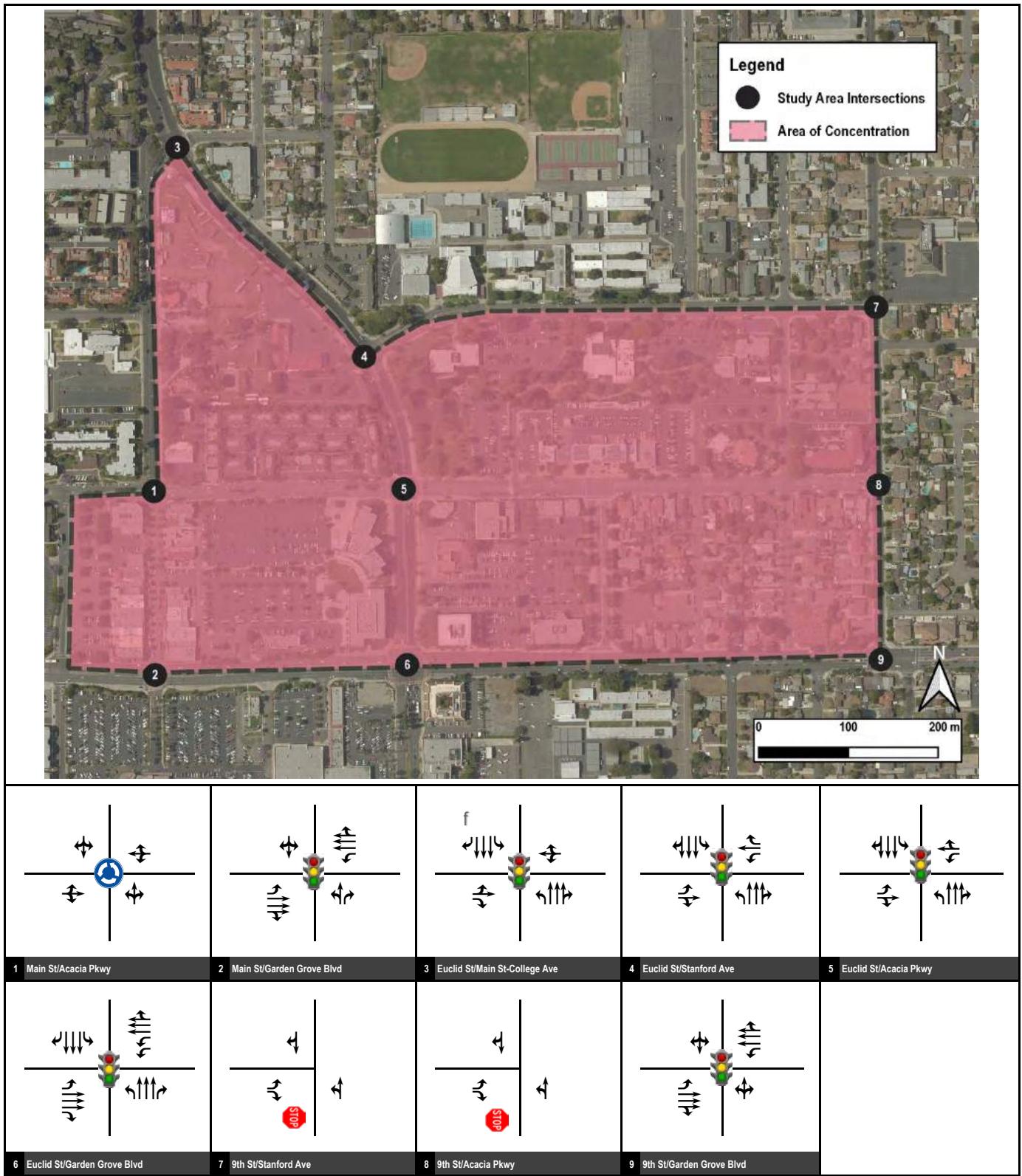


FIGURE 6

Legend



Signal



Roundabout/Traffic Circle



Stop Sign



Free-Right

**Garden Grove ADP Multimodal Traffic Analysis
Existing With Project Intersection Geometrics and Stop Control**

Table F: Existing With Project Automobile Intersection Levels of Service

Intersection	Jurisdiction	LOS Standard	Control	Existing With Project Conditions							
				AM Peak Hour				PM Peak Hour			
				ICU	LOS	Delay	LOS	ICU	LOS	Delay	LOS
1 . Main Street/Acacia Parkway	Garden Grove	D	Roundabout	-	6.3	A	-	-	5.1	A	
2 . Main Street/Garden Grove Boulevard	Garden Grove	D	Signal	0.350	A	26.3	C	0.507	A	27.6	C
3 . Euclid Street/Main Street-College Avenue	Garden Grove	D	Signal	0.546	A	8.2	A	0.635	B	13.7	B
4 . Euclid Street/Stanford Avenue	Garden Grove	D	Signal	0.508	A	14.0	B	0.454	A	21.4	C
5 . Euclid Street/Acacia Parkway	Garden Grove	D	Signal	0.501	A	20.0	B	0.436	A	15.8	B
6 . Euclid Street/Garden Grove Boulevard	Garden Grove	D	Signal	0.648	B	20.1	C	0.736	C	28.8	C
7 . 9th Street/Stanford Avenue	Garden Grove	D	TWSC	-	42.7	E *	-	-	25.3	D	
8 . 9th Street/Acacia Parkway	Garden Grove	D	TWSC	-	20.3	C	-	-	22.5	C	
9 . 9th Street/Garden Grove Boulevard	Garden Grove	D	Signal	0.523	A	22.0	C	0.616	B	21.5	C

Notes:

* Exceeds LOS Standard

AWSC = All-Way Stop Control; TWSC = Two-Way Stop Control; For TWSC intersections, reported delay is for worst-case approach/movement.

LOS = Level of Service

Table G: Existing With Project Pedestrian Levels of Service

Intersection	Control	Existing With Project Conditions															
		AM Peak Hour								PM Peak Hour							
		EB		WB		NB		SB		EB		WB		NB		SB	
Score	LOS	Score	LOS	Score	LOS	Score	LOS	Score	LOS	Score	LOS	Score	LOS	Score	LOS		
1 . Main Street/Acacia Parkway	Roundabout	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2 . Main Street/Garden Grove Boulevard	Signal	2.990	C	3.000	C	2.070	B	1.800	B	2.990	C	3.000	C	2.080	B	2.060	B
3 . Euclid Street/Main Street-College Avenue	Signal	2.340	B	1.810	B	3.150	C	3.190	C	2.370	B	1.750	B	3.080	C	3.170	C
4 . Euclid Street/Stanford Avenue	Signal	2.010	C	2.560	C	3.150	C	3.130	C	1.950	B	2.320	B	3.110	C	3.160	C
5 . Euclid Street/Acacia Parkway	Signal	2.210	B	2.040	B	3.140	C	3.140	C	2.030	B	2.000	B	3.100	C	3.090	C
6 . Euclid Street/Garden Grove Boulevard	Signal	3.230	C	3.450	C	3.550	D	3.360	C	3.420	C	3.530	D	3.470	C	3.400	C
7 . 9th Street/Stanford Avenue ¹	TWSC	-	-	-	-	B	-	B	-	-	-	-	B	-	B	-	B
8 . 9th Street/Acacia Parkway ¹	TWSC	-	-	-	-	B	-	B	-	-	-	-	B	-	B	-	B
9 . 9th Street/Garden Grove Boulevard	Signal	3.100	C	3.110	C	1.820	B	2.730	C	3.200	C	3.100	C	1.760	B	2.500	C

Notes:

* Exceeds LOS Standard

Pedestrian LOS is based on HCM 6th Edition Pedestrian Mode Methodology. The Crosswalk Score values and LOS are based on traveler perception research where travelers were asked to rate the quality of service associated with a specific trip through a signalized intersection.

The letter "A" represents the best quality of service and "F" represents the worst quality of service.

It should be noted that the with project LOS is the same as the without project LOS. However, to improve the LOS, the permitted phasing for the left-turn lanes can be converted to protected phasing. This will reduce Ped. Conflicts, reduce accidents, and ultimately improve the LOS.

¹ Pedestrian LOS at two-way-stop-controlled intersections are based on the average pedestrian delay.

phasing for the left-turn lanes can be converted to protected-phasing. This will reduce pedestrian conflicts with automobiles and ultimately improve the pedestrian levels of service.

An intersection level of service analysis for bicyclists was conducted for existing with project conditions to determine current circulation system performance. The existing with project bicycle levels of service for the study area intersections are summarized in Table H. As shown in Table H, all bicyclists at the study area intersections are projected to operate at satisfactory levels of service.

PEDESTRIAN AND BICYCLE INTERSECTION SAFETY INDICES

The pedestrian and bicycle intersection safety indices are used to identify intersection crossings and approach legs that should be given priority for undergoing safety improvements. Using observable characteristics of an intersection crossing or approach leg, a safety index score is developed, with higher scores indicating a greater priority for an in-depth safety assessment. Each leg of an intersection may have different characteristics affecting pedestrian or bicyclist safety; therefore, the tools are intended to provide an evaluation of the safety of an individual crossing or approach leg rather than evaluating the intersections as a whole. The values defined for the pedestrian and bicycle intersection safety indices range from 1 (Safest, Lowest Priority for Further Evaluation) to 6 (Least safe, Highest Priority for Further Evaluation).

Pedestrian Intersection Safety Indices

The pedestrian intersection safety indices at the study area intersections are shown in Table I. As shown in Table I, none of the pedestrian safety indices are higher than 4.0, which indicates that the crosswalks are not a high priority (Least unsafe). The intersections with the highest priority safety indices include the following:

- 9th Street/Stanford Avenue (NB Crosswalk 3.7/ SB Crosswalk 3.7);
- 9th Street/Acacia Parkway (NB Crosswalk 3.7/ SB Crosswalk 3.7);
- Main Street/Garden Grove Boulevard (EB Crosswalk 3.6/ WB Crosswalk 3.6);
- Euclid Street/Garden Grove Boulevard (NB Crosswalk 3.6/ SB Crosswalk 3.6/ EB Crosswalk 3.6/ WB Crosswalk 3.6);
- Euclid Street/Main Street-College Avenue (NB Crosswalk 3.4/ SB Crosswalk 3.4);
- Euclid Street/Stanford Avenue (NB Crosswalk 3.4/ SB Crosswalk 3.4);
- Euclid Street/Acacia Parkway (NB Crosswalk 3.4/ SB Crosswalk 3.4);
- 9th Street/Garden Grove Boulevard (EB Crosswalk 3.4/ WB Crosswalk 3.4).

Bicycle Intersection Safety Indices

The bicycle intersection safety indices at the study area intersections are shown in Table J. As shown in Table J, none of the bicycle safety indices are higher than 4.2, which indicates that the approaches are not a high priority (Least unsafe). The intersections with the highest priority safety indices include the following:

- Euclid Street/Garden Grove Boulevard (NB Approach 3.7/SB Approach 3.7/EB Approach 3.6/WB Approach 3.7);
- Euclid Street/Main Street-College Avenue (NB Approach 3.1/SB Approach 3.3);
- 9th Street/Garden Grove Boulevard (EB Approach 3.1/WB Approach 3.2);
- Main Street/Garden Grove Boulevard (EB Approach 3.1/WB Approach 3.1);
- Euclid Street/Stanford Avenue (NB Approach 3.1/ SB Approach 3.1); and
- Euclid Street/Acacia Parkway (NB Approach 3.1/SB Approach 3.1);

VEHICLE MILES TRAVELED (VMT) ANALYSIS

Table H: Existing With Project Bicycle Levels of Service

Intersection	Control	Existing With Project Conditions															
		AM Peak Hour						PM Peak Hour									
		EB		WB		NB		SB		EB		WB		NB		SB	
Intersection	Control	Score	LOS	Score	LOS	Score	LOS	Score	LOS	Score	LOS	Score	LOS	Score	LOS	Score	LOS
1 . Main Street/Acacia Parkway ¹	Roundabout	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2 . Main Street/Garden Grove Boulevard	Signal	2.600	C	2.690	C	3.110	C	2.940	C	2.740	C	2.560	C	3.190	C	3.250	C
3 . Euclid Street/Main Street-College Avenue	Signal	3.250	C	3.060	C	2.780	C	3.150	C	3.240	C	2.960	C	3.000	C	2.830	C
4 . Euclid Street/Stanford Avenue	Signal	3.060	C	2.020	B	3.000	C	3.020	C	2.940	C	1.640	B	3.220	C	2.690	C
5 . Euclid Street/Acacia Parkway	Signal	2.150	B	2.190	B	2.810	C	3.260	C	2.070	B	2.060	B	3.020	C	2.730	C
6 . Euclid Street/Garden Grove Boulevard	Signal	3.620	D	3.580	D	3.890	D	4.190	D	3.700	D	3.860	D	3.990	D	3.850	D
7 . 9th Street/Stanford Avenue ¹	TWSC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
8 . 9th Street/Acacia Parkway ¹	TWSC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
9 . 9th Street/Garden Grove Boulevard	Signal	2.640	C	2.530	C	3.140	C	3.880	D	2.510	C	2.810	C	3.070	C	3.610	D

Notes:

* Exceeds LOS Standard

Bicycle LOS Score is based on HCM 6th Edition Bicycle Mode Methodology. The LOS Score is an indication of the typical bicyclist's perception of the overall crossing experience.

The letter "A" represents the best quality of service and "F" represents the worst quality of service.

¹ As of the HCM 6th Edition, no methodology specific to bicyclists has been developed to assess the performance of bicyclists at unsignalized intersections.

Table I: Pedestrian Intersection Safety Indices

Intersection	NB Crosswalk Safety Index	SB Crosswalk Safety Index	EB Crosswalk Safety Index	WB Crosswalk Safety Index
1 . Main Street/Acacia Parkway	3.7	3.7	3.7	3.7
2 . Main Street/Garden Grove Boulevard	1.9	1.9	3.6	3.6
3 . Euclid Street/Main Street-College Avenue	3.4	3.4	1.7	1.6
4 . Euclid Street/Stanford Avenue	3.4	3.4	1.6	1.6
5 . Euclid Street/Acacia Parkway	3.4	3.4	1.6	1.6
6 . Euclid Street/Garden Grove Boulevard	3.6	3.6	3.6	3.6
7 . 9th Street/Stanford Avenue	3.7	3.7	3.5	-
8 . 9th Street/Acacia Parkway	3.7	3.7	3.5	-
9 . 9th Street/Garden Grove Boulevard	1.1	1.9	3.4	3.4

Table J: Bicycle Intersection Safety Indices

Intersection	NB Approach				SB Approach				EB Approach				WB Approach			
	Left-Turn Indexes	Thru Indexes	Right-Turn Indexes	Average	Left-Turn Indexes	Thru Indexes	Right-Turn Indexes	Average	Left-Turn Indexes	Thru Indexes	Right-Turn Indexes	Average	Left-Turn Indexes	Thru Indexes	Right-Turn Indexes	Average
1 . Main Street/Acacia Parkway	1.8	2.1	1.6	1.8	2.2	2.2	1.7	2.0	2.5	2.2	1.6	2.1	2.5	2.2	1.6	2.1
2 . Main Street/Garden Grove Boulevard	2.4	2.8	2.0	2.4	2.3	3.0	2.3	2.5	3.7	3.6	1.9	3.1	3.7	3.6	1.9	3.1
3 . Euclid Street/Main Street-College Avenue	3.7	3.6	2.0	3.1	3.9	3.7	2.1	3.3	2.5	3.0	2.1	2.5	2.2	3.1	2.1	2.5
4 . Euclid Street/Stanford Avenue	3.8	3.6	2.0	3.1	3.7	3.6	2.0	3.1	2.4	2.8	1.9	2.4	2.8	2.9	2.0	2.6
5 . Euclid Street/Acacia Parkway	3.8	3.6	2.0	3.1	3.8	3.6	2.0	3.1	3.0	3.1	2.2	2.8	2.6	3.1	2.2	2.6
6 . Euclid Street/Garden Grove Boulevard	4.2	4.2	2.7	3.7	4.2	4.1	2.7	3.7	4.1	4.1	2.6	3.6	4.1	4.2	2.6	3.7
7 . 9th Street/Stanford Avenue	1.9	2.4	1.8	2.0	1.5	3.0	1.8	2.1	2.1	2.2	1.6	2.0	-	-	-	-
8 . 9th Street/Acacia Parkway	1.9	2.3	1.8	2.0	1.5	3.0	1.8	2.1	2.1	2.2	1.6	2.0	-	-	-	-
9 . 9th Street/Garden Grove Boulevard	2.0	3.0	1.9	2.3	2.4	4.0	2.3	2.9	3.7	3.6	1.9	3.1	3.8	3.7	2.0	3.2

An evaluation of the study area related vehicle miles traveled (VMT) is based on the OCTAM. The VMT for originating and ending within the City of Garden Grove is 2,721,176 vehicle-miles per day.

To measure the potential VMT reduction for the new bicycle facilities within the study area, reduction rates that included a 0.004 to 0.011 percent decrease in VMT for every 1% increase in study area street length with bike lanes were used¹. To provide a conservative estimate, an average of 0.007 percent in VMT for every 1% increase in study area street length with bike lanes was used to develop the reduction in VMT. The proposed bicycle facilities represent a growth of 12.06% when compared to the existing facilities (2.57 miles/21.3 miles). The reduction in VMT for the proposed bicycle facilities within the study area is approximately 0.0844 percent (12.06×0.007), or 2,298 vehicle-miles per day ($2,721,176 \times .0844$ percent). A reduction in VMT would be nominal for the proposed pedestrian facilities, since the growth in pedestrian facilities would be not represent a significant change when compared to the existing facilities within the City.

CONCLUSION

The existing conditions, the automobile levels of service operate at satisfactory levels of service, with the exception of 9th Street and Stanford Avenue in the a.m. peak hour. Under existing with project conditions, all intersections are projected to operate at satisfactory levels of service.

The pedestrian and bicycle levels of service operate at satisfactory levels of service under existing and existing with project conditions.

The reduction in VMT for the new bicycle facilities within the project area is 2,298 vehicle-miles per day.

¹ *Impacts of Bicycling Strategies on Passenger Vehicle Use and Greenhouse Gas Emissions* (Handy, Tal, Boarnet), September 2014.

APPENDIX C1 – TRAFFIC COUNTS

Counts Unlimited
 PO Box 1178
 Corona, CA 92878
 (951) 268-6268

City of Garden Grove
 N/S: Main Street
 E/W: Acacia Parkway
 Weather: Clear

File Name : 01_GRG_Main_Acacia_AM
 Site Code : 04119438
 Start Date : 5/15/2019
 Page No : 1

Groups Printed- Total Volume

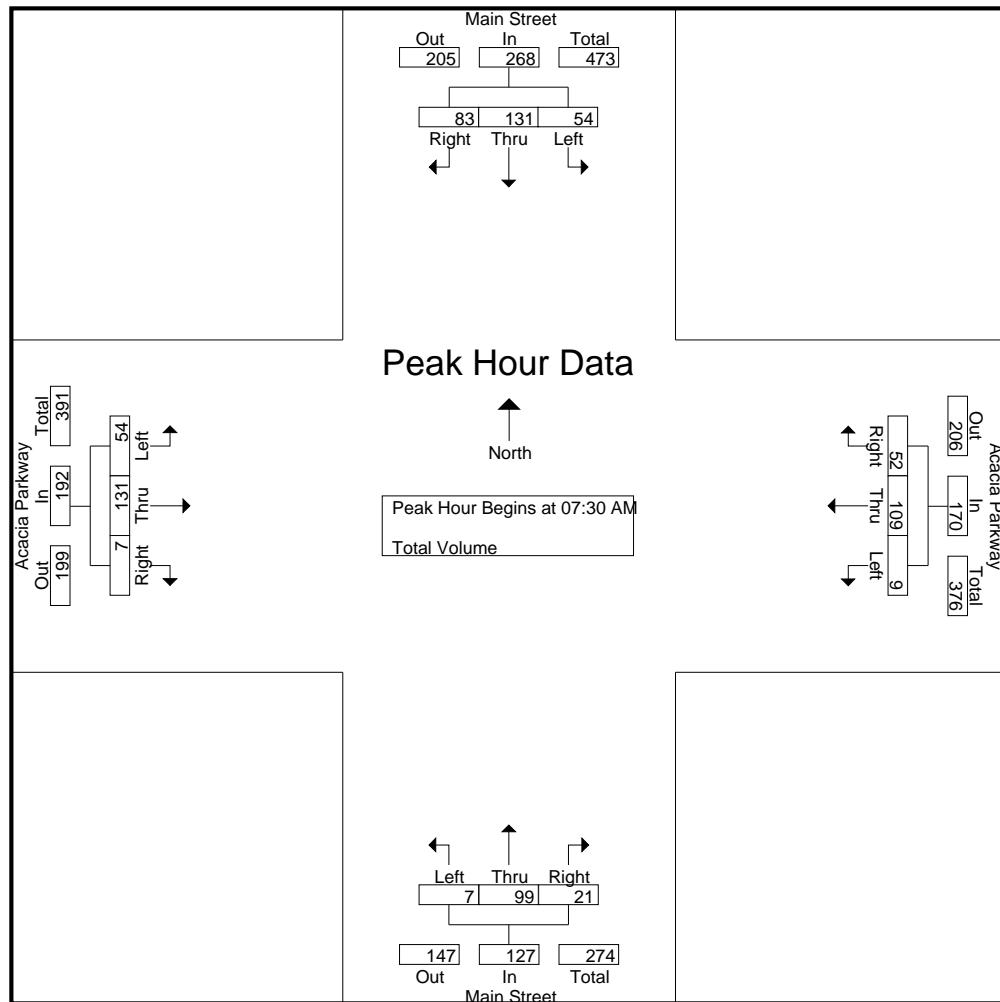
	Main Street Southbound				Acacia Parkway Westbound				Main Street Northbound				Acacia Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	8	19	7	34	2	8	3	13	1	5	3	9	2	9	2	13	69
07:15 AM	8	15	12	35	2	11	6	19	1	14	0	15	13	18	2	33	102
07:30 AM	13	29	13	55	0	19	11	30	2	21	5	28	8	40	1	49	162
07:45 AM	17	34	25	76	8	49	26	83	2	31	13	46	23	53	2	78	283
Total	46	97	57	200	12	87	46	145	6	71	21	98	46	120	7	173	616
08:00 AM	13	33	29	75	1	30	10	41	1	32	3	36	12	12	2	26	178
08:15 AM	11	35	16	62	0	11	5	16	2	15	0	17	11	26	2	39	134
08:30 AM	5	23	16	44	2	5	10	17	6	19	2	27	10	18	3	31	119
08:45 AM	15	27	14	56	0	7	2	9	2	10	3	15	6	21	2	29	109
Total	44	118	75	237	3	53	27	83	11	76	8	95	39	77	9	125	540
Grand Total	90	215	132	437	15	140	73	228	17	147	29	193	85	197	16	298	1156
Apprch %	20.6	49.2	30.2		6.6	61.4	32		8.8	76.2	15		28.5	66.1	5.4		
Total %	7.8	18.6	11.4	37.8	1.3	12.1	6.3	19.7	1.5	12.7	2.5	16.7	7.4	17	1.4	25.8	

	Main Street Southbound				Acacia Parkway Westbound				Main Street Northbound				Acacia Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	13	29	13	55	0	19	11	30	2	21	5	28	8	40	1	49	162
07:45 AM	17	34	25	76	8	49	26	83	2	31	13	46	23	53	2	78	283
08:00 AM	13	33	29	75	1	30	10	41	1	32	3	36	12	12	2	26	178
08:15 AM	11	35	16	62	0	11	5	16	2	15	0	17	11	26	2	39	134
Total Volume	54	131	83	268	9	109	52	170	7	99	21	127	54	131	7	192	757
% App. Total	20.1	48.9	31		5.3	64.1	30.6		5.5	78	16.5		28.1	68.2	3.6		
PHF	.794	.936	.716	.882	.281	.556	.500	.512	.875	.773	.404	.690	.587	.618	.875	.615	.669

Counts Unlimited
 PO Box 1178
 Corona, CA 92878
 (951) 268-6268

City of Garden Grove
 N/S: Main Street
 E/W: Acacia Parkway
 Weather: Clear

File Name : 01_GRG_Main_Acacia_AM
 Site Code : 04119438
 Start Date : 5/15/2019
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:30 AM				07:15 AM				07:30 AM				07:30 AM			
	13	29	13	55	2	11	6	19	2	21	5	28	8	40	1	49
+0 mins.	13	29	13	55	2	11	6	19	2	21	5	28	8	40	1	49
+15 mins.	17	34	25	76	0	19	11	30	2	31	13	46	23	53	2	78
+30 mins.	13	33	29	75	8	49	26	83	1	32	3	36	12	12	2	26
+45 mins.	11	35	16	62	1	30	10	41	2	15	0	17	11	26	2	39
Total Volume	54	131	83	268	11	109	53	173	7	99	21	127	54	131	7	192
% App. Total	20.1	48.9	31		6.4	63	30.6		5.5	78	16.5		28.1	68.2	3.6	
PHF	.794	.936	.716	.882	.344	.556	.510	.521	.875	.773	.404	.690	.587	.618	.875	.615

Counts Unlimited
 PO Box 1178
 Corona, CA 92878
 (951) 268-6268

City of Garden Grove
 N/S: Main Street
 E/W: Acacia Parkway
 Weather: Clear

File Name : 01_GRG_Main_Acacia PM
 Site Code : 04119438
 Start Date : 5/15/2019
 Page No : 1

Groups Printed- Total Volume

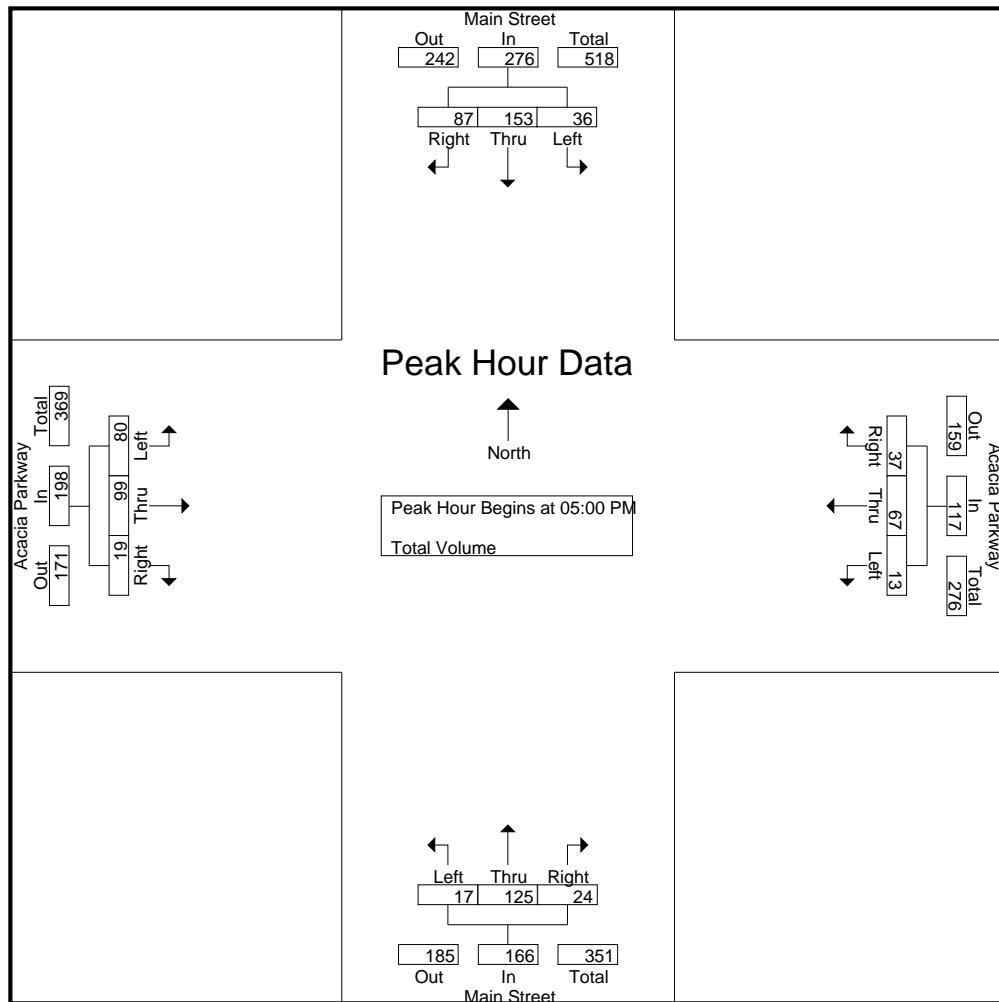
	Main Street Southbound				Acacia Parkway Westbound				Main Street Northbound				Acacia Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	11	43	27	81	7	9	4	20	1	28	1	30	17	25	3	45	176
04:15 PM	13	47	25	85	1	13	6	20	10	19	3	32	24	31	7	62	199
04:30 PM	12	24	21	57	4	18	6	28	8	18	4	30	18	17	5	40	155
04:45 PM	8	29	23	60	2	11	5	18	2	27	3	32	30	19	7	56	166
Total	44	143	96	283	14	51	21	86	21	92	11	124	89	92	22	203	696
05:00 PM	5	27	21	53	1	9	14	24	4	36	5	45	19	23	6	48	170
05:15 PM	10	39	16	65	3	14	9	26	3	24	4	31	27	23	6	56	178
05:30 PM	10	46	23	79	3	26	7	36	7	32	5	44	13	22	3	38	197
05:45 PM	11	41	27	79	6	18	7	31	3	33	10	46	21	31	4	56	212
Total	36	153	87	276	13	67	37	117	17	125	24	166	80	99	19	198	757
Grand Total	80	296	183	559	27	118	58	203	38	217	35	290	169	191	41	401	1453
Apprch %	14.3	53	32.7		13.3	58.1	28.6		13.1	74.8	12.1		42.1	47.6	10.2		
Total %	5.5	20.4	12.6	38.5	1.9	8.1	4	14	2.6	14.9	2.4		20	11.6	13.1	2.8	27.6

	Main Street Southbound				Acacia Parkway Westbound				Main Street Northbound				Acacia Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	5	27	21	53	1	9	14	24	4	36	5	45	19	23	6	48	170
05:15 PM	10	39	16	65	3	14	9	26	3	24	4	31	27	23	6	56	178
05:30 PM	10	46	23	79	3	26	7	36	7	32	5	44	13	22	3	38	197
05:45 PM	11	41	27	79	6	18	7	31	3	33	10	46	21	31	4	56	212
Total Volume	36	153	87	276	13	67	37	117	17	125	24	166	80	99	19	198	757
% App. Total	13	55.4	31.5		11.1	57.3	31.6		10.2	75.3	14.5		40.4	50	9.6		
PHF	.818	.832	.806	.873	.542	.644	.661	.813	.607	.868	.600	.902	.741	.798	.792	.884	.893

Counts Unlimited
 PO Box 1178
 Corona, CA 92878
 (951) 268-6268

City of Garden Grove
 N/S: Main Street
 E/W: Acacia Parkway
 Weather: Clear

File Name : 01_GRG_Main_Acacia PM
 Site Code : 04119438
 Start Date : 5/15/2019
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:00 PM				05:00 PM				05:00 PM				04:15 PM			
+0 mins.	11	43	27	81	1	9	14	24	4	36	5	45	24	31	7	62
+15 mins.	13	47	25	85	3	14	9	26	3	24	4	31	18	17	5	40
+30 mins.	12	24	21	57	3	26	7	36	7	32	5	44	30	19	7	56
+45 mins.	8	29	23	60	6	18	7	31	3	33	10	46	19	23	6	48
Total Volume	44	143	96	283	13	67	37	117	17	125	24	166	91	90	25	206
% App. Total	15.5	50.5	33.9		11.1	57.3	31.6		10.2	75.3	14.5		44.2	43.7	12.1	
PHF	.846	.761	.889	.832	.542	.644	.661	.813	.607	.868	.600	.902	.758	.726	.893	.831

Location: Garden Grove
N/S: Main Street
E/W: Acacia Parkway



Date: 5/15/2019
Day: Wednesday

PEDESTRIANS

	North Leg Main Street Pedestrians	East Leg Acacia Parkway Pedestrians	South Leg Main Street Pedestrians	West Leg Acacia Parkway Pedestrians	
7:00 AM	3	4	1	8	16
7:15 AM	0	1	2	3	6
7:30 AM	4	2	3	2	11
7:45 AM	5	5	3	4	17
8:00 AM	3	6	4	6	19
8:15 AM	2	0	2	1	5
8:30 AM	2	2	0	8	12
8:45 AM	2	1	1	4	8
TOTAL VOLUMES:	21	21	16	36	94

	North Leg Main Street Pedestrians	East Leg Acacia Parkway Pedestrians	South Leg Main Street Pedestrians	West Leg Acacia Parkway Pedestrians	
4:00 PM	3	0	1	1	5
4:15 PM	1	6	7	9	23
4:30 PM	0	1	0	1	2
4:45 PM	5	4	2	7	18
5:00 PM	2	4	5	7	18
5:15 PM	1	3	7	8	19
5:30 PM	0	4	4	10	18
5:45 PM	3	11	1	8	23
TOTAL VOLUMES:	15	33	27	51	126

Location: Garden Grove
 N/S: Main Street
 E/W: Acacia Parkway



Date: 5/15/2019
 Day: Wednesday

BICYCLES

	Southbound Main Street			Westbound Acacia Parkway			Northbound Main Street			Eastbound Acacia Parkway			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Main Street			Westbound Acacia Parkway			Northbound Main Street			Eastbound Acacia Parkway			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

Counts Unlimited
 PO Box 1178
 Corona, CA 92878
 (951) 268-6268

City of Garden Grove
 N/S: Main Street
 E/W: Garden Grove Boulevard
 Weather: Clear

File Name : 02_GRG_Main_Garden Grove AM
 Site Code : 04119438
 Start Date : 5/15/2019
 Page No : 1

Groups Printed- Total Volume

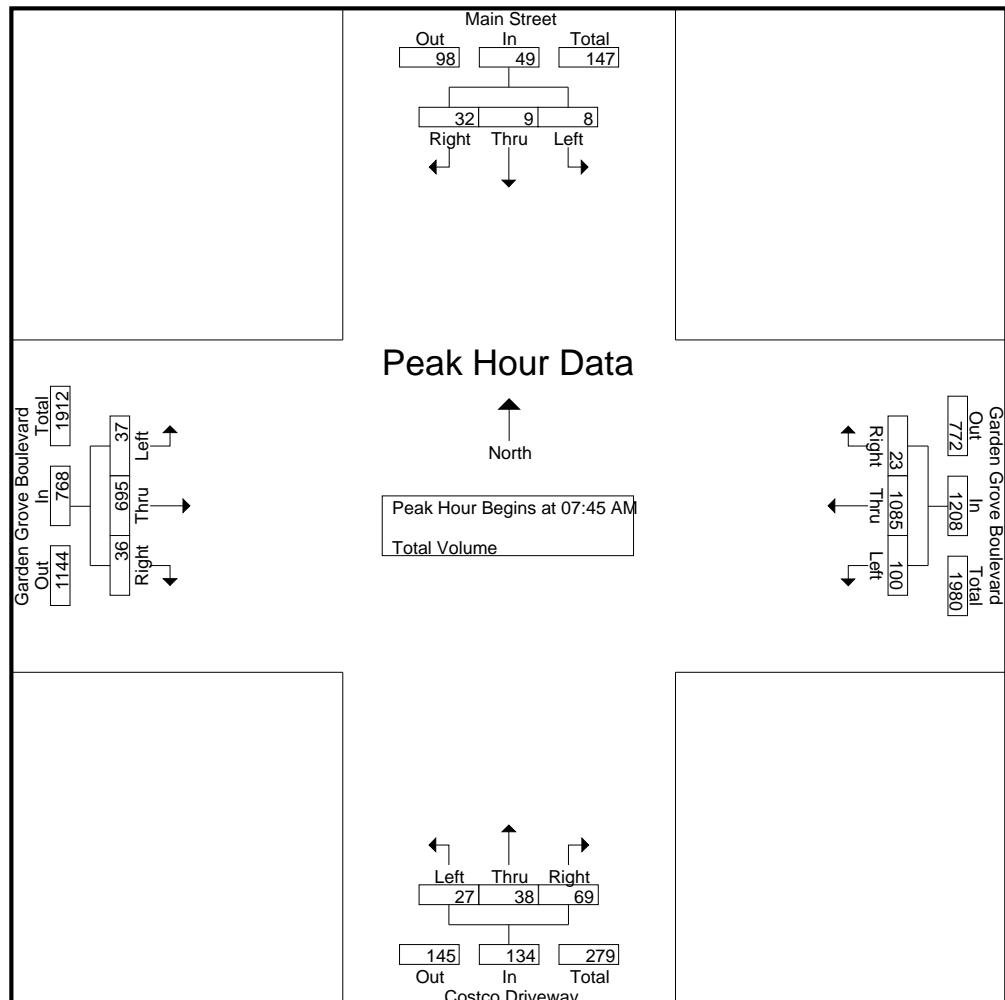
	Main Street Southbound				Garden Grove Boulevard Westbound				Costco Driveway Northbound				Garden Grove Boulevard Eastbound				Int. Total	
	Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM		1	0	7	8	6	136	4	146	5	2	10	17	10	98	2	110	281
07:15 AM		2	0	8	10	18	187	2	207	6	1	13	20	9	109	1	119	356
07:30 AM		3	2	12	17	18	238	0	256	5	5	14	24	12	146	4	162	459
07:45 AM		1	1	8	10	46	302	3	351	7	10	21	38	9	201	10	220	619
Total		7	3	35	45	88	863	9	960	23	18	58	99	40	554	17	611	1715
08:00 AM		3	3	9	15	15	273	4	292	5	6	23	34	13	175	12	200	541
08:15 AM		2	3	15	20	19	250	8	277	8	11	13	32	7	160	7	174	503
08:30 AM		2	2	0	4	20	260	8	288	7	11	12	30	8	159	7	174	496
08:45 AM		2	4	13	19	20	200	8	228	2	8	10	20	9	152	5	166	433
Total		9	12	37	58	74	983	28	1085	22	36	58	116	37	646	31	714	1973
Grand Total		16	15	72	103	162	1846	37	2045	45	54	116	215	77	1200	48	1325	3688
Apprch %		15.5	14.6	69.9		7.9	90.3	1.8		20.9	25.1	54		5.8	90.6	3.6		
Total %		0.4	0.4	2	2.8	4.4	50.1	1	55.5	1.2	1.5	3.1	5.8	2.1	32.5	1.3	35.9	

	Main Street Southbound				Garden Grove Boulevard Westbound				Costco Driveway Northbound				Garden Grove Boulevard Eastbound				Int. Total	
	Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 07:45 AM																		
07:45 AM		1	1	8	10	46	302	3	351	7	10	21	38	9	201	10	220	619
08:00 AM		3	3	9	15	15	273	4	292	5	6	23	34	13	175	12	200	541
08:15 AM		2	3	15	20	19	250	8	277	8	11	13	32	7	160	7	174	503
08:30 AM		2	2	0	4	20	260	8	288	7	11	12	30	8	159	7	174	496
Total Volume		8	9	32	49	100	1085	23	1208	27	38	69	134	37	695	36	768	2159
% App. Total		16.3	18.4	65.3		8.3	89.8	1.9		20.1	28.4	51.5		4.8	90.5	4.7		
PHF		.667	.750	.533	.613	.543	.898	.719	.860	.844	.864	.750	.882	.712	.864	.750	.873	.872

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Garden Grove
N/S: Main Street
E/W: Garden Grove Boulevard
Weather: Clear

File Name : 02_GRG_Main_Garden Grove AM
Site Code : 04119438
Start Date : 5/15/2019
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:30 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	3	2	12	17	46	302	3	351	7	10	21	38	9	201	10	220
+15 mins.	1	1	8	10	15	273	4	292	5	6	23	34	13	175	12	200
+30 mins.	3	3	9	15	19	250	8	277	8	11	13	32	7	160	7	174
+45 mins.	2	3	15	20	20	260	8	288	7	11	12	30	8	159	7	174
Total Volume	9	9	44	62	100	1085	23	1208	27	38	69	134	37	695	36	768
% App. Total	14.5	14.5	71		8.3	89.8	1.9		20.1	28.4	51.5		4.8	90.5	4.7	
PHF	.750	.750	.733	.775	.543	.898	.719	.860	.844	.864	.750	.882	.712	.864	.750	.873

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City of Garden Grove
 N/S: Main Street
 E/W: Garden Grove Boulevard
 Weather: Clear

File Name : 02_GRG_Main_Garden Grove PM
 Site Code : 04119438
 Start Date : 5/15/2019
 Page No : 1

Groups Printed- Total Volume

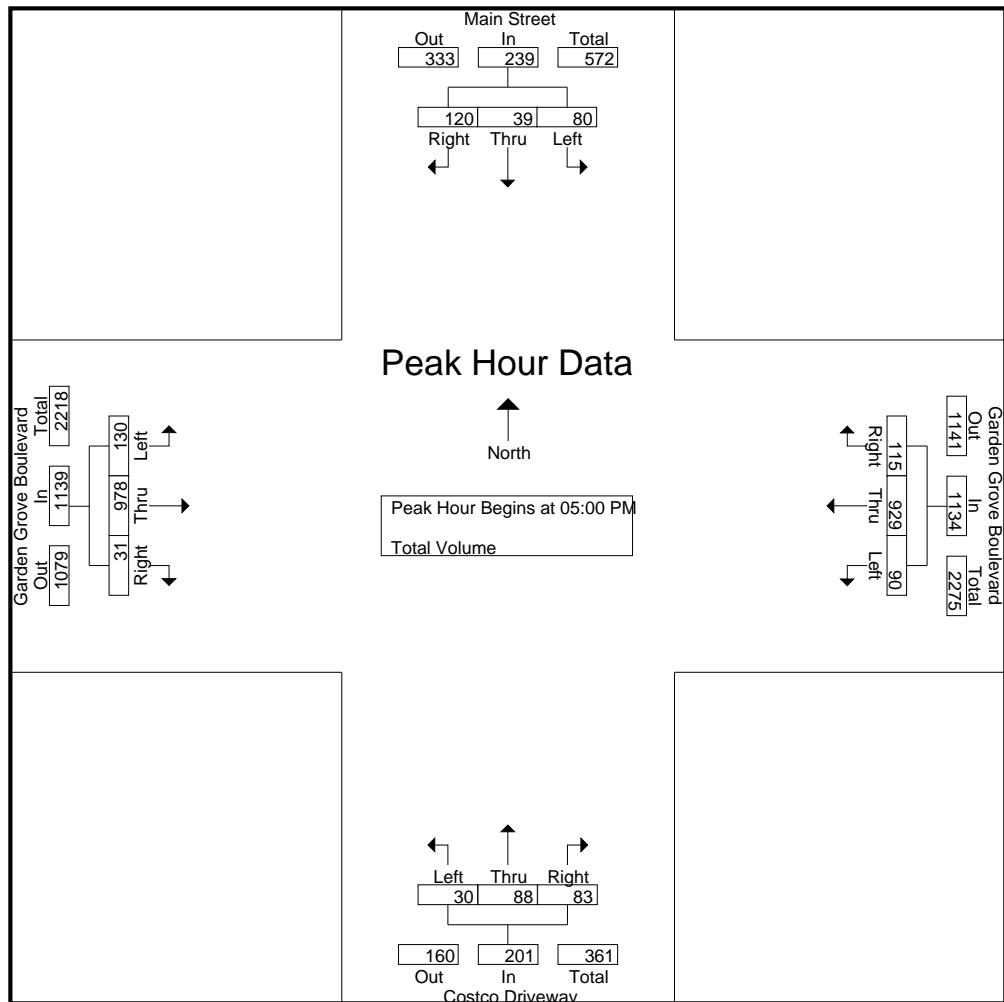
	Main Street Southbound				Garden Grove Boulevard Westbound				Costco Driveway Northbound				Garden Grove Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	18	7	27	52	27	205	29	261	9	15	22	46	25	230	7	262	621
04:15 PM	15	10	23	48	22	222	29	273	9	15	19	43	31	208	5	244	608
04:30 PM	26	9	24	59	32	217	30	279	3	17	15	35	27	217	9	253	626
04:45 PM	23	11	23	57	29	220	33	282	5	15	20	40	34	204	5	243	622
Total	82	37	97	216	110	864	121	1095	26	62	76	164	117	859	26	1002	2477
05:00 PM	16	8	25	49	19	224	38	281	8	18	21	47	41	255	8	304	681
05:15 PM	21	8	32	61	23	245	22	290	7	32	30	69	30	227	11	268	688
05:30 PM	23	16	35	74	19	228	19	266	5	20	18	43	30	260	7	297	680
05:45 PM	20	7	28	55	29	232	36	297	10	18	14	42	29	236	5	270	664
Total	80	39	120	239	90	929	115	1134	30	88	83	201	130	978	31	1139	2713
Grand Total	162	76	217	455	200	1793	236	2229	56	150	159	365	247	1837	57	2141	5190
Apprch %	35.6	16.7	47.7		9	80.4	10.6		15.3	41.1	43.6		11.5	85.8	2.7		
Total %	3.1	1.5	4.2	8.8	3.9	34.5	4.5	42.9	1.1	2.9	3.1	7	4.8	35.4	1.1	41.3	

	Main Street Southbound				Garden Grove Boulevard Westbound				Costco Driveway Northbound				Garden Grove Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	16	8	25	49	19	224	38	281	8	18	21	47	41	255	8	304	681
05:15 PM	21	8	32	61	23	245	22	290	7	32	30	69	30	227	11	268	688
05:30 PM	23	16	35	74	19	228	19	266	5	20	18	43	30	260	7	297	680
05:45 PM	20	7	28	55	29	232	36	297	10	18	14	42	29	236	5	270	664
Total Volume	80	39	120	239	90	929	115	1134	30	88	83	201	130	978	31	1139	2713
% App. Total	33.5	16.3	50.2		7.9	81.9	10.1		14.9	43.8	41.3		11.4	85.9	2.7		
PHF	.870	.609	.857	.807	.776	.948	.757	.955	.750	.688	.692	.728	.793	.940	.705	.937	.986

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City of Garden Grove
N/S: Main Street
E/W: Garden Grove Boulevard
Weather: Clear

File Name : 02_GRG_Main_Garden Grove PM
Site Code : 04119438
Start Date : 5/15/2019
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM				05:00 PM				05:00 PM				05:00 PM			
	23	11	23	57	19	224	38	281	8	18	21	47	41	255	8	304
+0 mins.	23	11	23	57	19	224	38	281	8	18	21	47	41	255	8	304
+15 mins.	16	8	25	49	23	245	22	290	7	32	30	69	30	227	11	268
+30 mins.	21	8	32	61	19	228	19	266	5	20	18	43	30	260	7	297
+45 mins.	23	16	35	74	29	232	36	297	10	18	14	42	29	236	5	270
Total Volume	83	43	115	241	90	929	115	1134	30	88	83	201	130	978	31	1139
% App. Total	34.4	17.8	47.7		7.9	81.9	10.1		14.9	43.8	41.3		11.4	85.9	2.7	
PHF	.902	.672	.821	.814	.776	.948	.757	.955	.750	.688	.692	.728	.793	.940	.705	.937

Location: Garden Grove
 N/S: Main Street
 E/W: Garden Grove Boulevard



Date: 5/15/2019
 Day: Wednesday

PEDESTRIANS

	North Leg Main Street Pedestrians	East Leg Garden Grove Boulevard Pedestrians	South Leg Costco Driveway Pedestrians	West Leg Garden Grove Boulevard Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	2	4	0	6
7:30 AM	6	1	4	8	19
7:45 AM	1	1	4	5	11
8:00 AM	2	0	1	5	8
8:15 AM	3	1	2	2	8
8:30 AM	2	0	1	2	5
8:45 AM	2	1	2	3	8
TOTAL VOLUMES:	16	6	18	25	65

	North Leg Main Street Pedestrians	East Leg Garden Grove Boulevard Pedestrians	South Leg Costco Driveway Pedestrians	West Leg Garden Grove Boulevard Pedestrians	
4:00 PM	1	2	5	6	14
4:15 PM	7	2	0	7	16
4:30 PM	5	0	1	0	6
4:45 PM	3	3	3	2	11
5:00 PM	7	5	2	5	19
5:15 PM	3	3	2	2	10
5:30 PM	1	4	4	2	11
5:45 PM	3	2	3	10	18
TOTAL VOLUMES:	30	21	20	34	105

Location: Garden Grove
 N/S: Main Street
 E/W: Garden Grove Boulevard



Date: 5/15/2019
 Day: Wednesday

BICYCLES

	Southbound Main Street			Westbound Garden Grove Boulevard			Northbound Costco Driveway			Eastbound Garden Grove Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Main Street			Westbound Garden Grove Boulevard			Northbound Costco Driveway			Eastbound Garden Grove Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

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City of Garden Grove
 N/S: Euclid Street
 E/W: Main Street/College Avenue
 Weather: Clear

File Name : 03_GRG_Euclid_Main_College AM
 Site Code : 04119438
 Start Date : 5/15/2019
 Page No : 1

Groups Printed- Total Volume

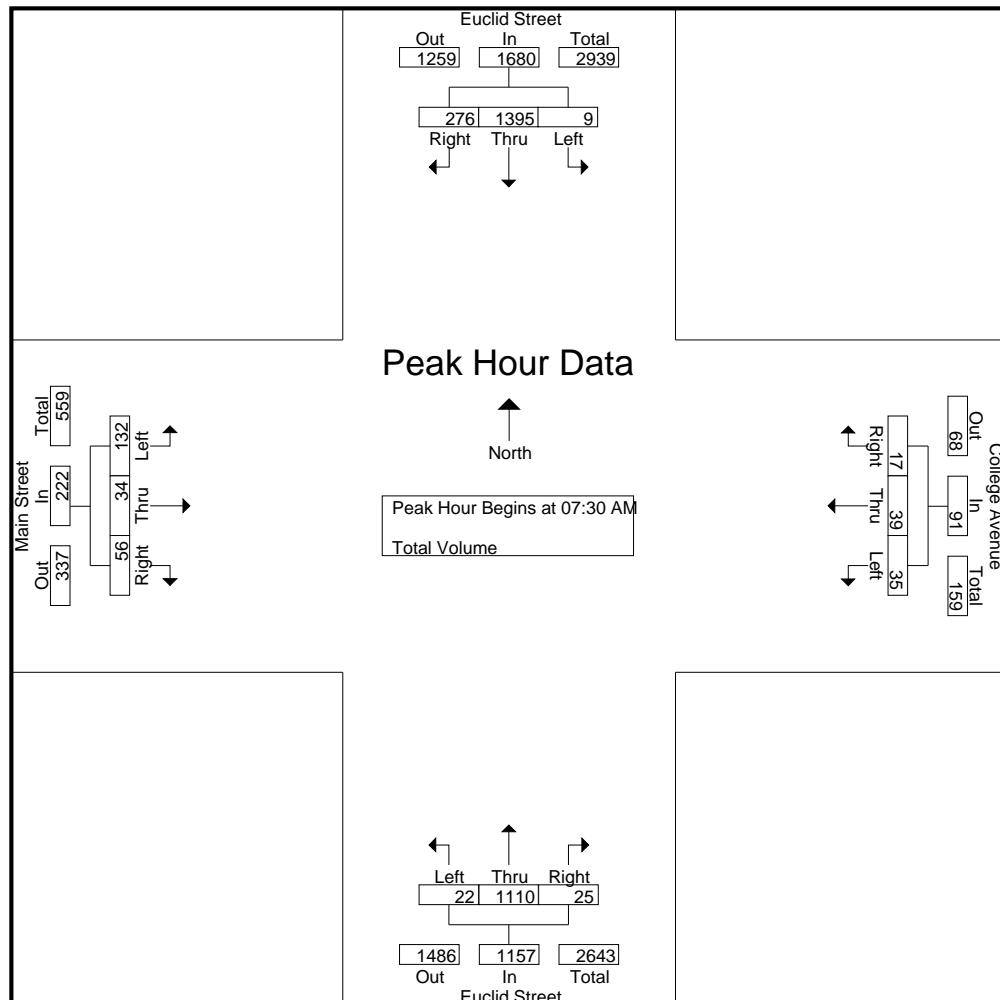
	Euclid Street Southbound				College Avenue Westbound				Euclid Street Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	361	32	395	2	1	4	7	2	120	4	126	12	0	7	19	547
07:15 AM	0	339	38	377	4	0	4	8	4	205	1	210	33	1	9	43	638
07:30 AM	2	421	68	491	7	9	6	22	6	255	3	264	21	5	16	42	819
07:45 AM	5	334	78	417	9	7	7	23	5	329	10	344	37	8	28	73	857
Total	9	1455	216	1680	22	17	21	60	17	909	18	944	103	14	60	177	2861
08:00 AM	2	346	69	417	9	12	3	24	8	311	11	330	42	13	8	63	834
08:15 AM	0	294	61	355	10	11	1	22	3	215	1	219	32	8	4	44	640
08:30 AM	0	326	58	384	6	1	4	11	1	273	4	278	33	2	8	43	716
08:45 AM	1	274	65	340	6	3	1	10	2	215	2	219	24	1	4	29	598
Total	3	1240	253	1496	31	27	9	67	14	1014	18	1046	131	24	24	179	2788
Grand Total	12	2695	469	3176	53	44	30	127	31	1923	36	1990	234	38	84	356	5649
Apprch %	0.4	84.9	14.8		41.7	34.6	23.6		1.6	96.6	1.8		65.7	10.7	23.6		
Total %	0.2	47.7	8.3	56.2	0.9	0.8	0.5	2.2	0.5	34	0.6	35.2	4.1	0.7	1.5	6.3	

	Euclid Street Southbound				College Avenue Westbound				Euclid Street Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	2	421	68	491	7	9	6	22	6	255	3	264	21	5	16	42	819
07:45 AM	5	334	78	417	9	7	7	23	5	329	10	344	37	8	28	73	857
08:00 AM	2	346	69	417	9	12	3	24	8	311	11	330	42	13	8	63	834
08:15 AM	0	294	61	355	10	11	1	22	3	215	1	219	32	8	4	44	640
Total Volume	9	1395	276	1680	35	39	17	91	22	1110	25	1157	132	34	56	222	3150
% App. Total	0.5	83	16.4		38.5	42.9	18.7		1.9	95.9	2.2		59.5	15.3	25.2		
PHF	.450	.828	.885	.855	.875	.813	.607	.948	.688	.843	.568	.841	.786	.654	.500	.760	.919

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City of Garden Grove
N/S: Euclid Street
E/W: Main Street/College Avenue
Weather: Clear

File Name : 03_GRG_Euclid_Main_College AM
Site Code : 04119438
Start Date : 5/15/2019
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM				07:30 AM				07:45 AM				07:45 AM			
+0 mins.	0	339	38	377	7	9	6	22	5	329	10	344	37	8	28	73
+15 mins.	2	421	68	491	9	7	7	23	8	311	11	330	42	13	8	63
+30 mins.	5	334	78	417	9	12	3	24	3	215	1	219	32	8	4	44
+45 mins.	2	346	69	417	10	11	1	22	1	273	4	278	33	2	8	43
Total Volume	9	1440	253	1702	35	39	17	91	17	1128	26	1171	144	31	48	223
% App. Total	0.5	84.6	14.9		38.5	42.9	18.7		1.5	96.3	2.2		64.6	13.9	21.5	
PHF	.450	.855	.811	.867	.875	.813	.607	.948	.531	.857	.591	.851	.857	.596	.429	.764

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City of Garden Grove
 N/S: Euclid Street
 E/W: Main Street/College Avenue
 Weather: Clear

File Name : 03_GRG_Euclid_Main_College PM
 Site Code : 04119438
 Start Date : 5/15/2019
 Page No : 1

Groups Printed- Total Volume

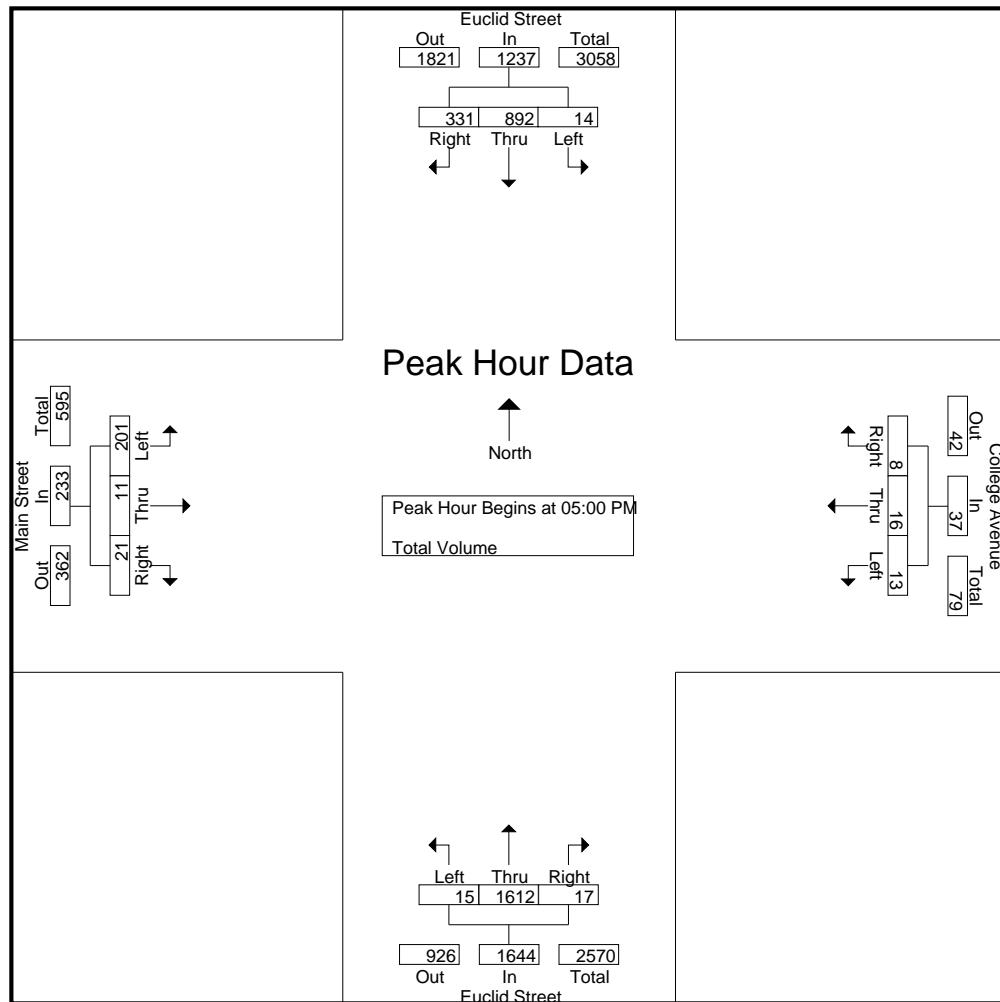
	Euclid Street Southbound				College Avenue Westbound				Euclid Street Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	203	65	268	5	0	4	9	3	335	4	342	39	3	2	44	663
04:15 PM	1	241	60	302	1	0	0	1	5	410	4	419	51	2	4	57	779
04:30 PM	1	191	78	270	1	2	1	4	4	360	5	369	50	3	4	57	700
04:45 PM	1	197	74	272	1	1	3	5	2	396	2	400	46	2	5	53	730
Total	3	832	277	1112	8	3	8	19	14	1501	15	1530	186	10	15	211	2872
05:00 PM	4	228	73	305	4	5	1	10	6	391	7	404	54	3	6	63	782
05:15 PM	5	228	107	340	4	3	1	8	6	371	3	380	43	3	6	52	780
05:30 PM	3	227	82	312	3	5	4	12	1	406	2	409	56	2	4	62	795
05:45 PM	2	209	69	280	2	3	2	7	2	444	5	451	48	3	5	56	794
Total	14	892	331	1237	13	16	8	37	15	1612	17	1644	201	11	21	233	3151
Grand Total	17	1724	608	2349	21	19	16	56	29	3113	32	3174	387	21	36	444	6023
Apprch %	0.7	73.4	25.9		37.5	33.9	28.6		0.9	98.1	1		87.2	4.7	8.1		
Total %	0.3	28.6	10.1	39	0.3	0.3	0.3	0.9	0.5	51.7	0.5	52.7	6.4	0.3	0.6	7.4	

	Euclid Street Southbound				College Avenue Westbound				Euclid Street Northbound				Main Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	4	228	73	305	4	5	1	10	6	391	7	404	54	3	6	63	782
05:15 PM	5	228	107	340	4	3	1	8	6	371	3	380	43	3	6	52	780
05:30 PM	3	227	82	312	3	5	4	12	1	406	2	409	56	2	4	62	795
05:45 PM	2	209	69	280	2	3	2	7	2	444	5	451	48	3	5	56	794
Total Volume	14	892	331	1237	13	16	8	37	15	1612	17	1644	201	11	21	233	3151
% App. Total	1.1	72.1	26.8		35.1	43.2	21.6		0.9	98.1	1		86.3	4.7	9		
PHF	.700	.978	.773	.910	.813	.800	.500	.771	.625	.908	.607	.911	.897	.917	.875	.925	.991

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City of Garden Grove
N/S: Euclid Street
E/W: Main Street/College Avenue
Weather: Clear

File Name : 03_GRG_Euclid_Main_College PM
Site Code : 04119438
Start Date : 5/15/2019
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	05:00 PM	05:00 PM	05:00 PM	05:00 PM	05:00 PM	05:00 PM	05:00 PM	
+0 mins.	4	228	73	305	4	5	1	10
+15 mins.	5	228	107	340	4	3	1	8
+30 mins.	3	227	82	312	3	5	4	12
+45 mins.	2	209	69	280	2	3	2	7
Total Volume	14	892	331	1237	13	16	8	37
% App. Total	1.1	72.1	26.8		35.1	43.2	21.6	
PHF	.700	.978	.773	.910	.813	.800	.500	.771

Location: Garden Grove
 N/S: Euclid Street
 E/W: Main Street/College Avenue



Date: 5/15/2019
 Day: Wednesday

PEDESTRIANS

	North Leg Euclid Street Pedestrians	East Leg College Avenue Pedestrians	South Leg Euclid Street Pedestrians	West Leg Main Street Pedestrians	
7:00 AM	0	1	3	4	8
7:15 AM	1	2	1	2	6
7:30 AM	0	3	1	5	9
7:45 AM	2	5	1	2	10
8:00 AM	3	2	0	2	7
8:15 AM	0	0	1	0	
8:30 AM	0	0	3	0	3
8:45 AM	0	2	3	1	6
TOTAL VOLUMES:	6	15	13	16	50

	North Leg Euclid Street Pedestrians	East Leg College Avenue Pedestrians	South Leg Euclid Street Pedestrians	West Leg Main Street Pedestrians	
4:00 PM	0	0	0	1	1
4:15 PM	0	1	6	4	11
4:30 PM	0	0	0	0	0
4:45 PM	1	0	0	3	4
5:00 PM	0	1	0	2	3
5:15 PM	1	3	3	1	8
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	2	5	9	11	27

Location: Garden Grove
 N/S: Euclid Street
 E/W: Main Street/College Avenue



Date: 5/15/2019
 Day: Wednesday

BICYCLES

	Southbound Euclid Street			Westbound College Avenue			Northbound Euclid Street			Eastbound Main Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Euclid Street			Westbound College Avenue			Northbound Euclid Street			Eastbound Main Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

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City of Garden Grove
 N/S: Euclid Street
 E/W: Stanford Avenue
 Weather: Clear

File Name : 04_GRG_Euclid_Stanford AM
 Site Code : 04119438
 Start Date : 5/15/2019
 Page No : 1

Groups Printed- Total Volume

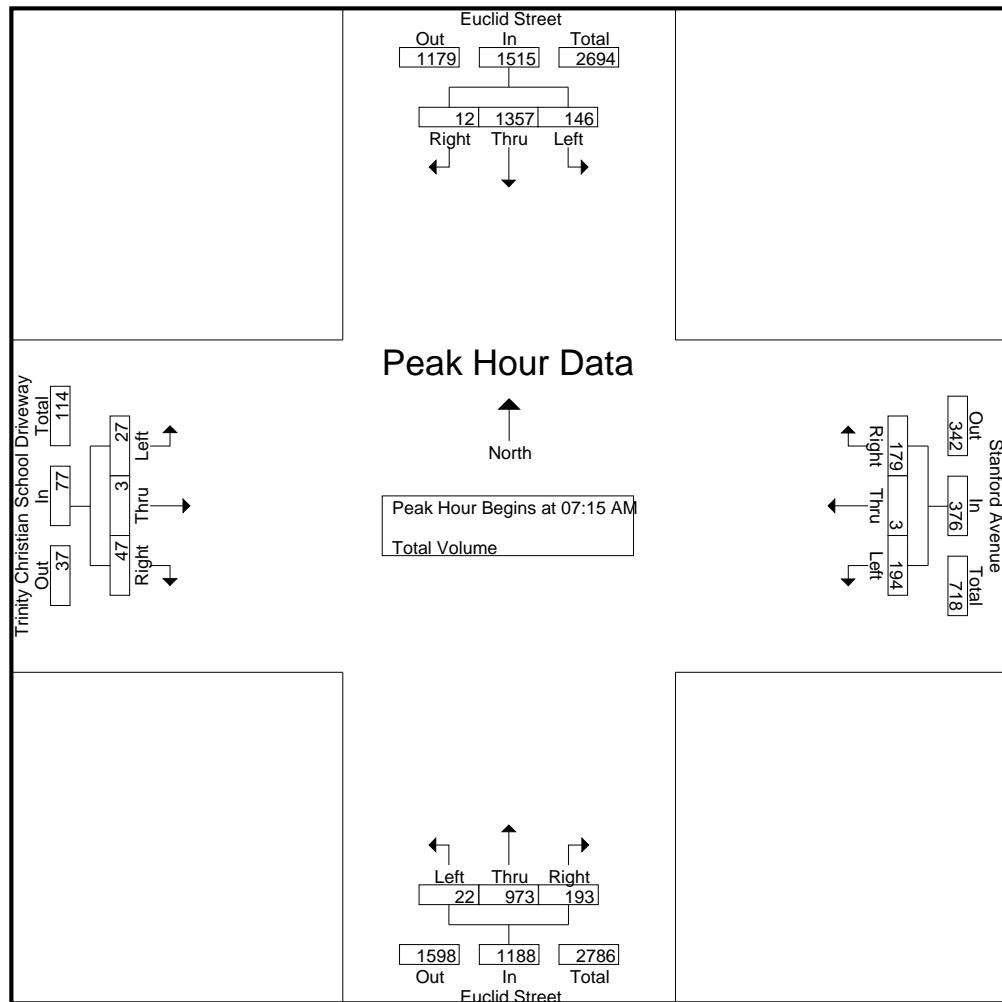
	Euclid Street Southbound				Stanford Avenue Westbound				Euclid Street Northbound				Trinity Christian School Driveway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	17	321	0	338	26	0	30	56	1	114	31	146	0	3	1	4	544
07:15 AM	24	385	1	410	32	0	34	66	0	210	43	253	0	0	4	4	733
07:30 AM	34	360	1	395	73	2	47	122	5	257	51	313	7	0	22	29	859
07:45 AM	68	281	5	354	49	1	59	109	10	256	80	346	17	2	15	34	843
Total	143	1347	7	1497	180	3	170	353	16	837	205	1058	24	5	42	71	2979
08:00 AM	20	331	5	356	40	0	39	79	7	250	19	276	3	1	6	10	721
08:15 AM	7	304	3	314	9	3	12	24	6	229	19	254	6	1	2	9	601
08:30 AM	10	258	0	268	7	0	4	11	1	214	15	230	0	0	3	3	512
08:45 AM	9	273	0	282	10	0	10	20	2	202	23	227	1	1	0	2	531
Total	46	1166	8	1220	66	3	65	134	16	895	76	987	10	3	11	24	2365
Grand Total	189	2513	15	2717	246	6	235	487	32	1732	281	2045	34	8	53	95	5344
Apprch %	7	92.5	0.6		50.5	1.2	48.3		1.6	84.7	13.7		35.8	8.4	55.8		
Total %	3.5	47	0.3	50.8	4.6	0.1	4.4	9.1	0.6	32.4	5.3	38.3	0.6	0.1	1	1.8	

	Euclid Street Southbound				Stanford Avenue Westbound				Euclid Street Northbound				Trinity Christian School Driveway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	24	385	1	410	32	0	34	66	0	210	43	253	0	0	4	4	733
07:30 AM	34	360	1	395	73	2	47	122	5	257	51	313	7	0	22	29	859
07:45 AM	68	281	5	354	49	1	59	109	10	256	80	346	17	2	15	34	843
08:00 AM	20	331	5	356	40	0	39	79	7	250	19	276	3	1	6	10	721
Total Volume	146	1357	12	1515	194	3	179	376	22	973	193	1188	27	3	47	77	3156
% App. Total	9.6	89.6	0.8		51.6	0.8	47.6		1.9	81.9	16.2		35.1	3.9	61		
PHF	.537	.881	.600	.924	.664	.375	.758	.770	.550	.946	.603	.858	.397	.375	.534	.566	.919

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City of Garden Grove
 N/S: Euclid Street
 E/W: Stanford Avenue
 Weather: Clear

File Name : 04_GRG_Euclid_Stanford AM
 Site Code : 04119438
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:30 AM				07:30 AM			
+0 mins.	24	385	1	410	32	0	34	66	5	257	51	313	7	0	22	29
+15 mins.	34	360	1	395	73	2	47	122	10	256	80	346	17	2	15	34
+30 mins.	68	281	5	354	49	1	59	109	7	250	19	276	3	1	6	10
+45 mins.	20	331	5	356	40	0	39	79	6	229	19	254	6	1	2	9
Total Volume	146	1357	12	1515	194	3	179	376	28	992	169	1189	33	4	45	82
% App. Total	9.6	89.6	0.8		51.6	0.8	47.6		2.4	83.4	14.2		40.2	4.9	54.9	
PHF	.537	.881	.600	.924	.664	.375	.758	.770	.700	.965	.528	.859	.485	.500	.511	.603

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City of Garden Grove
 N/S: Euclid Street
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File Name : 04_GRG_Euclid_Stanford PM
 Site Code : 04119438
 Start Date : 5/15/2019
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Groups Printed- Total Volume

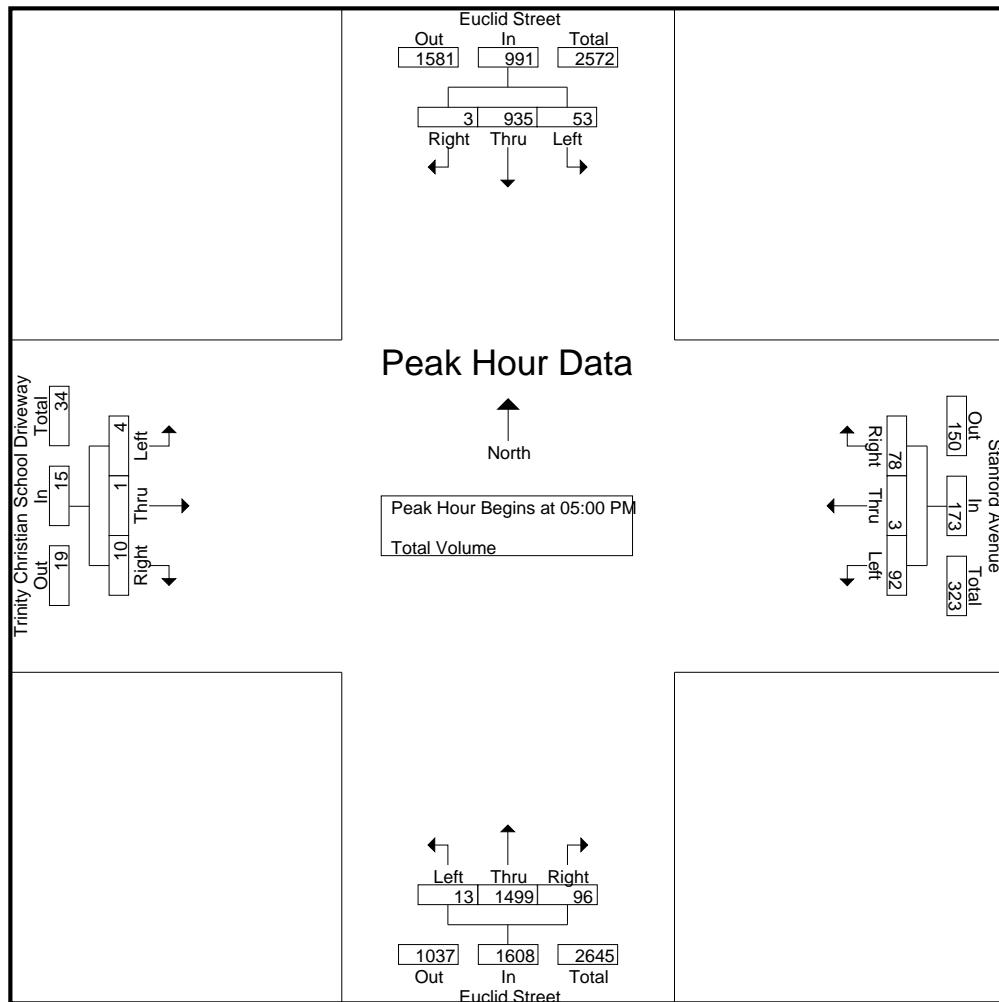
	Euclid Street Southbound				Stanford Avenue Westbound				Euclid Street Northbound				Trinity Christian School Driveway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	12	167	1	180	16	1	16	33	5	337	29	371	2	1	3	6	590
04:15 PM	14	217	2	233	26	0	24	50	1	385	24	410	1	1	3	5	698
04:30 PM	10	196	0	206	20	0	12	32	2	383	21	406	1	0	2	3	647
04:45 PM	20	229	0	249	15	0	20	35	0	363	28	391	2	1	1	4	679
Total	56	809	3	868	77	1	72	150	8	1468	102	1578	6	3	9	18	2614
05:00 PM	16	195	1	212	27	0	28	55	0	365	20	385	1	0	0	1	653
05:15 PM	12	257	1	270	17	0	14	31	5	376	28	409	0	0	2	2	712
05:30 PM	10	220	0	230	17	3	20	40	7	414	25	446	1	1	8	10	726
05:45 PM	15	263	1	279	31	0	16	47	1	344	23	368	2	0	0	2	696
Total	53	935	3	991	92	3	78	173	13	1499	96	1608	4	1	10	15	2787
Grand Total	109	1744	6	1859	169	4	150	323	21	2967	198	3186	10	4	19	33	5401
Apprch %	5.9	93.8	0.3		52.3	1.2	46.4		0.7	93.1	6.2		30.3	12.1	57.6		
Total %	2	32.3	0.1	34.4	3.1	0.1	2.8	6	0.4	54.9	3.7	59	0.2	0.1	0.4	0.6	

	Euclid Street Southbound				Stanford Avenue Westbound				Euclid Street Northbound				Trinity Christian School Driveway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	16	195	1	212	27	0	28	55	0	365	20	385	1	0	0	1	653
05:15 PM	12	257	1	270	17	0	14	31	5	376	28	409	0	0	2	2	712
05:30 PM	10	220	0	230	17	3	20	40	7	414	25	446	1	1	8	10	726
05:45 PM	15	263	1	279	31	0	16	47	1	344	23	368	2	0	0	2	696
Total Volume	53	935	3	991	92	3	78	173	13	1499	96	1608	4	1	10	15	2787
% App. Total	5.3	94.3	0.3		53.2	1.7	45.1		0.8	93.2	6		26.7	6.7	66.7		
PHF	.828	.889	.750	.888	.742	.250	.696	.786	.464	.905	.857	.901	.500	.250	.313	.375	.960

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City of Garden Grove
 N/S: Euclid Street
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 Weather: Clear

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 Site Code : 04119438
 Start Date : 5/15/2019
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				04:45 PM				04:00 PM			
+0 mins.	16	195	1	212	27	0	28	55	0	363	28	391	2	1	3	6
+15 mins.	12	257	1	270	17	0	14	31	0	365	20	385	1	1	3	5
+30 mins.	10	220	0	230	17	3	20	40	5	376	28	409	1	0	2	3
+45 mins.	15	263	1	279	31	0	16	47	7	414	25	446	2	1	1	4
Total Volume	53	935	3	991	92	3	78	173	12	1518	101	1631	6	3	9	18
% App. Total	5.3	94.3	0.3		53.2	1.7	45.1		0.7	93.1	6.2		33.3	16.7	50	
PHF	.828	.889	.750	.888	.742	.250	.696	.786	.429	.917	.902	.914	.750	.750	.750	.750

Location: Garden Grove
N/S: Euclid Street
E/W: Stanford Avenue



Date: 5/15/2019
Day: Wednesday

PEDESTRIANS

	North Leg Euclid Street Pedestrians	East Leg Stanford Avenue Pedestrians	South Leg Euclid Street Pedestrians	West Leg Trinity Christian School DW Pedestrians	
7:00 AM	10	1	4	0	15
7:15 AM	9	0	2	3	14
7:30 AM	57	0	6	6	69
7:45 AM	133	2	3	5	143
8:00 AM	17	0	5	3	25
8:15 AM	5	1	1	4	11
8:30 AM	3	0	0	2	5
8:45 AM	5	5	2	7	19
TOTAL VOLUMES:	239	9	23	30	301

	North Leg Euclid Street Pedestrians	East Leg Stanford Avenue Pedestrians	South Leg Euclid Street Pedestrians	West Leg Trinity Christian School DW Pedestrians	
4:00 PM	21	4	3	5	33
4:15 PM	14	4	6	11	35
4:30 PM	7	5	2	3	17
4:45 PM	8	1	2	6	17
5:00 PM	10	0	5	4	19
5:15 PM	3	0	3	1	7
5:30 PM	7	3	0	4	14
5:45 PM	2	4	0	1	7
TOTAL VOLUMES:	72	21	21	35	149

Location: Garden Grove
 N/S: Euclid Street
 E/W: Stanford Avenue



Date: 5/15/2019
 Day: Wednesday

BICYCLES

	Southbound Euclid Street			Westbound Stanford Avenue			Northbound Euclid Street			Eastbound Trinity Christian School DW			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	6	0	0	0	0	0	0	0	6
7:45 AM	0	0	0	0	12	0	0	1	0	0	0	0	13
8:00 AM	0	2	0	0	3	0	0	3	0	0	1	0	9
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	1	0	0	0	0	0	1	0	0	0	0	2
8:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	5	0	0	22	0	0	5	0	0	1	0	33

	Southbound Euclid Street			Westbound Stanford Avenue			Northbound Euclid Street			Eastbound Trinity Christian School DW			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
4:15 PM	0	2	0	0	3	0	0	0	0	0	0	0	5
4:30 PM	0	2	0	0	1	0	0	1	0	0	1	0	5
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:15 PM	0	0	0	0	1	0	0	1	0	0	0	0	2
5:30 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	4	0	0	9	0	0	3	0	0	1	0	17

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City of Garden Grove
 N/S: Euclid Street
 E/W: Acacia Parkway
 Weather: Clear

File Name : 05_GRG_Euclid_Acacia AM
 Site Code : 04119438
 Start Date : 5/15/2019
 Page No : 1

Groups Printed- Total Volume

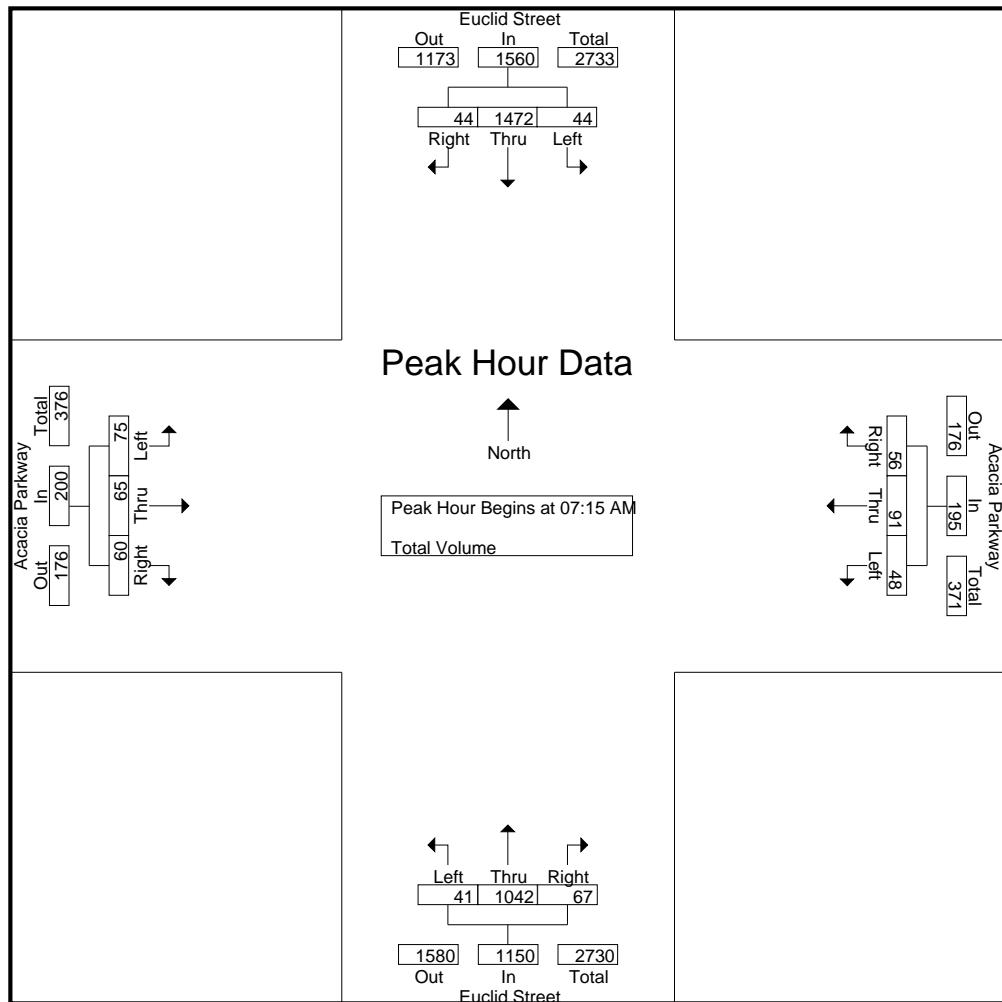
	Euclid Street Southbound				Acacia Parkway Westbound				Euclid Street Northbound				Acacia Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	330	2	335	4	7	3	14	2	121	8	131	10	2	8	20	500
07:15 AM	14	386	5	405	2	7	1	10	6	235	13	254	13	5	14	32	701
07:30 AM	8	432	13	453	14	24	12	50	10	250	20	280	34	22	17	73	856
07:45 AM	11	305	17	333	14	35	29	78	15	318	20	353	22	27	10	59	823
Total	36	1453	37	1526	34	73	45	152	33	924	61	1018	79	56	49	184	2880
08:00 AM	11	349	9	369	18	25	14	57	10	239	14	263	6	11	19	36	725
08:15 AM	5	312	2	319	8	6	3	17	5	241	8	254	6	13	17	36	626
08:30 AM	8	256	2	266	8	4	3	15	13	211	16	240	8	7	7	22	543
08:45 AM	6	271	4	281	5	2	4	11	16	217	9	242	9	7	10	26	560
Total	30	1188	17	1235	39	37	24	100	44	908	47	999	29	38	53	120	2454
Grand Total	66	2641	54	2761	73	110	69	252	77	1832	108	2017	108	94	102	304	5334
Apprch %	2.4	95.7	2		29	43.7	27.4		3.8	90.8	5.4		35.5	30.9	33.6		
Total %	1.2	49.5	1	51.8	1.4	2.1	1.3	4.7	1.4	34.3	2	37.8	2	1.8	1.9	5.7	

	Euclid Street Southbound				Acacia Parkway Westbound				Euclid Street Northbound				Acacia Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	14	386	5	405	2	7	1	10	6	235	13	254	13	5	14	32	701
07:30 AM	8	432	13	453	14	24	12	50	10	250	20	280	34	22	17	73	856
07:45 AM	11	305	17	333	14	35	29	78	15	318	20	353	22	27	10	59	823
08:00 AM	11	349	9	369	18	25	14	57	10	239	14	263	6	11	19	36	725
Total Volume	44	1472	44	1560	48	91	56	195	41	1042	67	1150	75	65	60	200	3105
% App. Total	2.8	94.4	2.8		24.6	46.7	28.7		3.6	90.6	5.8		37.5	32.5	30		
PHF	.786	.852	.647	.861	.667	.650	.483	.625	.683	.819	.838	.814	.551	.602	.789	.685	.907

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City of Garden Grove
 N/S: Euclid Street
 E/W: Acacia Parkway
 Weather: Clear

File Name : 05_GRG_Euclid_Acacia AM
 Site Code : 04119438
 Start Date : 5/15/2019
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM				07:30 AM				07:15 AM				07:30 AM			
+0 mins.	14	386	5	405	14	24	12	50	6	235	13	254	34	22	17	73
+15 mins.	8	432	13	453	14	35	29	78	10	250	20	280	22	27	10	59
+30 mins.	11	305	17	333	18	25	14	57	15	318	20	353	6	11	19	36
+45 mins.	11	349	9	369	8	6	3	17	10	239	14	263	6	13	17	36
Total Volume	44	1472	44	1560	54	90	58	202	41	1042	67	1150	68	73	63	204
% App. Total	2.8	94.4	2.8		26.7	44.6	28.7		3.6	90.6	5.8		33.3	35.8	30.9	
PHF	.786	.852	.647	.861	.750	.643	.500	.647	.683	.819	.838	.814	.500	.676	.829	.699

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City of Garden Grove
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 Weather: Clear

File Name : 05_GRG_Euclid_Acacia PM
 Site Code : 04119438
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 Page No : 1

Groups Printed- Total Volume

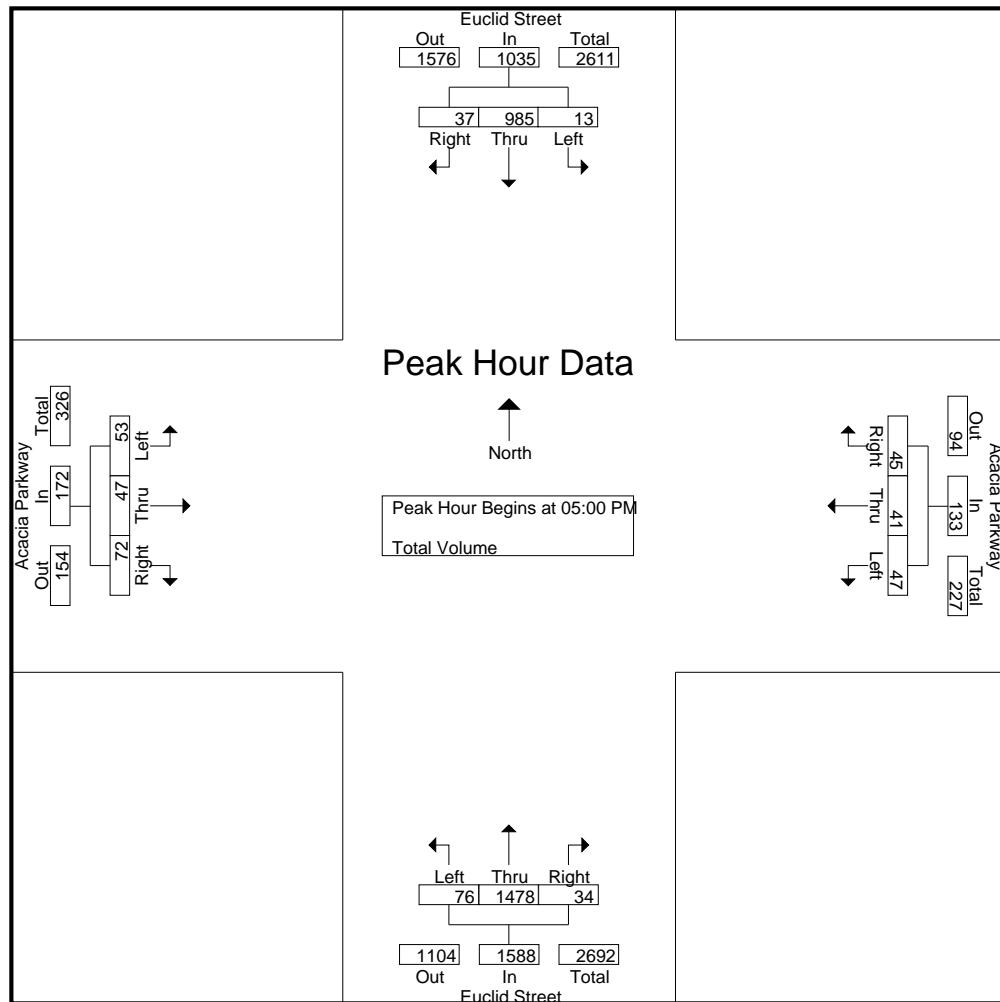
	Euclid Street Southbound				Acacia Parkway Westbound				Euclid Street Northbound				Acacia Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	6	182	3	191	13	10	5	28	5	354	12	371	9	14	18	41	631
04:15 PM	3	225	10	238	11	5	6	22	8	406	13	427	5	11	20	36	723
04:30 PM	7	225	5	237	7	11	16	34	14	395	10	419	16	14	19	49	739
04:45 PM	3	214	9	226	7	6	8	21	11	350	10	371	12	12	10	34	652
Total	19	846	27	892	38	32	35	105	38	1505	45	1588	42	51	67	160	2745
05:00 PM	4	228	8	240	18	11	12	41	16	348	8	372	15	12	22	49	702
05:15 PM	3	251	8	262	3	8	10	21	13	380	7	400	17	11	20	48	731
05:30 PM	2	230	12	244	19	12	10	41	24	400	7	431	16	13	14	43	759
05:45 PM	4	276	9	289	7	10	13	30	23	350	12	385	5	11	16	32	736
Total	13	985	37	1035	47	41	45	133	76	1478	34	1588	53	47	72	172	2928
Grand Total	32	1831	64	1927	85	73	80	238	114	2983	79	3176	95	98	139	332	5673
Apprch %	1.7	95	3.3		35.7	30.7	33.6		3.6	93.9	2.5		28.6	29.5	41.9		
Total %	0.6	32.3	1.1	34	1.5	1.3	1.4	4.2	2	52.6	1.4	56	1.7	1.7	2.5	5.9	

	Euclid Street Southbound				Acacia Parkway Westbound				Euclid Street Northbound				Acacia Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	4	228	8	240	18	11	12	41	16	348	8	372	15	12	22	49	702
05:15 PM	3	251	8	262	3	8	10	21	13	380	7	400	17	11	20	48	731
05:30 PM	2	230	12	244	19	12	10	41	24	400	7	431	16	13	14	43	759
05:45 PM	4	276	9	289	7	10	13	30	23	350	12	385	5	11	16	32	736
Total Volume	13	985	37	1035	47	41	45	133	76	1478	34	1588	53	47	72	172	2928
% App. Total	1.3	95.2	3.6		35.3	30.8	33.8		4.8	93.1	2.1		30.8	27.3	41.9		
PHF	.813	.892	.771	.895	.618	.854	.865	.811	.792	.924	.708	.921	.779	.904	.818	.878	.964

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File Name : 05_GRG_Euclid_Acacia PM
 Site Code : 04119438
 Start Date : 5/15/2019
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				04:15 PM				04:30 PM			
+0 mins.	4	228	8	240	18	11	12	41	8	406	13	427	16	14	19	49
+15 mins.	3	251	8	262	3	8	10	21	14	395	10	419	12	12	10	34
+30 mins.	2	230	12	244	19	12	10	41	11	350	10	371	15	12	22	49
+45 mins.	4	276	9	289	7	10	13	30	16	348	8	372	17	11	20	48
Total Volume	13	985	37	1035	47	41	45	133	49	1499	41	1589	60	49	71	180
% App. Total	1.3	95.2	3.6		35.3	30.8	33.8		3.1	94.3	2.6		33.3	27.2	39.4	
PHF	.813	.892	.771	.895	.618	.854	.865	.811	.766	.923	.788	.930	.882	.875	.807	.918

Location: Garden Grove
N/S: Euclid Street
E/W: Acacia Parkway



Date: 5/15/2019
Day: Wednesday

PEDESTRIANS

	North Leg Euclid Street Pedestrians	East Leg Acacia Parkway Pedestrians	South Leg Euclid Street Pedestrians	West Leg Acacia Parkway Pedestrians	
7:00 AM	6	1	3	2	12
7:15 AM	1	1	1	5	8
7:30 AM	10	2	4	7	23
7:45 AM	12	1	0	6	19
8:00 AM	3	1	3	1	8
8:15 AM	2	6	2	2	12
8:30 AM	1	2	0	0	3
8:45 AM	0	2	0	0	2
TOTAL VOLUMES:	35	16	13	23	87

	North Leg Euclid Street Pedestrians	East Leg Acacia Parkway Pedestrians	South Leg Euclid Street Pedestrians	West Leg Acacia Parkway Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Garden Grove
 N/S: Euclid Street
 E/W: Acacia Parkway



Date: 5/15/2019
 Day: Wednesday

BICYCLES

	Southbound Euclid Street			Westbound Acacia Parkway			Northbound Euclid Street			Eastbound Acacia Parkway			
	Left	Thru	Right										
7:00 AM	0	1	0	0	0	0	0	1	0	0	0	0	2
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
8:00 AM	0	1	0	0	1	0	0	3	0	1	1	0	7
8:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	2	0	0	1	0	3
8:45 AM	0	1	0	0	0	0	0	0	0	0	1	0	2
TOTAL VOLUMES:	0	4	0	0	2	0	0	7	0	1	4	0	18

	Southbound Euclid Street			Westbound Acacia Parkway			Northbound Euclid Street			Eastbound Acacia Parkway			
	Left	Thru	Right										
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	2	0	0	1	0	0	0	0	0	0	0	3
4:45 PM	0	0	0	0	0	0	0	1	1	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	1	1	0	1	0	3
5:30 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
5:45 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
TOTAL VOLUMES:	0	2	0	0	3	0	0	3	3	0	1	0	12

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City of Garden Grove
 N/S: Euclid Street
 E/W: Garden Grove Boulevard
 Weather: Clear

File Name : 06_GRG_Euclid_Garden Grove AM
 Site Code : 04119438
 Start Date : 5/15/2019
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Groups Printed- Total Volume

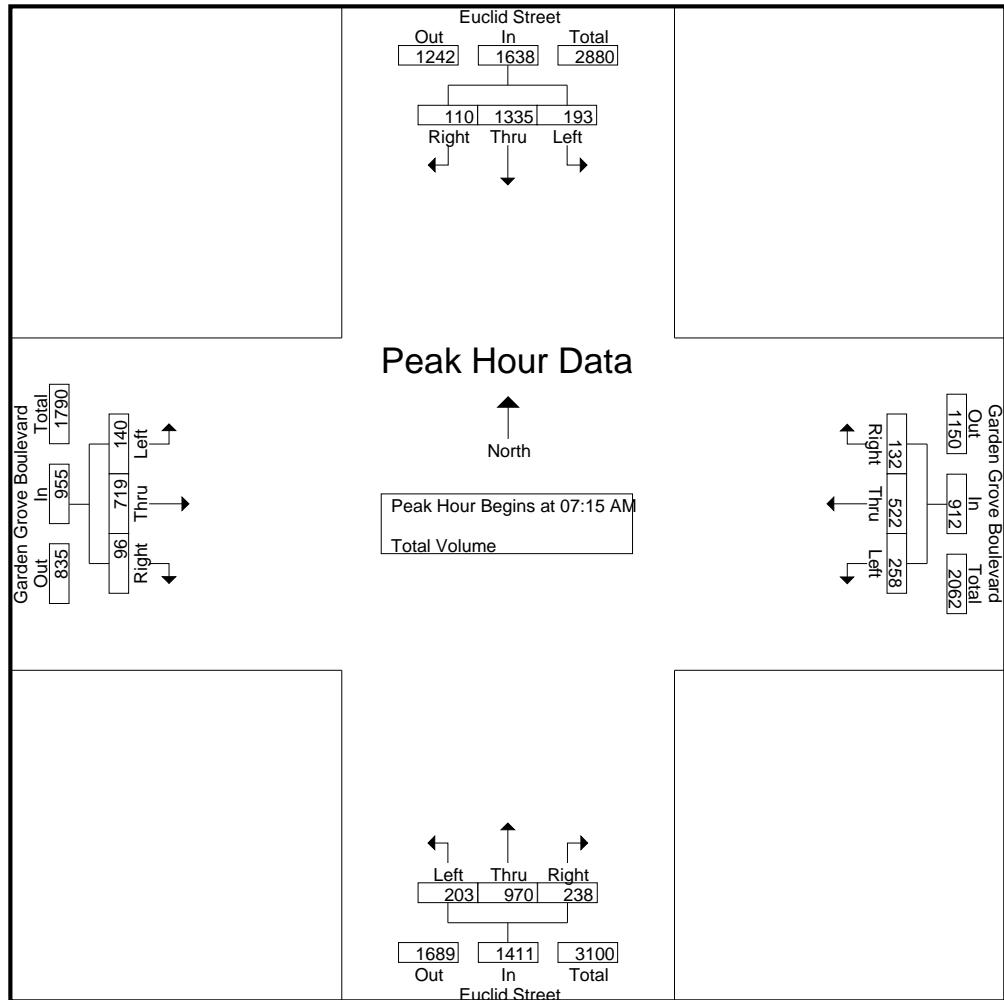
	Euclid Street Southbound				Garden Grove Boulevard Westbound				Euclid Street Northbound				Garden Grove Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	30	295	17	342	39	92	12	143	27	138	38	203	18	115	22	155	843
07:15 AM	42	343	11	396	50	97	27	174	47	200	43	290	21	158	25	204	1064
07:30 AM	45	379	24	448	57	113	23	193	48	243	65	356	36	181	18	235	1232
07:45 AM	54	270	43	367	79	153	48	280	59	294	68	421	57	192	27	276	1344
Total	171	1287	95	1553	225	455	110	790	181	875	214	1270	132	646	92	870	4483
08:00 AM	52	343	32	427	72	159	34	265	49	233	62	344	26	188	26	240	1276
08:15 AM	48	237	25	310	63	121	30	214	48	192	53	293	38	169	34	241	1058
08:30 AM	41	231	22	294	40	135	32	207	34	200	64	298	21	186	21	228	1027
08:45 AM	38	224	15	277	43	121	28	192	52	199	47	298	32	129	31	192	959
Total	179	1035	94	1308	218	536	124	878	183	824	226	1233	117	672	112	901	4320
Grand Total	350	2322	189	2861	443	991	234	1668	364	1699	440	2503	249	1318	204	1771	8803
Apprch %	12.2	81.2	6.6		26.6	59.4	14		14.5	67.9	17.6		14.1	74.4	11.5		
Total %	4	26.4	2.1	32.5	5	11.3	2.7	18.9	4.1	19.3	5	28.4	2.8	15	2.3		20.1

	Euclid Street Southbound				Garden Grove Boulevard Westbound				Euclid Street Northbound				Garden Grove Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	42	343	11	396	50	97	27	174	47	200	43	290	21	158	25	204	1064
07:30 AM	45	379	24	448	57	113	23	193	48	243	65	356	36	181	18	235	1232
07:45 AM	54	270	43	367	79	153	48	280	59	294	68	421	57	192	27	276	1344
08:00 AM	52	343	32	427	72	159	34	265	49	233	62	344	26	188	26	240	1276
Total Volume	193	1335	110	1638	258	522	132	912	203	970	238	1411	140	719	96	955	4916
% App. Total	11.8	81.5	6.7		28.3	57.2	14.5		14.4	68.7	16.9		14.7	75.3	10.1		
PHF	.894	.881	.640	.914	.816	.821	.688	.814	.860	.825	.875	.838	.614	.936	.889	.865	.914

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City of Garden Grove
N/S: Euclid Street
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Weather: Clear

File Name : 06_GRG_Euclid_Garden Grove AM
Site Code : 04119438
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM				07:45 AM				07:30 AM				07:30 AM			
+0 mins.	42	343	11	396	79	153	48	280	48	243	65	356	36	181	18	235
+15 mins.	45	379	24	448	72	159	34	265	59	294	68	421	57	192	27	276
+30 mins.	54	270	43	367	63	121	30	214	49	233	62	344	26	188	26	240
+45 mins.	52	343	32	427	40	135	32	207	48	192	53	293	38	169	34	241
Total Volume	193	1335	110	1638	254	568	144	966	204	962	248	1414	157	730	105	992
% App. Total	11.8	81.5	6.7		26.3	58.8	14.9		14.4	68	17.5		15.8	73.6	10.6	
PHF	.894	.881	.640	.914	.804	.893	.750	.863	.864	.818	.912	.840	.689	.951	.772	.899

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City of Garden Grove
 N/S: Euclid Street
 E/W: Garden Grove Boulevard
 Weather: Clear

File Name : 06_GRG_Euclid_Garden Grove PM
 Site Code : 04119438
 Start Date : 5/15/2019
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Groups Printed- Total Volume

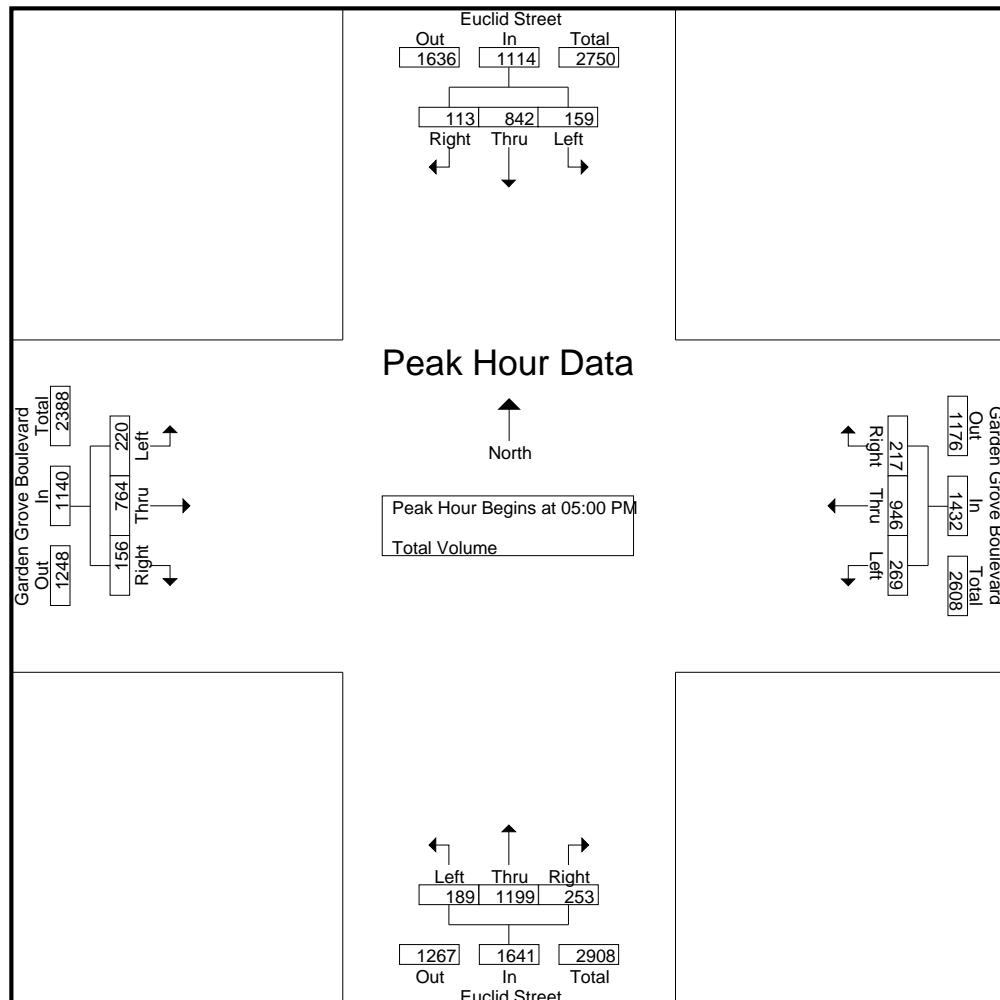
	Euclid Street Southbound				Garden Grove Boulevard Westbound				Euclid Street Northbound				Garden Grove Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	37	175	23	235	52	217	60	329	62	293	53	408	36	166	41	243	1215
04:15 PM	39	200	18	257	57	169	54	280	42	289	51	382	45	164	44	253	1172
04:30 PM	28	177	27	232	70	206	58	334	47	296	59	402	41	192	39	272	1240
04:45 PM	37	185	23	245	54	217	40	311	49	287	38	374	54	209	46	309	1239
Total	141	737	91	969	233	809	212	1254	200	1165	201	1566	176	731	170	1077	4866
05:00 PM	35	205	36	276	59	219	54	332	50	297	58	405	45	163	44	252	1265
05:15 PM	31	211	25	267	65	251	46	362	42	284	48	374	67	194	44	305	1308
05:30 PM	46	223	28	297	59	212	59	330	62	353	79	494	58	189	26	273	1394
05:45 PM	47	203	24	274	86	264	58	408	35	265	68	368	50	218	42	310	1360
Total	159	842	113	1114	269	946	217	1432	189	1199	253	1641	220	764	156	1140	5327
Grand Total	300	1579	204	2083	502	1755	429	2686	389	2364	454	3207	396	1495	326	2217	10193
Apprch %	14.4	75.8	9.8		18.7	65.3	16		12.1	73.7	14.2		17.9	67.4	14.7		
Total %	2.9	15.5	2	20.4	4.9	17.2	4.2	26.4	3.8	23.2	4.5	31.5	3.9	14.7	3.2	21.8	

	Euclid Street Southbound				Garden Grove Boulevard Westbound				Euclid Street Northbound				Garden Grove Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	35	205	36	276	59	219	54	332	50	297	58	405	45	163	44	252	1265
05:15 PM	31	211	25	267	65	251	46	362	42	284	48	374	67	194	44	305	1308
05:30 PM	46	223	28	297	59	212	59	330	62	353	79	494	58	189	26	273	1394
05:45 PM	47	203	24	274	86	264	58	408	35	265	68	368	50	218	42	310	1360
Total Volume	159	842	113	1114	269	946	217	1432	189	1199	253	1641	220	764	156	1140	5327
% App. Total	14.3	75.6	10.1		18.8	66.1	15.2		11.5	73.1	15.4		19.3	67	13.7		
PHF	.846	.944	.785	.938	.782	.896	.919	.877	.762	.849	.801	.830	.821	.876	.886	.919	.955

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 Site Code : 04119438
 Start Date : 5/15/2019
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				04:45 PM				05:00 PM			
+0 mins.	35	205	36	276	59	219	54	332	49	287	38	374	45	163	44	252
+15 mins.	31	211	25	267	65	251	46	362	50	297	58	405	67	194	44	305
+30 mins.	46	223	28	297	59	212	59	330	42	284	48	374	58	189	26	273
+45 mins.	47	203	24	274	86	264	58	408	62	353	79	494	50	218	42	310
Total Volume	159	842	113	1114	269	946	217	1432	203	1221	223	1647	220	764	156	1140
% App. Total	14.3	75.6	10.1		18.8	66.1	15.2		12.3	74.1	13.5		19.3	67	13.7	
PHF	.846	.944	.785	.938	.782	.896	.919	.877	.819	.865	.706	.834	.821	.876	.886	.919

Location: Garden Grove
 N/S: Euclid Street
 E/W: Garden Grove Boulevard



Date: 5/15/2019
 Day: Wednesday

PEDESTRIANS

	North Leg Euclid Street Pedestrians	East Leg Garden Grove Boulevard Pedestrians	South Leg Euclid Street Pedestrians	West Leg Garden Grove Boulevard Pedestrians	
7:00 AM	4	0	1	1	6
7:15 AM	1	2	2	3	8
7:30 AM	5	0	1	3	9
7:45 AM	3	4	0	4	11
8:00 AM	2	1	7	2	12
8:15 AM	7	1	5	7	20
8:30 AM	4	1	2	0	7
8:45 AM	2	2	0	6	10
TOTAL VOLUMES:	28	11	18	26	83

	North Leg Euclid Street Pedestrians	East Leg Garden Grove Boulevard Pedestrians	South Leg Euclid Street Pedestrians	West Leg Garden Grove Boulevard Pedestrians	
4:00 PM	6	2	6	0	14
4:15 PM	5	6	2	4	17
4:30 PM	3	0	1	2	6
4:45 PM	4	1	4	5	14
5:00 PM	10	6	2	6	24
5:15 PM	1	0	1	1	3
5:30 PM	6	3	1	5	15
5:45 PM	4	3	6	5	18
TOTAL VOLUMES:	39	21	23	28	111

Location: Garden Grove
 N/S: Euclid Street
 E/W: Garden Grove Boulevard



Date: 5/15/2019
 Day: Wednesday

BICYCLES

	Southbound Euclid Street			Westbound Garden Grove Boulevard			Northbound Euclid Street			Eastbound Garden Grove Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	1	0	0	0	0	0	0	0	0	1	0	2
7:30 AM	0	0	0	0	2	0	0	0	0	0	0	0	2
7:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:00 AM	0	0	0	0	3	0	0	4	0	0	0	0	7
8:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	1	0	0	2	0	0	1	0	4
8:45 AM	0	2	0	0	1	0	0	0	0	0	0	0	3
TOTAL VOLUMES:	0	4	0	0	7	0	0	7	0	0	2	0	20

	Southbound Euclid Street			Westbound Garden Grove Boulevard			Northbound Euclid Street			Eastbound Garden Grove Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	2	0	0	2	0	0	2	0	0	0	0	6
4:15 PM	0	2	0	0	0	0	0	0	0	0	2	0	4
4:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:45 PM	0	1	0	0	1	0	0	2	0	0	0	0	4
5:00 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
5:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	3	0	3
5:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
TOTAL VOLUMES:	0	5	0	0	4	0	0	6	0	0	8	0	23

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City of Garden Grove
 N/S: 9th Street
 E/W: Stanford Avenue
 Weather: Clear

File Name : 07_GRG_9th_Stanford AM
 Site Code : 04119438
 Start Date : 5/15/2019
 Page No : 1

Groups Printed- Total Volume

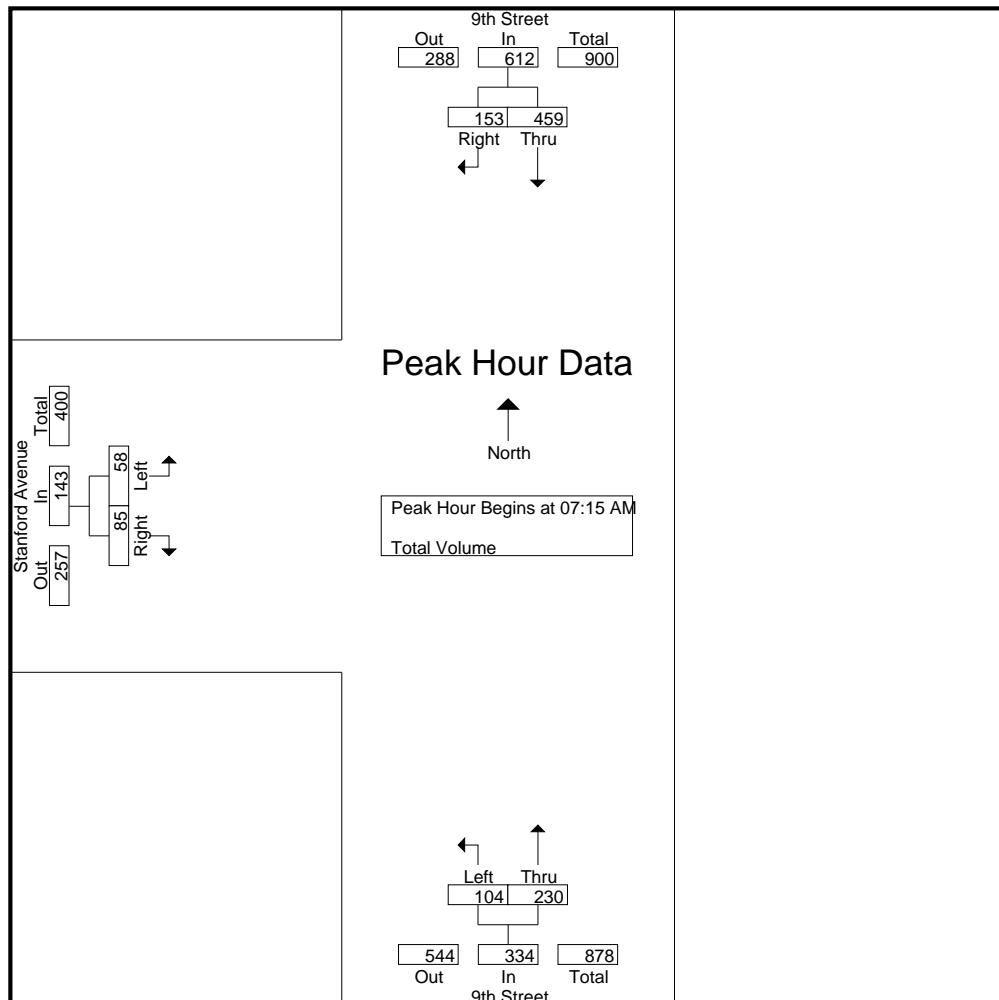
	9th Street Southbound			9th Street Northbound			Stanford Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	114	22	136	20	35	55	9	18	27	218
07:15 AM	128	17	145	21	46	67	3	11	14	226
07:30 AM	121	49	170	29	51	80	9	15	24	274
07:45 AM	97	73	170	38	65	103	21	33	54	327
Total	460	161	621	108	197	305	42	77	119	1045
08:00 AM	113	14	127	16	68	84	25	26	51	262
08:15 AM	124	16	140	7	59	66	8	1	9	215
08:30 AM	101	10	111	7	65	72	8	4	12	195
08:45 AM	97	2	99	8	60	68	6	3	9	176
Total	435	42	477	38	252	290	47	34	81	848
Grand Total	895	203	1098	146	449	595	89	111	200	1893
Apprch %	81.5	18.5		24.5	75.5		44.5	55.5		
Total %	47.3	10.7	58	7.7	23.7	31.4	4.7	5.9	10.6	

	9th Street Southbound			9th Street Northbound			Stanford Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	128	17	145	21	46	67	3	11	14	226
07:30 AM	121	49	170	29	51	80	9	15	24	274
07:45 AM	97	73	170	38	65	103	21	33	54	327
08:00 AM	113	14	127	16	68	84	25	26	51	262
Total Volume	459	153	612	104	230	334	58	85	143	1089
% App. Total	75	25		31.1	68.9		40.6	59.4		
PHF	.896	.524	.900	.684	.846	.811	.580	.644	.662	.833

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City of Garden Grove
 N/S: 9th Street
 E/W: Stanford Avenue
 Weather: Clear

File Name : 07_GRG_9th_Stanford AM
 Site Code : 04119438
 Start Date : 5/15/2019
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:00 AM			07:15 AM			07:15 AM		
+0 mins.	114	22	136	21	46	67	3	11	14
+15 mins.	128	17	145	29	51	80	9	15	24
+30 mins.	121	49	170	38	65	103	21	33	54
+45 mins.	97	73	170	16	68	84	25	26	51
Total Volume	460	161	621	104	230	334	58	85	143
% App. Total	74.1	25.9		31.1	68.9		40.6	59.4	
PHF	.898	.551	.913	.684	.846	.811	.580	.644	.662

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City of Garden Grove
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Groups Printed- Total Volume

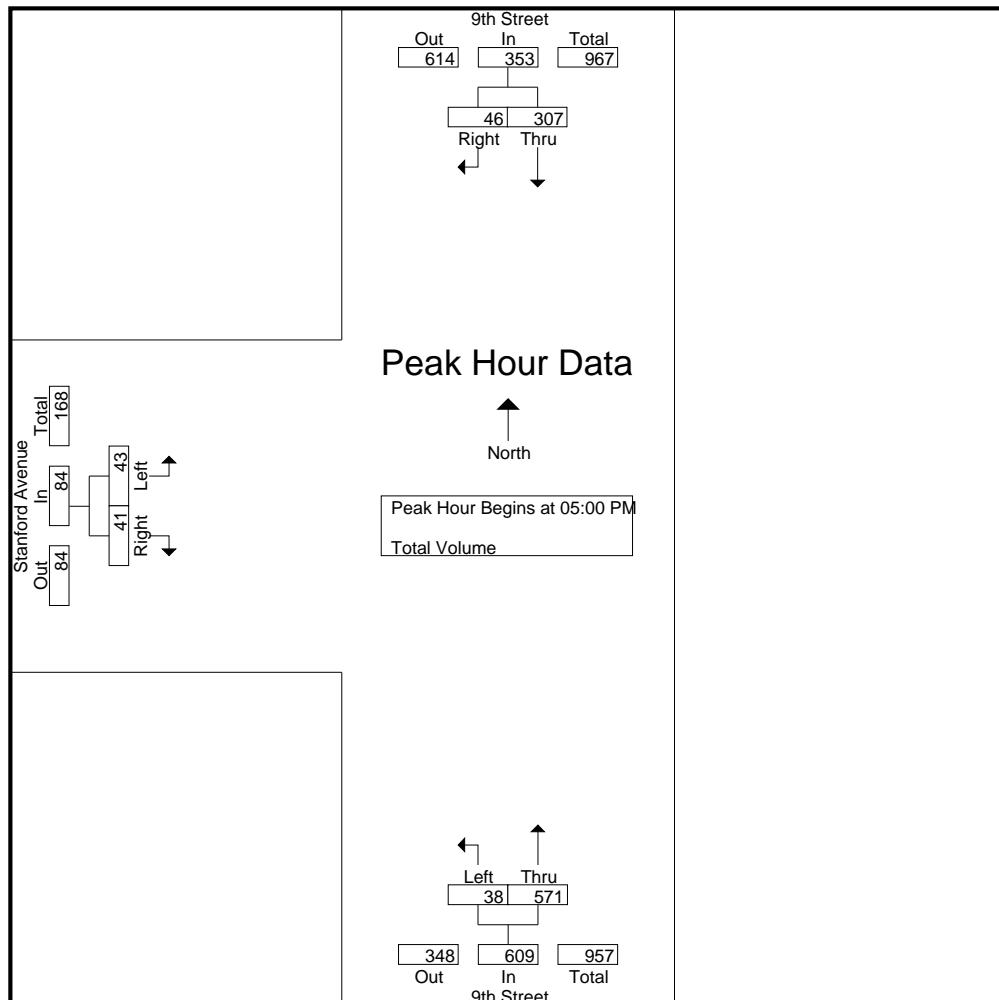
	9th Street Southbound			9th Street Northbound			Stanford Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
04:00 PM	69	11	80	11	127	138	8	9	17	235
04:15 PM	47	13	60	10	134	144	8	5	13	217
04:30 PM	72	9	81	9	137	146	11	12	23	250
04:45 PM	79	7	86	16	136	152	12	10	22	260
Total	267	40	307	46	534	580	39	36	75	962
05:00 PM	79	13	92	11	134	145	15	10	25	262
05:15 PM	75	5	80	7	137	144	11	13	24	248
05:30 PM	76	10	86	13	146	159	7	7	14	259
05:45 PM	77	18	95	7	154	161	10	11	21	277
Total	307	46	353	38	571	609	43	41	84	1046
Grand Total	574	86	660	84	1105	1189	82	77	159	2008
Apprch %	87	13		7.1	92.9		51.6	48.4		
Total %	28.6	4.3	32.9	4.2	55	59.2	4.1	3.8	7.9	

	9th Street Southbound			9th Street Northbound			Stanford Avenue Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	79	13	92	11	134	145	15	10	25	262
05:15 PM	75	5	80	7	137	144	11	13	24	248
05:30 PM	76	10	86	13	146	159	7	7	14	259
05:45 PM	77	18	95	7	154	161	10	11	21	277
Total Volume	307	46	353	38	571	609	43	41	84	1046
% App. Total	87	13		6.2	93.8		51.2	48.8		
PHF	.972	.639	.929	.731	.927	.946	.717	.788	.840	.944

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City of Garden Grove
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 Weather: Clear

File Name : 07_GRG_9th_Stanford PM
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	05:00 PM			05:00 PM			04:30 PM		
+0 mins.	79	13	92	11	134	145	11	12	23
+15 mins.	75	5	80	7	137	144	12	10	22
+30 mins.	76	10	86	13	146	159	15	10	25
+45 mins.	77	18	95	7	154	161	11	13	24
Total Volume	307	46	353	38	571	609	49	45	94
% App. Total	87	13		6.2	93.8		52.1	47.9	
PHF	.972	.639	.929	.731	.927	.946	.817	.865	.940

Location: Garden Grove
N/S: 9th Street
E/W: Stanford Avenue



Date: 5/15/2019
Day: Wednesday

PEDESTRIANS

	North Leg 9th Street Pedestrians	East Leg Dead End Pedestrians	South Leg 9th Street Pedestrians	West Leg Stanford Avenue Pedestrians	
7:00 AM	0	2	0	2	4
7:15 AM	1	16	7	2	26
7:30 AM	6	2	5	1	14
7:45 AM	16	3	9	6	34
8:00 AM	5	2	4	0	11
8:15 AM	0	4	1	0	5
8:30 AM	0	2	3	3	8
8:45 AM	1	6	1	1	9
TOTAL VOLUMES:	29	37	30	15	111

	North Leg 9th Street Pedestrians	East Leg Dead End Pedestrians	South Leg 9th Street Pedestrians	West Leg Stanford Avenue Pedestrians	
4:00 PM	5	2	2	2	11
4:15 PM	0	1	2	2	5
4:30 PM	2	2	3	1	8
4:45 PM	0	0	2	2	4
5:00 PM	2	2	1	0	5
5:15 PM	3	1	2	0	6
5:30 PM	0	2	0	4	6
5:45 PM	1	0	0	0	1
TOTAL VOLUMES:	13	10	12	11	46

Location: Garden Grove
 N/S: 9th Street
 E/W: Stanford Avenue



Date: 5/15/2019
 Day: Wednesday

BICYCLES

	Southbound 9th Street			Westbound Dead End			Northbound 9th Street			Eastbound Stanford Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	3	1	0	0	0	0	0	0	0	0	0	4
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	5	1	0	1	0	0	0	0	0	0	0	7

	Southbound 9th Street			Westbound Dead End			Northbound 9th Street			Eastbound Stanford Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	1	0	1	0	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	2	0	0	1	0	0	0	0	3
5:15 PM	0	0	0	0	1	0	0	1	0	0	1	1	4
5:30 PM	0	1	0	0	0	0	0	3	0	0	1	0	5
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	3	0	0	7	0	1	2	1	15

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City of Garden Grove
 N/S: 9th Street
 E/W: Acacia Parkway
 Weather: Clear

File Name : 08_GRG_9th_Acacia AM
 Site Code : 04119438
 Start Date : 5/15/2019
 Page No : 1

Groups Printed- Total Volume

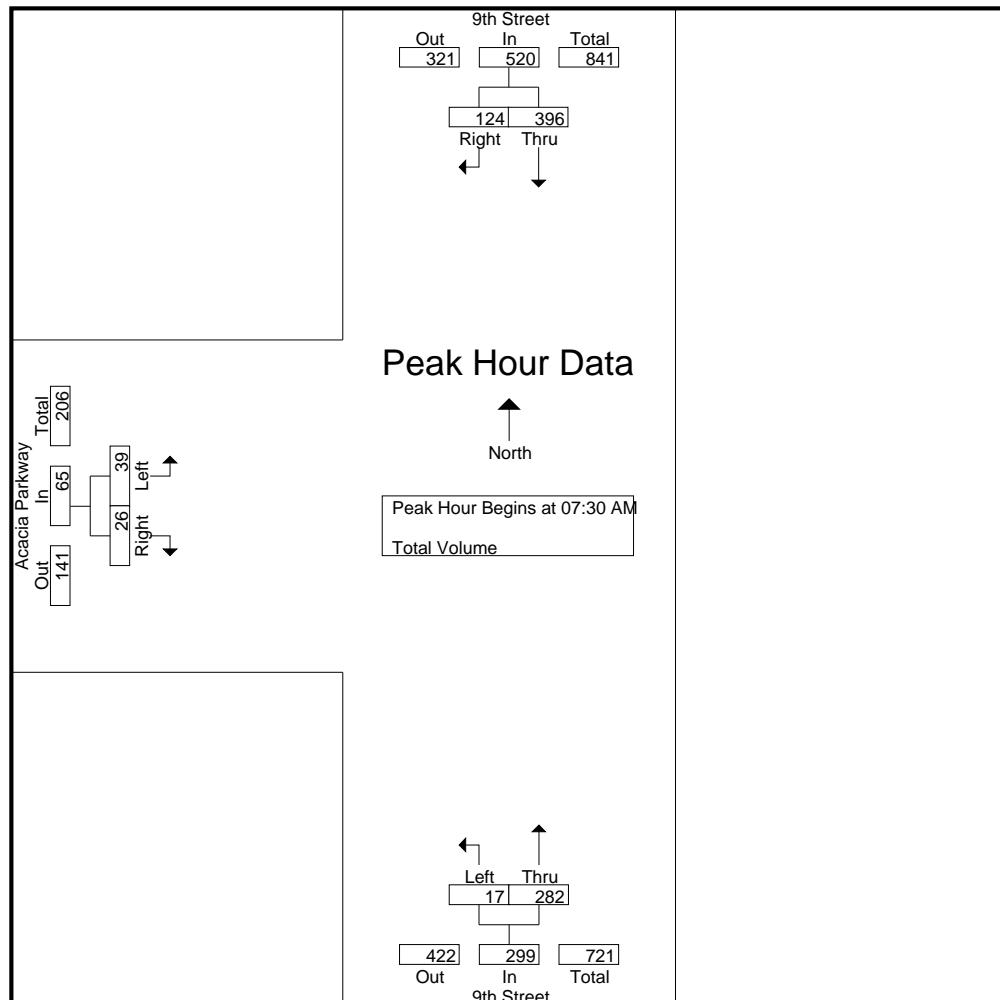
	9th Street Southbound			9th Street Northbound			Acacia Parkway Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	109	20	129	2	57	59	3	2	5	193
07:15 AM	115	24	139	2	46	48	3	1	4	191
07:30 AM	103	29	132	0	82	82	9	3	12	226
07:45 AM	105	30	135	12	96	108	7	15	22	265
Total	432	103	535	16	281	297	22	21	43	875
08:00 AM	85	36	121	4	52	56	8	3	11	188
08:15 AM	103	29	132	1	52	53	15	5	20	205
08:30 AM	92	12	104	3	65	68	5	6	11	183
08:45 AM	82	7	89	1	66	67	4	9	13	169
Total	362	84	446	9	235	244	32	23	55	745
Grand Total	794	187	981	25	516	541	54	44	98	1620
Apprch %	80.9	19.1		4.6	95.4		55.1	44.9		
Total %	49	11.5	60.6	1.5	31.9	33.4	3.3	2.7		6

	9th Street Southbound			9th Street Northbound			Acacia Parkway Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	103	29	132	0	82	82	9	3	12	226
07:45 AM	105	30	135	12	96	108	7	15	22	265
08:00 AM	85	36	121	4	52	56	8	3	11	188
08:15 AM	103	29	132	1	52	53	15	5	20	205
Total Volume	396	124	520	17	282	299	39	26	65	884
% App. Total	76.2	23.8		5.7	94.3		60	40		
PHF	.943	.861	.963	.354	.734	.692	.650	.433	.739	.834

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City of Garden Grove
 N/S: 9th Street
 E/W: Acacia Parkway
 Weather: Clear

File Name : 08_GRG_9th_Acacia AM
 Site Code : 04119438
 Start Date : 5/15/2019
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:00 AM			07:30 AM			07:30 AM		
+0 mins.	109	20	129	0	82	82	9	3	12
+15 mins.	115	24	139	12	96	108	7	15	22
+30 mins.	103	29	132	4	52	56	8	3	11
+45 mins.	105	30	135	1	52	53	15	5	20
Total Volume	432	103	535	17	282	299	39	26	65
% App. Total	80.7	19.3		5.7	94.3		60	40	
PHF	.939	.858	.962	.354	.734	.692	.650	.433	.739

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City of Garden Grove
 N/S: 9th Street
 E/W: Acacia Parkway
 Weather: Clear

File Name : 08_GRG_9th_Acacia PM
 Site Code : 04119438
 Start Date : 5/15/2019
 Page No : 1

Groups Printed- Total Volume

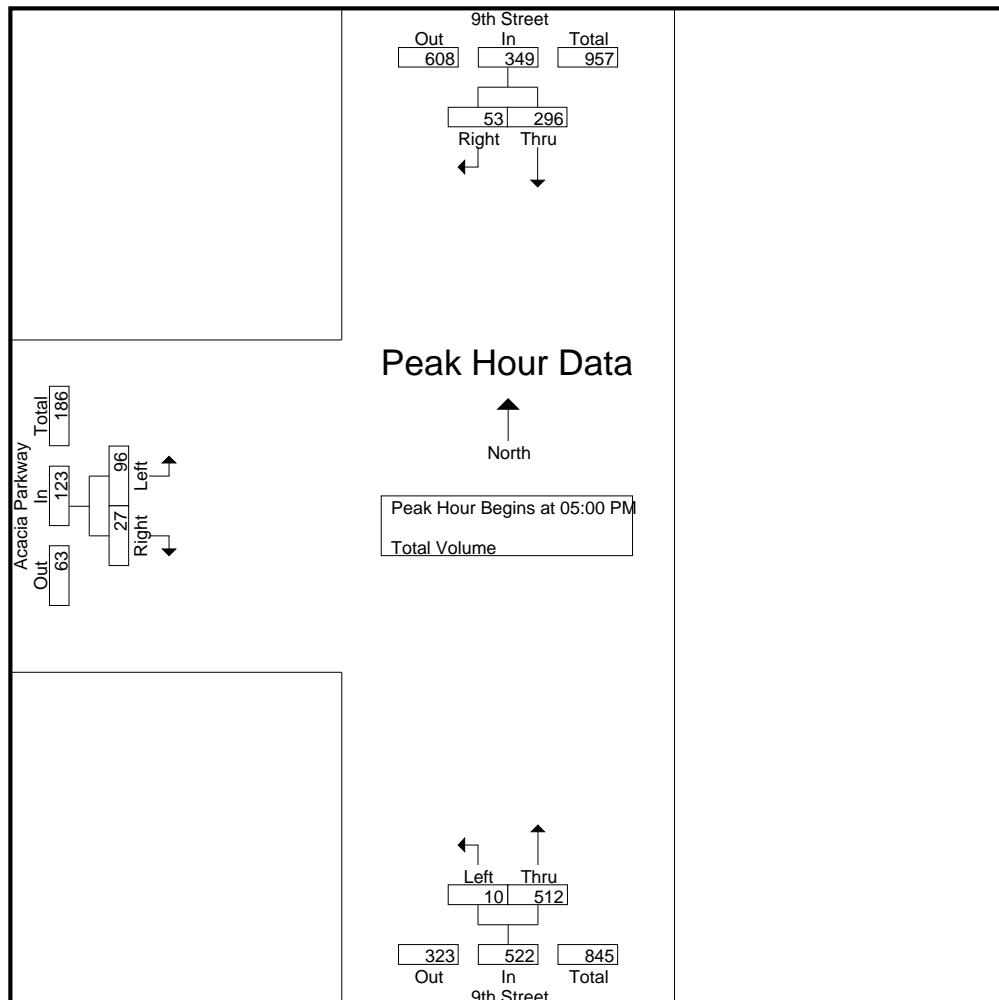
	9th Street Southbound			9th Street Northbound			Acacia Parkway Eastbound			Int. Total	
	Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:00 PM	69	9	78		3	118	121	20	12	32	231
04:15 PM	46	7	53		1	112	113	23	8	31	197
04:30 PM	92	11	103		3	133	136	24	9	33	272
04:45 PM	76	7	83		0	133	133	25	12	37	253
Total	283	34	317		7	496	503	92	41	133	953
05:00 PM	73	15	88		3	117	120	17	9	26	234
05:15 PM	70	11	81		2	126	128	21	3	24	233
05:30 PM	72	13	85		4	132	136	33	11	44	265
05:45 PM	81	14	95		1	137	138	25	4	29	262
Total	296	53	349		10	512	522	96	27	123	994
Grand Total	579	87	666		17	1008	1025	188	68	256	1947
Apprch %	86.9	13.1			1.7	98.3		73.4	26.6		
Total %	29.7	4.5	34.2		0.9	51.8		9.7	3.5		13.1

	9th Street Southbound			9th Street Northbound			Acacia Parkway Eastbound			Int. Total	
	Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 05:00 PM											
05:00 PM	73	15	88		3	117	120	17	9	26	234
05:15 PM	70	11	81		2	126	128	21	3	24	233
05:30 PM	72	13	85		4	132	136	33	11	44	265
05:45 PM	81	14	95		1	137	138	25	4	29	262
Total Volume	296	53	349		10	512	522	96	27	123	994
% App. Total	84.8	15.2			1.9	98.1		78	22		
PHF	.914	.883	.918		.625	.934	.946	.727	.614	.699	.938

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City of Garden Grove
 N/S: 9th Street
 E/W: Acacia Parkway
 Weather: Clear

File Name : 08_GRG_9th_Acacia PM
 Site Code : 04119438
 Start Date : 5/15/2019
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:30 PM			05:00 PM			04:00 PM		
+0 mins.	92	11	103	3	117	120	20	12	32
+15 mins.	76	7	83	2	126	128	23	8	31
+30 mins.	73	15	88	4	132	136	24	9	33
+45 mins.	70	11	81	1	137	138	25	12	37
Total Volume	311	44	355	10	512	522	92	41	133
% App. Total	87.6	12.4		1.9	98.1		69.2	30.8	
PHF	.845	.733	.862	.625	.934	.946	.920	.854	.899

Location: Garden Grove
N/S: 9th Street
E/W: Acacia Parkway



Date: 5/15/2019
Day: Wednesday

PEDESTRIANS

	North Leg 9th Street Pedestrians	East Leg Dead End Pedestrians	South Leg 9th Street Pedestrians	West Leg Acacia Parkway Pedestrians	
7:00 AM	0	0	0	2	2
7:15 AM	0	0	0	7	7
7:30 AM	0	0	0	3	3
7:45 AM	0	0	0	14	14
8:00 AM	0	0	0	1	1
8:15 AM	0	0	0	0	0
8:30 AM	0	0	2	3	5
8:45 AM	0	0	0	2	2
TOTAL VOLUMES:	0	0	2	32	34

	North Leg 9th Street Pedestrians	East Leg Dead End Pedestrians	South Leg 9th Street Pedestrians	West Leg Acacia Parkway Pedestrians	
4:00 PM	0	0	0	3	3
4:15 PM	0	0	0	1	1
4:30 PM	0	0	0	2	2
4:45 PM	0	0	1	4	5
5:00 PM	0	0	0	3	3
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	2	2
5:45 PM	0	0	0	2	2
TOTAL VOLUMES:	0	0	1	17	18

Location: Garden Grove
 N/S: 9th Street
 E/W: Acacia Parkway



Date: 5/15/2019
 Day: Wednesday

BICYCLES

	Southbound 9th Street			Westbound Dead End			Northbound 9th Street			Eastbound Acacia Parkway			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	3
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
8:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	5	0	0	0	0	2	0	0	0	0	0	7

	Southbound 9th Street			Westbound Dead End			Northbound 9th Street			Eastbound Acacia Parkway			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	1	0	0	0	0	0	1	0	1	0	1	4
5:30 PM	0	1	0	0	0	0	0	0	0	3	0	0	4
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	2	0	0	0	0	0	4	0	4	0	1	11

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City of Garden Grove
 N/S: 9th Street/Nina Place
 E/W: Garden Grove Boulevard
 Weather: Clear

File Name : 09_GRG_9th_Garden Grove AM
 Site Code : 04119438
 Start Date : 5/15/2019
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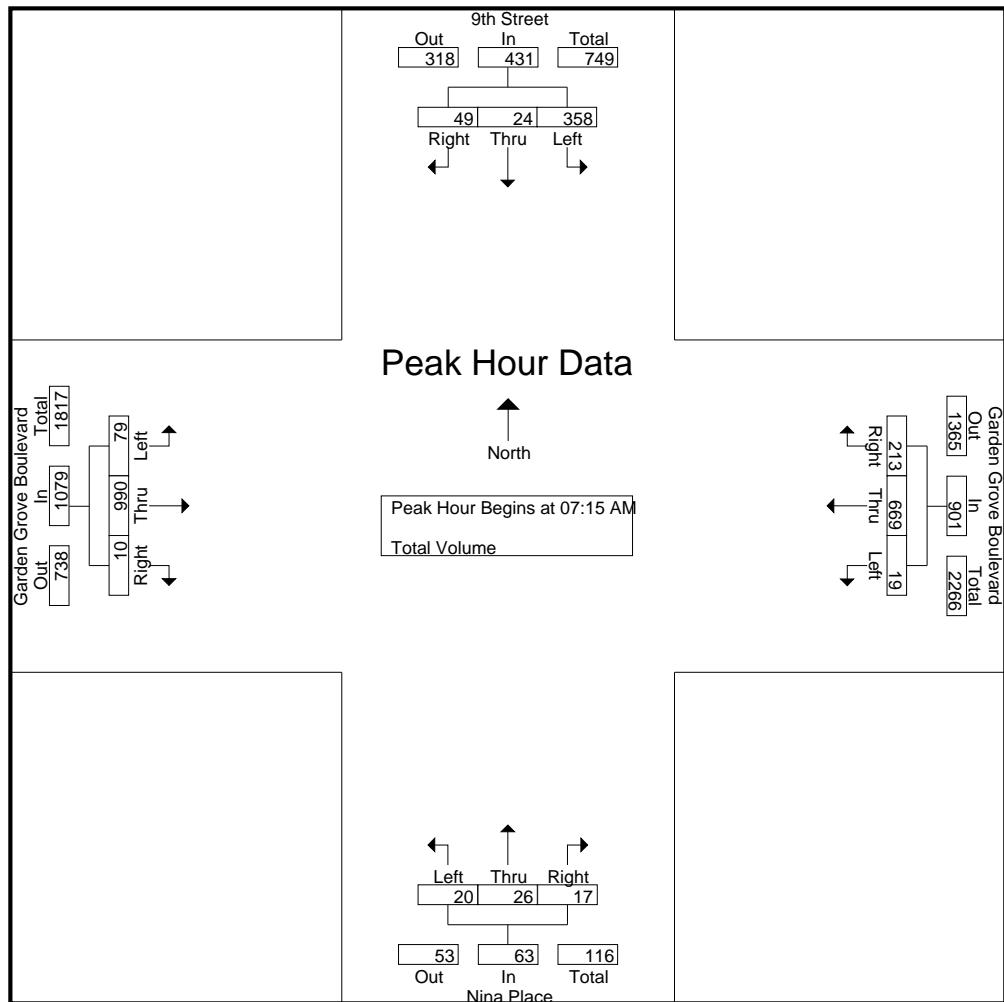
Groups Printed- Total Volume																		
	9th Street Southbound				Garden Grove Boulevard Westbound				Nina Place Northbound				Garden Grove Boulevard Eastbound					
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total	
07:00 AM	85	6	20	111	1	103	41	145	3	1	4	8	18	165	0	183	447	
07:15 AM	109	3	16	128	7	134	39	180	2	5	4	11	11	216	3	230	549	
07:30 AM	87	4	9	100	5	144	60	209	2	4	4	10	20	249	2	271	590	
07:45 AM	90	9	14	113	2	224	78	304	13	13	5	31	27	267	1	295	743	
Total	371	22	59	452	15	605	218	838	20	23	17	60	76	897	6	979	2329	
08:00 AM	72	8	10	90	5	167	36	208	3	4	4	11	21	258	4	283	592	
08:15 AM	106	3	16	125	1	145	24	170	1	3	2	6	11	211	2	224	525	
08:30 AM	61	3	29	93	3	143	48	194	3	1	3	7	25	229	3	257	551	
08:45 AM	69	5	25	99	3	171	44	218	3	0	5	8	22	178	1	201	526	
Total	308	19	80	407	12	626	152	790	10	8	14	32	79	876	10	965	2194	
Grand Total	679	41	139	859	27	1231	370	1628	30	31	31	92	155	1773	16	1944	4523	
Apprch %	79	4.8	16.2		1.7	75.6	22.7		32.6	33.7	33.7		8	91.2	0.8			
Total %	15	0.9	3.1	19	0.6	27.2	8.2	36	0.7	0.7	0.7	2	3.4	39.2	0.4		43	

	9th Street Southbound				Garden Grove Boulevard Westbound				Nina Place Northbound				Garden Grove Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	109	3	16	128	7	134	39	180	2	5	4	11	11	216	3	230	549
07:30 AM	87	4	9	100	5	144	60	209	2	4	4	10	20	249	2	271	590
07:45 AM	90	9	14	113	2	224	78	304	13	13	5	31	27	267	1	295	743
08:00 AM	72	8	10	90	5	167	36	208	3	4	4	11	21	258	4	283	592
Total Volume	358	24	49	431	19	669	213	901	20	26	17	63	79	990	10	1079	2474
% App. Total	83.1	5.6	11.4		2.1	74.3	23.6		31.7	41.3	27		7.3	91.8	0.9		
PHF	.821	.667	.766	.842	.679	.747	.683	.741	.385	.500	.850	.508	.731	.927	.625	.914	.832

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City of Garden Grove
 N/S: 9th Street/Nina Place
 E/W: Garden Grove Boulevard
 Weather: Clear

File Name : 09_GRG_9th_Garden Grove AM
 Site Code : 04119438
 Start Date : 5/15/2019
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:00 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	85	6	20	111	7	134	39	180	2	5	4	11	11	216	3	230
+15 mins.	109	3	16	128	5	144	60	209	2	4	4	10	20	249	2	271
+30 mins.	87	4	9	100	2	224	78	304	13	13	5	31	27	267	1	295
+45 mins.	90	9	14	113	5	167	36	208	3	4	4	11	21	258	4	283
Total Volume	371	22	59	452	19	669	213	901	20	26	17	63	79	990	10	1079
% App. Total	82.1	4.9	13.1		2.1	74.3	23.6		31.7	41.3	27		7.3	91.8	0.9	
PHF	.851	.611	.738	.883	.679	.747	.683	.741	.385	.500	.850	.508	.731	.927	.625	.914

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City of Garden Grove
 N/S: 9th Street/Nina Place
 E/W: Garden Grove Boulevard
 Weather: Clear

File Name : 09_GRG_9th_Garden Grove PM
 Site Code : 04119438
 Start Date : 5/15/2019
 Page No : 1

Groups Printed- Total Volume

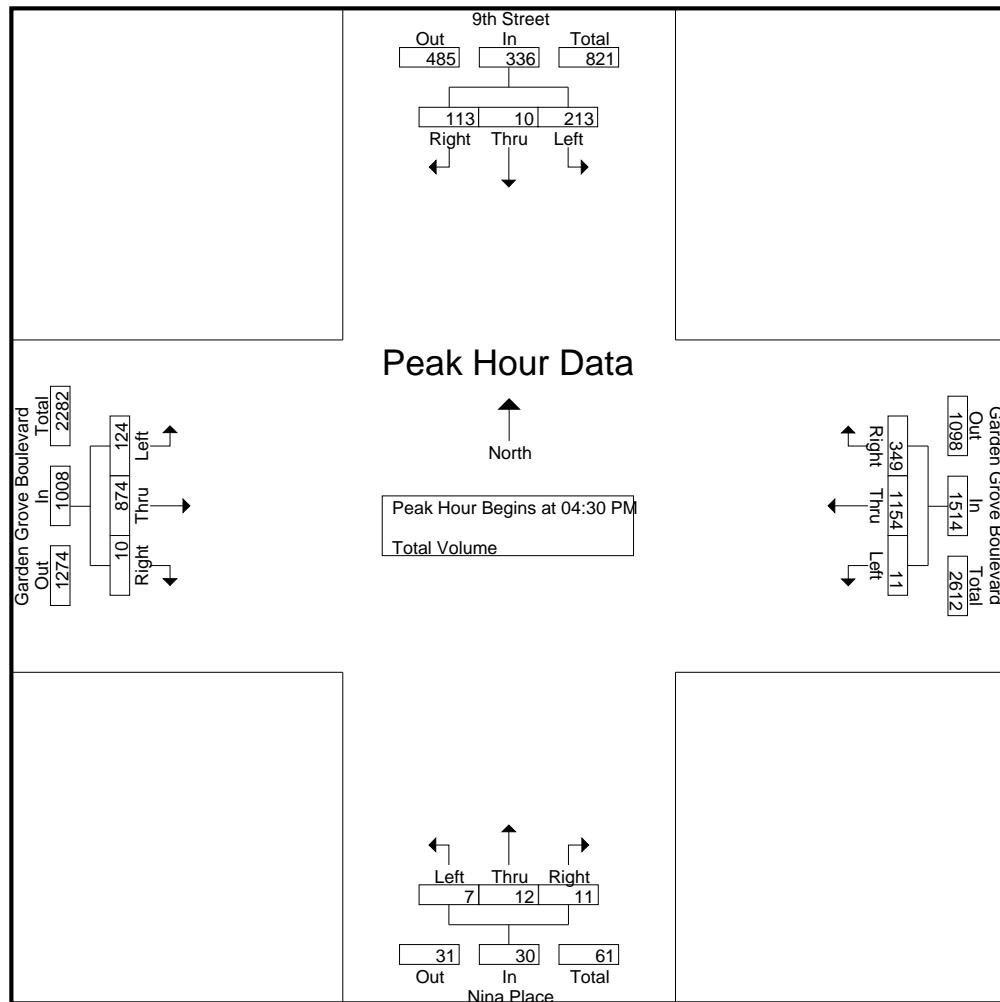
Start Time	9th Street Southbound				Garden Grove Boulevard Westbound				Nina Place Northbound				Garden Grove Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	48	3	29	80	7	283	87	377	5	7	2	14	24	218	3	245	716
04:15 PM	31	7	11	49	5	257	73	335	3	4	1	8	28	211	1	240	632
04:30 PM	60	3	33	96	2	288	102	392	3	5	2	10	30	224	4	258	756
04:45 PM	56	3	24	83	2	265	92	359	0	3	4	7	29	234	1	264	713
Total	195	16	97	308	16	1093	354	1463	11	19	9	39	111	887	9	1007	2817
05:00 PM	53	3	32	88	5	297	81	383	1	3	3	7	24	210	2	236	714
05:15 PM	44	1	24	69	2	304	74	380	3	1	2	6	41	206	3	250	705
05:30 PM	49	4	17	70	2	287	93	382	4	3	2	9	26	213	4	243	704
05:45 PM	58	4	27	89	9	334	81	424	1	8	3	12	30	203	4	237	762
Total	204	12	100	316	18	1222	329	1569	9	15	10	34	121	832	13	966	2885
Grand Total	399	28	197	624	34	2315	683	3032	20	34	19	73	232	1719	22	1973	5702
Apprch %	63.9	4.5	31.6		1.1	76.4	22.5		27.4	46.6	26		11.8	87.1	1.1		
Total %	7	0.5	3.5	10.9	0.6	40.6	12	53.2	0.4	0.6	0.3	1.3	4.1	30.1	0.4	34.6	

Start Time	9th Street Southbound				Garden Grove Boulevard Westbound				Nina Place Northbound				Garden Grove Boulevard Eastbound				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 04:30 PM																		
04:30 PM	60	3	33	96	2	288	102	392	3	5	2	10	30	224	4	258	756	
04:45 PM	56	3	24	83	2	265	92	359	0	3	4	7	29	234	1	264	713	
05:00 PM	53	3	32	88	5	297	81	383	1	3	3	7	24	210	2	236	714	
05:15 PM	44	1	24	69	2	304	74	380	3	1	2	6	41	206	3	250	705	
Total Volume	213	10	113	336	11	1154	349	1514	7	12	11	30	124	874	10	1008	2888	
% App. Total	63.4	3	33.6		0.7	76.2	23.1		23.3	40	36.7		12.3	86.7	1			
PHF	.888	.833	.856	.875	.550	.949	.855	.966	.583	.600	.688	.750	.756	.934	.625	.955	.955	

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City of Garden Grove
N/S: 9th Street/Nina Place
E/W: Garden Grove Boulevard
Weather: Clear

File Name : 09_GRG_9th_Garden Grove PM
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:30 PM				05:00 PM				04:00 PM				04:30 PM			
+0 mins.	60	3	33	96	5	297	81	383	5	7	2	14	30	224	4	258
+15 mins.	56	3	24	83	2	304	74	380	3	4	1	8	29	234	1	264
+30 mins.	53	3	32	88	2	287	93	382	3	5	2	10	24	210	2	236
+45 mins.	44	1	24	69	9	334	81	424	0	3	4	7	41	206	3	250
Total Volume	213	10	113	336	18	1222	329	1569	11	19	9	39	124	874	10	1008
% App. Total	63.4	3	33.6		1.1	77.9	21		28.2	48.7	23.1		12.3	86.7	1	
PHF	.888	.833	.856	.875	.500	.915	.884	.925	.550	.679	.563	.696	.756	.934	.625	.955

Location: Garden Grove
 N/S: 9th Street/Nina Place
 E/W: Garden Grove Boulevard



Date: 5/15/2019
 Day: Wednesday

PEDESTRIANS

	North Leg 9th Street Pedestrians	East Leg Garden Grove Boulevard Pedestrians	South Leg Nina Place Pedestrians	West Leg Garden Grove Boulevard Pedestrians	
7:00 AM	2	1	0	0	3
7:15 AM	0	0	10	6	16
7:30 AM	0	0	3	5	8
7:45 AM	5	3	4	8	20
8:00 AM	1	2	6	1	10
8:15 AM	0	2	1	1	4
8:30 AM	0	3	5	2	10
8:45 AM	0	0	3	1	4
TOTAL VOLUMES:	8	11	32	24	75

	North Leg 9th Street Pedestrians	East Leg Garden Grove Boulevard Pedestrians	South Leg Nina Place Pedestrians	West Leg Garden Grove Boulevard Pedestrians	
4:00 PM	0	0	1	1	2
4:15 PM	2	0	2	1	5
4:30 PM	0	2	3	1	6
4:45 PM	0	0	6	4	10
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	2	2	12	7	23

Location: Garden Grove
 N/S: 9th Street/Nina Place
 E/W: Garden Grove Boulevard



Date: 5/15/2019
 Day: Wednesday

BICYCLES

Southbound 9th Street			Westbound Garden Grove Boulevard			Northbound Nina Place			Eastbound Garden Grove Boulevard			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	1	0	0	0	1	0	0	0	0	1	0	3
7:15 AM	1	0	0	0	1	0	0	0	0	0	0	2
7:30 AM	0	0	0	0	2	0	0	0	0	0	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	3	0	0	0	0	0	0	3
8:15 AM	1	0	0	0	1	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	1	0	0	0	1	0	0	0	0	0	0	2
TOTAL VOLUMES:	4	0	0	0	9	0	0	0	0	1	0	14

Southbound 9th Street			Westbound Garden Grove Boulevard			Northbound Nina Place			Eastbound Garden Grove Boulevard			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	1	0	0	0	1
4:15 PM	0	0	0	0	1	1	0	0	0	2	0	4
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	3	0	0	2	0	0	0	5
5:00 PM	0	0	2	0	2	1	0	0	0	1	0	6
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	1	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	2	0	6	2	0	3	0	0	4	0
												17

APPENDIX C2 – VOLUME DEVELOPMENT WORKSHEETS

Table B-1 - Existing Peak Hour Volume Summary

	AM Peak Hour	PM Peak Hour
	Existing Traffic Volumes	Existing Traffic Volumes
1 . Main Street/Acacia Parkway		
NBL	7	17
NBT	99	125
NBR	21	24
SBL	54	36
SBT	131	153
SBR	83	87
EBL	54	80
EBT	131	99
EBR	7	19
WBL	9	13
WBT	109	67
WBR	52	37
North Leg		
Approach	268	276
Departure	205	242
Total	473	518
South Leg		
Approach	127	166
Departure	147	185
Total	274	351
East Leg		
Approach	170	117
Departure	206	159
Total	376	276
West Leg		
Approach	192	198
Departure	199	171
Total	391	369
Total Approaches		
Approach	757	757
Departure	757	757
Total	1,514	1,514

Table B-1 - Existing Peak Hour Volume Summary

	AM Peak Hour	PM Peak Hour
	Existing Traffic Volumes	Existing Traffic Volumes
2 Main Street/Garden Grove Boulevard		
NBL	27	30
NBT	38	88
NBR	69	83
SBL	8	80
SBT	9	39
SBR	32	120
EBL	37	130
EBT	695	978
EBR	36	31
WBL	100	90
WBT	1,085	929
WBR	23	115
North Leg		
Approach	49	239
Departure	98	333
Total	147	572
South Leg		
Approach	134	201
Departure	145	160
Total	279	361
East Leg		
Approach	1,208	1,134
Departure	772	1,141
Total	1,980	2,275
West Leg		
Approach	768	1,139
Departure	1,144	1,079
Total	1,912	2,218
Total Approaches		
Approach	2,159	2,713
Departure	2,159	2,713
Total	4,318	5,426

Table B-1 - Existing Peak Hour Volume Summary

	AM Peak Hour	PM Peak Hour
	Existing Traffic Volumes	Existing Traffic Volumes
3 Euclid Street/Main Street-College Avenue		
NBL	22	15
NBT	1,110	1,612
NBR	25	17
SBL	9	14
SBT	1,395	892
SBR	276	331
EBL	132	201
EBT	34	11
EBR	56	21
WBL	35	13
WBT	39	16
WBR	17	8
North Leg		
Approach	1,680	1,237
Departure	1,259	1,821
Total	2,939	3,058
South Leg		
Approach	1,157	1,644
Departure	1,486	926
Total	2,643	2,570
East Leg		
Approach	91	37
Departure	68	42
Total	159	79
West Leg		
Approach	222	233
Departure	337	362
Total	559	595
Total Approaches		
Approach	3,150	3,151
Departure	3,150	3,151
Total	6,300	6,302

Table B-1 - Existing Peak Hour Volume Summary

	AM Peak Hour	PM Peak Hour
	Existing Traffic Volumes	Existing Traffic Volumes
4 Euclid Street/Stanford Avenue		
NBL	22	13
NBT	973	1,499
NBR	193	96
SBL	146	53
SBT	1,357	935
SBR	12	3
EBL	27	4
EBT	3	1
EBR	47	10
WBL	194	92
WBT	3	3
WBR	179	78
North Leg		
Approach	1,515	991
Departure	1,179	1,581
Total	2,694	2,572
South Leg		
Approach	1,188	1,608
Departure	1,598	1,037
Total	2,786	2,645
East Leg		
Approach	376	173
Departure	342	150
Total	718	323
West Leg		
Approach	77	15
Departure	37	19
Total	114	34
Total Approaches		
Approach	3,156	2,787
Departure	3,156	2,787
Total	6,312	5,574

Table B-1 - Existing Peak Hour Volume Summary

	AM Peak Hour	PM Peak Hour
	Existing Traffic Volumes	Existing Traffic Volumes
5 Euclid Street/Acacia Parkway		
NBL	41	76
NBT	1,042	1,478
NBR	67	34
SBL	44	13
SBT	1,472	985
SBR	44	37
EBL	75	53
EBT	65	47
EBR	60	72
WBL	48	47
WBT	91	41
WBR	56	45
North Leg		
Approach	1,560	1,035
Departure	1,173	1,576
Total	2,733	2,611
South Leg		
Approach	1,150	1,588
Departure	1,580	1,104
Total	2,730	2,692
East Leg		
Approach	195	133
Departure	176	94
Total	371	227
West Leg		
Approach	200	172
Departure	176	154
Total	376	326
Total Approaches		
Approach	3,105	2,928
Departure	3,105	2,928
Total	6,210	5,856

Table B-1 - Existing Peak Hour Volume Summary

	AM Peak Hour	PM Peak Hour
	Existing Traffic Volumes	Existing Traffic Volumes
6 Euclid Street/Garden Grove Boulevard		
NBL	203	189
NBT	970	1,199
NBR	238	253
SBL	193	159
SBT	1,335	842
SBR	110	113
EBL	140	220
EBT	719	764
EBR	96	156
WBL	258	269
WBT	522	946
WBR	132	217
North Leg		
Approach	1,638	1,114
Departure	1,242	1,636
Total	2,880	2,750
South Leg		
Approach	1,411	1,641
Departure	1,689	1,267
Total	3,100	2,908
East Leg		
Approach	912	1,432
Departure	1,150	1,176
Total	2,062	2,608
West Leg		
Approach	955	1,140
Departure	835	1,248
Total	1,790	2,388
Total Approaches		
Approach	4,916	5,327
Departure	4,916	5,327
Total	9,832	10,654

Table B-1 - Existing Peak Hour Volume Summary

	AM Peak Hour	PM Peak Hour
	Existing Traffic Volumes	Existing Traffic Volumes
7 9th Street/Stanford Avenue		
NBL	104	38
NBT	230	571
NBR	0	0
SBL	0	0
SBT	459	307
SBR	153	46
EBL	58	43
EBT	0	0
EBR	85	41
WBL	0	0
WBT	0	0
WBR	0	0
North Leg		
Approach	612	353
Departure	288	614
Total	900	967
South Leg		
Approach	334	609
Departure	544	348
Total	878	957
East Leg		
Approach	0	0
Departure	0	0
Total	0	0
West Leg		
Approach	143	84
Departure	257	84
Total	400	168
Total Approaches		
Approach	1,089	1,046
Departure	1,089	1,046
Total	2,178	2,092

Table B-1 - Existing Peak Hour Volume Summary

	AM Peak Hour	PM Peak Hour
	Existing Traffic Volumes	Existing Traffic Volumes
8 9th Street/Acacia Parkway		
NBL	17	10
NBT	282	512
NBR	0	0
SBL	0	0
SBT	396	296
SBR	124	53
EBL	39	96
EBT	0	0
EBR	26	27
WBL	0	0
WBT	0	0
WBR	0	0
North Leg		
Approach	520	349
Departure	321	608
Total	841	957
South Leg		
Approach	299	522
Departure	422	323
Total	721	845
East Leg		
Approach	0	0
Departure	0	0
Total	0	0
West Leg		
Approach	65	123
Departure	141	63
Total	206	186
Total Approaches		
Approach	884	994
Departure	884	994
Total	1,768	1,988

Table B-1 - Existing Peak Hour Volume Summary

	AM Peak Hour	PM Peak Hour
	Existing Traffic Volumes	Existing Traffic Volumes
9 9th Street/Garden Grove Boulevard		
NBL	20	7
NBT	26	12
NBR	17	11
SBL	358	213
SBT	24	10
SBR	49	113
EBL	79	124
EBT	990	874
EBR	10	10
WBL	19	11
WBT	669	1,154
WBR	213	349
North Leg		
Approach	431	336
Departure	318	485
Total	749	821
South Leg		
Approach	63	30
Departure	53	31
Total	116	61
East Leg		
Approach	901	1,514
Departure	1,365	1,098
Total	2,266	2,612
West Leg		
Approach	1,079	1,008
Departure	738	1,274
Total	1,817	2,282
Total Approaches		
Approach	2,474	2,888
Departure	2,474	2,888
Total	4,948	5,776

APPENDIX C – LEVEL OF SERVICE WORKSHEETS

Intersection

Intersection Delay, s/veh

15

Intersection LOS

B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑	↑	↑	↑	↑	↑	↔	↑	↑	↑	↑
Traffic Vol, veh/h	54	131	7	9	109	52	7	99	21	54	131	83
Future Vol, veh/h	54	131	7	9	109	52	7	99	21	54	131	83
Peak Hour Factor	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	81	196	10	13	163	78	10	148	31	81	196	124
Number of Lanes	1	1	1	1	1	1	0	1	0	0	1	1
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	3			3			2			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	2			1			3			3		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			2			3			3		
HCM Control Delay	14.5			13.2			15.2			16.5		
HCM LOS	B			B			C			C		

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	6%	100%	0%	0%	100%	0%	0%	29%	0%
Vol Thru, %	78%	0%	100%	0%	0%	100%	0%	71%	0%
Vol Right, %	17%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop								
Traffic Vol by Lane	127	54	131	7	9	109	52	185	83
LT Vol	7	54	0	0	9	0	0	54	0
Through Vol	99	0	131	0	0	109	0	131	0
RT Vol	21	0	0	7	0	0	52	0	83
Lane Flow Rate	190	81	196	10	13	163	78	276	124
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.396	0.18	0.41	0.02	0.031	0.347	0.15	0.559	0.221
Departure Headway (Hd)	7.517	8.062	7.547	6.826	8.186	7.671	6.95	7.284	6.43
Convergence, Y/N	Yes								
Cap	478	444	477	523	437	469	515	494	557
Service Time	5.277	5.822	5.307	4.586	5.945	5.43	4.708	5.038	4.184
HCM Lane V/C Ratio	0.397	0.182	0.411	0.019	0.03	0.348	0.151	0.559	0.223
HCM Control Delay	15.2	12.6	15.5	9.7	11.2	14.5	10.9	18.9	11
HCM Lane LOS	C	B	C	A	B	B	B	C	B
HCM 95th-tile Q	1.9	0.6	2	0.1	0.1	1.5	0.5	3.4	0.8

HCM 6th Signalized Intersection Summary
2: Main Street & Garden Grove Boulevard

11/08/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑↑	↑↑↑		↑↑↑	↑↑↑		↑↑	↑↑	↑↑	↑↑	↑↑	↑↑
Traffic Volume (veh/h)	37	695	36	100	1085	23	27	38	69	8	9	32
Future Volume (veh/h)	37	695	36	100	1085	23	27	38	69	8	9	32
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	43	799	41	115	1247	26	31	44	79	9	10	37
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	239	2225	114	389	2394	50	276	373	579	108	131	384
Arrive On Green	0.03	0.45	0.45	0.02	0.15	0.15	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1781	4974	254	1781	5148	107	617	1021	1585	182	358	1053
Grp Volume(v), veh/h	43	546	294	115	825	448	75	0	79	56	0	0
Grp Sat Flow(s),veh/h/ln	1781	1702	1825	1781	1702	1851	1638	0	1585	1594	0	0
Q Serve(g_s), s	1.3	10.6	10.6	3.4	22.3	22.3	0.0	0.0	3.3	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.3	10.6	10.6	3.4	22.3	22.3	2.7	0.0	3.3	2.2	0.0	0.0
Prop In Lane	1.00		0.14	1.00		0.06	0.41		1.00	0.16		0.66
Lane Grp Cap(c), veh/h	239	1523	816	389	1583	861	649	0	579	624	0	0
V/C Ratio(X)	0.18	0.36	0.36	0.30	0.52	0.52	0.12	0.00	0.14	0.09	0.00	0.00
Avail Cap(c_a), veh/h	293	1523	816	447	1583	861	649	0	579	624	0	0
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.72	0.72	0.72	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.1	18.2	18.2	14.6	32.1	32.1	21.0	0.0	21.2	20.9	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.7	1.2	0.3	0.9	1.6	0.4	0.0	0.5	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	4.5	1.4	10.2	11.3	1.2	0.0	1.3	0.9	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.4	18.8	19.4	14.9	33.0	33.7	21.4	0.0	21.7	21.1	0.0	0.0
LnGrp LOS	B	B	B	B	C	C	C	A	C	C	A	A
Approach Vol, veh/h		883			1388			154			56	
Approach Delay, s/veh		18.9			31.7			21.5			21.1	
Approach LOS		B			C			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+R _c), s	9.8	49.2		41.0	8.0	51.0		41.0				
Change Period (Y+R _c), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	41.5	36.5		6.5	43.5		36.5					
Max Q Clear Time (g_c+l _b), s	12.6	4.2		3.3	24.3		5.3					
Green Ext Time (p _c), s	0.1	5.6		0.3	0.0	8.1		0.7				
Intersection Summary												
HCM 6th Ctrl Delay		26.3										
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary
3: Euclid Street & Main Street/College Avenue

11/08/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	34	56	35	39	17	22	1110	25	9	1395	276
Future Volume (veh/h)	132	34	56	35	39	17	22	1110	25	9	1395	276
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	143	37	61	38	42	18	24	1207	27	10	1516	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	241	51	384	79	79	24	254	3431	77	373	3410	
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	1.00	1.00	1.00	0.67	0.67	0.00
Sat Flow, veh/h	728	209	1585	121	326	101	345	5139	115	451	5106	1585
Grp Volume(v), veh/h	180	0	61	98	0	0	24	799	435	10	1516	0
Grp Sat Flow(s), veh/h/ln	937	0	1585	548	0	0	345	1702	1850	451	1702	1585
Q Serve(g_s), s	0.0	0.0	3.0	2.5	0.0	0.0	1.6	0.0	0.0	0.8	14.0	0.0
Cycle Q Clear(g_c), s	19.3	0.0	3.0	21.8	0.0	0.0	15.7	0.0	0.0	0.8	14.0	0.0
Prop In Lane	0.79		1.00	0.39		0.18	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	292	0	384	183	0	0	254	2273	1235	373	3410	
V/C Ratio(X)	0.62	0.00	0.16	0.54	0.00	0.00	0.09	0.35	0.35	0.03	0.44	
Avail Cap(c_a), veh/h	509	0	626	420	0	0	254	2273	1235	373	3410	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	0.00	0.85	0.85	0.85	1.00	1.00	0.00
Uniform Delay (d), s/veh	35.9	0.0	29.9	35.4	0.0	0.0	1.6	0.0	0.0	5.6	7.9	0.0
Incr Delay (d2), s/veh	2.1	0.0	0.2	2.4	0.0	0.0	0.6	0.4	0.7	0.1	0.4	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	4.3	0.0	1.2	2.5	0.0	0.0	0.1	0.1	0.2	0.1	4.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	38.0	0.0	30.0	37.8	0.0	0.0	2.3	0.4	0.7	5.8	8.3	0.0
LnGrp LOS	D	A	C	D	A	A	A	A	A	A	A	
Approach Vol, veh/h	241			98			1258			1526	A	
Approach Delay, s/veh	36.0			37.8			0.5			8.3		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	71.3		28.7		71.3		28.7					
Change Period (Y+Rc), s	4.5		4.5		4.5		4.5					
Max Green Setting (Gmax), s	51.5		39.5		51.5		39.5					
Max Q Clear Time (g_c+l1), s	17.7		21.3		16.0		23.8					
Green Ext Time (p_c), s	10.3		1.2		14.2		0.4					
Intersection Summary												
HCM 6th Ctrl Delay			8.2									
HCM 6th LOS			A									
Notes												

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

4: Euclid Street & Stanford Avenue

11/08/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗ ↘ ↙ ↖ ↗ ↘ ↙ ↖ ↗ ↘ ↙											
Traffic Volume (veh/h)	27	3	47	194	3	179	22	973	193	146	1357	12
Future Volume (veh/h)	27	3	47	194	3	179	22	973	193	146	1357	12
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	29	3	51	211	3	195	24	1058	210	159	1475	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	320	19	318	319	394	334	340	1513	300	535	2417	21
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.38	0.71	0.71	0.60	0.93	0.93
Sat Flow, veh/h	1185	89	1510	1350	1870	1585	1781	4274	847	1781	5220	46
Grp Volume(v), veh/h	29	0	54	211	3	195	24	842	426	159	962	526
Grp Sat Flow(s),veh/h/ln	1185	0	1599	1350	1870	1585	1781	1702	1718	1781	1702	1862
Q Serve(g_s), s	2.0	0.0	2.8	15.1	0.1	11.1	0.9	14.3	14.3	4.3	4.8	4.8
Cycle Q Clear(g_c), s	2.1	0.0	2.8	17.9	0.1	11.1	0.9	14.3	14.3	4.3	4.8	4.8
Prop In Lane	1.00		0.94	1.00		1.00	1.00		0.49	1.00		0.02
Lane Grp Cap(c), veh/h	320	0	337	319	394	334	340	1205	608	535	1576	862
V/C Ratio(X)	0.09	0.00	0.16	0.66	0.01	0.58	0.07	0.70	0.70	0.30	0.61	0.61
Avail Cap(c_a), veh/h	479	0	552	501	645	547	340	1205	608	535	1576	862
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00	0.92	0.92	0.92	0.91	0.91	0.91
Uniform Delay (d), s/veh	32.0	0.0	32.2	39.5	31.2	35.5	25.2	11.5	11.5	14.9	2.2	2.2
Incr Delay (d2), s/veh	0.1	0.0	0.2	2.3	0.0	1.6	0.1	3.1	6.1	0.3	1.6	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	1.1	5.2	0.1	4.4	0.4	3.7	4.2	1.6	1.2	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.1	0.0	32.4	41.9	31.2	37.1	25.3	14.6	17.6	15.1	3.8	5.1
LnGrp LOS	C	A	C	D	C	D	C	B	B	B	A	A
Approach Vol, veh/h		83			409			1292			1647	
Approach Delay, s/veh		32.3			39.5			15.8			5.3	
Approach LOS		C			D			B			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	34.5	39.9		25.6	23.6	50.8		25.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	35.4			34.5	5.7	46.3		34.5				
Max Q Clear Time (g_c+l), s	16.3			4.8	2.9	6.8		19.9				
Green Ext Time (p_c), s	0.3	8.2		0.4	0.0	13.1		1.2				
Intersection Summary												
HCM 6th Ctrl Delay			14.0									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary

5: Euclid Street & Acacia Parkway

11/08/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↑↑↑	↗	↖	↑↑↑	↗
Traffic Volume (veh/h)	75	65	60	48	91	56	41	1042	67	44	1472	44
Future Volume (veh/h)	75	65	60	48	91	56	41	1042	67	44	1472	44
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	82	71	66	53	100	62	45	1145	74	48	1618	48
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	199	246	209	263	129	80	490	1750	113	522	1911	57
Arrive On Green	0.05	0.13	0.13	0.04	0.12	0.12	0.55	0.71	0.71	0.59	0.75	0.75
Sat Flow, veh/h	1781	1870	1585	1781	1080	670	1781	4901	317	1781	5096	151
Grp Volume(v), veh/h	82	71	66	53	0	162	45	795	424	48	1081	585
Grp Sat Flow(s), veh/h/ln	1781	1870	1585	1781	0	1750	1781	1702	1813	1781	1702	1843
Q Serve(g_s), s	4.0	3.4	2.2	2.6	0.0	9.0	1.2	12.5	12.6	1.2	21.7	21.8
Cycle Q Clear(g_c), s	4.0	3.4	2.2	2.6	0.0	9.0	1.2	12.5	12.6	1.2	21.7	21.8
Prop In Lane	1.00		1.00	1.00		0.38	1.00		0.17	1.00		0.08
Lane Grp Cap(c), veh/h	199	246	209	263	0	208	490	1215	647	522	1277	691
V/C Ratio(X)	0.41	0.29	0.32	0.20	0.00	0.78	0.09	0.65	0.65	0.09	0.85	0.85
Avail Cap(c_a), veh/h	199	638	541	285	0	597	490	1215	647	522	1277	691
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	1.00	0.91	0.91	0.91	0.86	0.86	0.86
Uniform Delay (d), s/veh	36.5	39.2	13.2	36.6	0.0	42.8	16.6	11.0	11.0	14.9	10.5	10.5
Incr Delay (d2), s/veh	1.4	0.6	0.9	0.4	0.0	6.1	0.1	2.5	4.7	0.1	6.1	10.7
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	1.8	1.6	1.5	1.2	0.0	4.2	0.5	3.3	3.9	0.5	4.6	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	37.9	39.8	14.1	37.0	0.0	48.9	16.7	13.5	15.7	15.0	16.7	21.2
LnGrp LOS	D	D	B	D	A	D	B	B	B	B	B	C
Approach Vol, veh/h		219			215			1264			1714	
Approach Delay, s/veh		31.3			45.9			14.3			18.2	
Approach LOS		C			D			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	33.8	40.2	8.4	17.7	32.0	42.0	9.6	16.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	35.7	5.1	34.1	5.3	37.5	5.1	34.1					
Max Q Clear Time (g_c+l1), s	14.6	4.6	5.4	3.2	23.8	6.0	11.0					
Green Ext Time (p_c), s	0.0	8.1	0.0	0.6	0.0	8.8	0.0	0.9				
Intersection Summary												
HCM 6th Ctrl Delay			19.4									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary
6: Euclid Street & Garden Grove Boulevard

11/08/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑↑	↑	↑↑↑	↑↑↑	↑↑↑	↑	↑↑↑	↑	↑↑↑	↑↑↑	↑
Traffic Volume (veh/h)	140	719	96	258	522	132	203	970	238	193	1335	110
Future Volume (veh/h)	140	719	96	258	522	132	203	970	238	193	1335	110
Initial Q (Q _b), 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											
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	154	790	105	284	574	145	223	1066	262	212	1467	121
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	266	1889	586	418	1511	374	246	2757	856	245	2757	856
Arrive On Green	0.12	0.12	0.12	0.37	0.37	0.37	0.54	0.54	0.54	1.00	1.00	1.00
Sat Flow, veh/h	733	5106	1585	1206	4083	1010	321	5106	1585	413	5106	1585
Grp Volume(v), veh/h	154	790	105	284	477	242	223	1066	262	212	1467	121
Grp Sat Flow(s), veh/h/ln	733	1702	1585	603	1702	1689	321	1702	1585	413	1702	1585
Q Serve(g_s), s	20.6	14.3	5.9	22.7	10.3	10.6	54.0	12.1	9.1	41.9	0.0	0.0
Cycle Q Clear(g_c), s	31.2	14.3	5.9	37.0	10.3	10.6	54.0	12.1	9.1	54.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.60	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	266	1889	586	418	1260	625	246	2757	856	245	2757	856
V/C Ratio(X)	0.58	0.42	0.18	0.68	0.38	0.39	0.91	0.39	0.31	0.87	0.53	0.14
Avail Cap(c_a), veh/h	266	1889	586	418	1260	625	246	2757	856	245	2757	856
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(l)	0.94	0.94	0.94	0.84	0.84	0.84	1.00	1.00	1.00	0.84	0.84	0.84
Uniform Delay (d), s/veh	46.5	33.9	30.3	39.1	23.1	23.2	29.0	13.4	12.7	9.9	0.0	0.0
Incr Delay (d2), s/veh	2.9	0.1	0.1	3.7	0.2	0.3	37.8	0.4	0.9	27.5	0.6	0.3
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	4.2	6.5	2.3	3.6	3.9	4.1	8.0	4.3	3.2	2.3	0.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	49.5	34.1	30.4	42.8	23.2	23.5	66.8	13.8	13.6	37.4	0.6	0.3
LnGrp LOS	D	C	C	D	C	C	E	B	B	D	A	A
Approach Vol, veh/h	1049			1003			1551			1800		
Approach Delay, s/veh	36.0			28.8			21.4			4.9		
Approach LOS	D			C			C			A		
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+R _c), s	58.5		41.5		58.5		41.5					
Change Period (Y+R _c), s	4.5		4.5		4.5		4.5					
Max Green Setting (Gmax), s	54.0		37.0		54.0		37.0					
Max Q Clear Time (g_c+l1), s	56.0		33.2		56.0		39.0					
Green Ext Time (p_c), s	0.0		2.2		0.0		0.0					
Intersection Summary												
HCM 6th Ctrl Delay		20.1										
HCM 6th LOS		C										

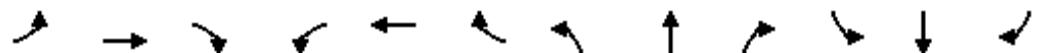
Intersection						
Int Delay, s/veh	4.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↗	↖ ↗	↗	↖	↗
Traffic Vol, veh/h	58	85	104	230	459	153
Future Vol, veh/h	58	85	104	230	459	153
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	65	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	70	102	125	277	553	184
Major/Minor						
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1172	645	737	0	-	0
Stage 1	645	-	-	-	-	-
Stage 2	527	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	196	476	878	-	-	-
Stage 1	526	-	-	-	-	-
Stage 2	609	-	-	-	-	-
Platoon blocked, %	1	-	-	-	-	-
Mov Cap-1 Maneuver	163	476	878	-	-	-
Mov Cap-2 Maneuver	163	-	-	-	-	-
Stage 1	438	-	-	-	-	-
Stage 2	609	-	-	-	-	-
Approach						
Approach	EB	NB		SB		
HCM Control Delay, s	26	3		0		
HCM LOS	D					
Minor Lane/Major Mvmt		NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)		878	-	163	476	-
HCM Lane V/C Ratio	0.143	-	0.429	0.215	-	-
HCM Control Delay (s)	9.8	0	42.7	14.6	-	-
HCM Lane LOS	A	A	E	B	-	-
HCM 95th %tile Q(veh)	0.5	-	1.9	0.8	-	-

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↑	↑	↔	↑		
Traffic Vol, veh/h	39	26	17	282	396	124
Future Vol, veh/h	39	26	17	282	396	124
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	95	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	47	31	20	340	477	149
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	932	552	626	0	-	0
Stage 1	552	-	-	-	-	-
Stage 2	380	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	290	537	965	-	-	-
Stage 1	581	-	-	-	-	-
Stage 2	742	-	-	-	-	-
Platoon blocked, %	1	-	-	-	-	-
Mov Cap-1 Maneuver	282	537	965	-	-	-
Mov Cap-2 Maneuver	282	-	-	-	-	-
Stage 1	566	-	-	-	-	-
Stage 2	742	-	-	-	-	-
Approach	EB	NB	SB			
HCM Control Delay, s	17	0.5	0			
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	965	-	282	537	-	-
HCM Lane V/C Ratio	0.021	-	0.167	0.058	-	-
HCM Control Delay (s)	8.8	0	20.3	12.1	-	-
HCM Lane LOS	A	A	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	0.2	-	-

HCM 6th Signalized Intersection Summary

9: 9th Street & Garden Grove Boulevard

11/08/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑↓		↑	↑↑↓			↔			↔	
Traffic Volume (veh/h)	79	990	10	19	669	213	20	26	17	358	24	49
Future Volume (veh/h)	79	990	10	19	669	213	20	26	17	358	24	49
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	95	1193	12	23	806	257	24	31	20	431	29	59
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	218	2172	22	193	1600	506	287	364	218	642	38	78
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.48	0.48	0.48	0.48	0.48	0.48
Sat Flow, veh/h	531	5213	52	464	3840	1215	485	754	450	1177	79	161
Grp Volume(v), veh/h	95	779	426	23	714	349	75	0	0	519	0	0
Grp Sat Flow(s), veh/h/ln	531	1702	1861	464	1702	1652	1689	0	0	1417	0	0
Q Serve(g_s), s	14.5	15.6	15.6	3.6	13.9	14.1	0.0	0.0	0.0	24.5	0.0	0.0
Cycle Q Clear(g_c), s	28.6	15.6	15.6	19.1	13.9	14.1	2.0	0.0	0.0	26.5	0.0	0.0
Prop In Lane	1.00		0.03	1.00		0.74	0.32		0.27	0.83		0.11
Lane Grp Cap(c), veh/h	218	1418	775	193	1418	688	869	0	0	758	0	0
V/C Ratio(X)	0.44	0.55	0.55	0.12	0.50	0.51	0.09	0.00	0.00	0.68	0.00	0.00
Avail Cap(c_a), veh/h	218	1418	775	193	1418	688	869	0	0	758	0	0
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(l)	0.86	0.86	0.86	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	30.0	19.9	19.9	27.1	19.4	19.4	12.5	0.0	0.0	18.7	0.0	0.0
Incr Delay (d2), s/veh	5.4	1.3	2.4	1.3	1.3	2.7	0.2	0.0	0.0	5.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	2.1	5.9	6.7	0.4	5.3	5.5	0.8	0.0	0.0	9.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	35.4	21.2	22.3	28.4	20.7	22.1	12.7	0.0	0.0	23.6	0.0	0.0
LnGrp LOS	D	C	C	C	C	C	B	A	A	C	A	A
Approach Vol, veh/h	1300				1086			75			519	
Approach Delay, s/veh	22.6				21.3			12.7			23.6	
Approach LOS	C				C			B			C	
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+R _c), s	42.0		48.0		42.0		48.0					
Change Period (Y+R _c), s	4.5		4.5		4.5		4.5					
Max Green Setting (Gmax), s	37.5		43.5		37.5		43.5					
Max Q Clear Time (g_c+l1), s	30.6		28.5		21.1		4.0					
Green Ext Time (p_c), s	4.3		3.0		6.5		0.4					
Intersection Summary												
HCM 6th Ctrl Delay			22.0									
HCM 6th LOS			C									

Intersection

Intersection Delay, s/veh 11.4

Intersection LOS B

Movement	EBL	EBT	EBC	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑	↑	↑	↑	↑	↔	↔	↔	↔	↔	↑
Traffic Vol, veh/h	80	99	19	13	67	37	17	125	24	36	153	87
Future Vol, veh/h	80	99	19	13	67	37	17	125	24	36	153	87
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	90	111	21	15	75	42	19	140	27	40	172	98
Number of Lanes	1	1	1	1	1	1	0	1	0	0	1	1
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	3			3			2			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	2			1			3			3		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			2			3			3		
HCM Control Delay	10.9			10.2			12.3			11.6		
HCM LOS	B			B			B			B		

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	10%	100%	0%	0%	100%	0%	0%	19%	0%
Vol Thru, %	75%	0%	100%	0%	0%	100%	0%	81%	0%
Vol Right, %	14%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop								
Traffic Vol by Lane	166	80	99	19	13	67	37	189	87
LT Vol	17	80	0	0	13	0	0	36	0
Through Vol	125	0	99	0	0	67	0	153	0
RT Vol	24	0	0	19	0	0	37	0	87
Lane Flow Rate	187	90	111	21	15	75	42	212	98
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.33	0.176	0.202	0.035	0.03	0.142	0.07	0.371	0.149
Departure Headway (Hd)	6.376	7.05	6.541	5.827	7.296	6.785	6.071	6.295	5.497
Convergence, Y/N	Yes								
Cap	561	508	547	612	489	526	587	571	650
Service Time	4.136	4.812	4.302	3.588	5.063	4.553	3.837	4.049	3.251
HCM Lane V/C Ratio	0.333	0.177	0.203	0.034	0.031	0.143	0.072	0.371	0.151
HCM Control Delay	12.3	11.3	11	8.8	10.3	10.7	9.3	12.7	9.2
HCM Lane LOS	B	B	B	A	B	B	A	B	A
HCM 95th-tile Q	1.4	0.6	0.7	0.1	0.1	0.5	0.2	1.7	0.5

HCM 6th Signalized Intersection Summary
2: Main Street & Garden Grove Boulevard

11/08/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑↑	↑↑↑		↑↑↑	↑↑↑			↑	↑	↑	↑	↑
Traffic Volume (veh/h)	130	978	31	90	929	115	30	88	83	80	39	120
Future Volume (veh/h)	130	978	31	90	929	115	30	88	83	80	39	120
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	131	988	31	91	938	116	30	89	84	81	39	121
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	238	1871	59	323	1711	211	194	549	643	232	123	305
Arrive On Green	0.07	0.37	0.37	0.03	0.12	0.12	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	1781	5086	159	1781	4605	568	354	1353	1585	440	304	751
Grp Volume(v), veh/h	131	661	358	91	693	361	119	0	84	241	0	0
Grp Sat Flow(s), veh/h/ln	1781	1702	1842	1781	1702	1768	1707	0	1585	1496	0	0
Q Serve(g_s), s	4.7	13.7	13.7	0.0	17.2	17.3	0.0	0.0	3.0	5.8	0.0	0.0
Cycle Q Clear(g_c), s	4.7	13.7	13.7	0.0	17.2	17.3	3.6	0.0	3.0	9.7	0.0	0.0
Prop In Lane	1.00		0.09	1.00		0.32	0.25		1.00	0.34		0.50
Lane Grp Cap(c), veh/h	238	1252	677	323	1265	657	743	0	643	660	0	0
V/C Ratio(X)	0.55	0.53	0.53	0.28	0.55	0.55	0.16	0.00	0.13	0.37	0.00	0.00
Avail Cap(c_a), veh/h	316	1252	677	323	1265	657	743	0	643	660	0	0
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.81	0.81	0.81	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.9	22.3	22.3	30.7	32.4	32.4	17.0	0.0	16.8	18.7	0.0	0.0
Incr Delay (d2), s/veh	2.0	1.6	2.9	0.4	1.4	2.7	0.5	0.0	0.4	1.6	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	2.0	5.4	6.1	1.8	8.0	8.6	1.6	0.0	1.2	3.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.8	23.9	25.3	31.0	33.8	35.1	17.4	0.0	17.2	20.2	0.0	0.0
LnGrp LOS	C	C	C	C	C	D	B	A	B	C	A	A
Approach Vol, veh/h		1150			1145			203			241	
Approach Delay, s/veh		24.6			34.0			17.3			20.2	
Approach LOS		C			C			B			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	1.4	37.6		41.0	11.1	37.9		41.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	3.9	33.1		36.5	10.5	29.5		36.5				
Max Q Clear Time (g_c+l1), s	12.0	15.7		11.7	6.7	19.3		5.6				
Green Ext Time (p_c), s	0.1	6.0		1.6	0.1	4.7		1.0				
Intersection Summary												
HCM 6th Ctrl Delay			27.6									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary
3: Euclid Street & Main Street/College Avenue

11/08/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	201	11	21	13	16	8	15	1612	17	14	892	331
Future Volume (veh/h)	201	11	21	13	16	8	15	1612	17	14	892	331
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	203	11	21	13	16	8	15	1628	17	14	901	0
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	313	13	515	72	80	27	379	2997	31	196	2937	
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.58	0.58	0.58	0.58	0.58	0.00
Sat Flow, veh/h	724	39	1585	55	246	83	618	5210	54	304	5106	1585
Grp Volume(v), veh/h	214	0	21	37	0	0	15	1064	581	14	901	0
Grp Sat Flow(s), veh/h/ln	763	0	1585	384	0	0	618	1702	1861	304	1702	1585
Q Serve(g_s), s	0.0	0.0	0.8	0.5	0.0	0.0	1.2	17.4	17.4	2.7	8.2	0.0
Cycle Q Clear(g_c), s	26.4	0.0	0.8	26.9	0.0	0.0	9.3	17.4	17.4	20.1	8.2	0.0
Prop In Lane	0.95		1.00	0.35		0.22	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	326	0	515	179	0	0	379	1958	1070	196	2937	
V/C Ratio(X)	0.66	0.00	0.04	0.21	0.00	0.00	0.04	0.54	0.54	0.07	0.31	
Avail Cap(c_a), veh/h	470	0	678	344	0	0	379	1958	1070	196	2937	
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	
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	0.00	0.84	0.84	0.84	1.00	1.00	0.00
Uniform Delay (d), s/veh	29.4	0.0	20.8	23.9	0.0	0.0	12.3	11.8	11.8	18.0	9.9	0.0
Incr Delay (d2), s/veh	2.3	0.0	0.0	0.6	0.0	0.0	0.2	0.9	1.7	0.7	0.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	4.6	0.0	0.3	0.6	0.0	0.0	0.2	5.9	6.6	0.2	2.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	31.7	0.0	20.8	24.4	0.0	0.0	12.4	12.7	13.5	18.7	10.1	0.0
LnGrp LOS	C	A	C	C	A	A	B	B	B	B	B	
Approach Vol, veh/h	235				37			1660			915	A
Approach Delay, s/veh	30.7				24.4			13.0			10.3	
Approach LOS	C				C			B			B	
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+R _c), s	56.3			33.7			56.3			33.7		
Change Period (Y+R _c), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	42.5			38.5			42.5			38.5		
Max Q Clear Time (g_c+l1), s	19.4			28.4			22.1			28.9		
Green Ext Time (p_c), s	12.2			0.9			6.3			0.1		
Intersection Summary												
HCM 6th Ctrl Delay				13.7								
HCM 6th LOS				B								
Notes												

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

4: Euclid Street & Stanford Avenue

11/08/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑ ↗	↑ ↘		↑ ↗	↑ ↘	↑ ↗	↑ ↗	↑ ↗ ↘		↑ ↗	↑ ↗ ↘	
Traffic Volume (veh/h)	4	1	10	92	3	78	13	1499	96	53	935	3
Future Volume (veh/h)	4	1	10	92	3	78	13	1499	96	53	935	3
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	4	1	10	96	3	81	14	1561	100	55	974	3
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	198	14	143	200	183	155	524	2133	137	592	2486	8
Arrive On Green	0.10	0.10	0.10	0.10	0.10	0.10	0.39	0.58	0.58	0.33	0.47	0.47
Sat Flow, veh/h	1314	146	1461	1404	1870	1585	1781	4904	314	1781	5255	16
Grp Volume(v), veh/h	4	0	11	96	3	81	14	1083	578	55	631	346
Grp Sat Flow(s),veh/h/ln	1314	0	1607	1404	1870	1585	1781	1702	1814	1781	1702	1867
Q Serve(g_s), s	0.3	0.0	0.6	6.7	0.1	4.9	0.5	23.3	23.3	2.1	12.0	12.0
Cycle Q Clear(g_c), s	0.4	0.0	0.6	7.3	0.1	4.9	0.5	23.3	23.3	2.1	12.0	12.0
Prop In Lane	1.00		0.91	1.00		1.00	1.00		0.17	1.00		0.01
Lane Grp Cap(c), veh/h	198	0	157	200	183	155	524	1481	789	592	1610	883
V/C Ratio(X)	0.02	0.00	0.07	0.48	0.02	0.52	0.03	0.73	0.73	0.09	0.39	0.39
Avail Cap(c_a), veh/h	518	0	548	542	638	541	524	1481	789	592	1610	883
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00	0.90	0.90	0.90	0.97	0.97	0.97
Uniform Delay (d), s/veh	41.0	0.0	41.0	44.3	40.8	42.9	21.6	16.8	16.8	23.0	17.0	17.0
Incr Delay (d2), s/veh	0.0	0.0	0.2	1.8	0.0	2.7	0.0	2.9	5.4	0.1	0.7	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.3	2.4	0.1	2.0	0.2	7.4	8.4	0.9	4.5	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.0	0.0	41.2	46.1	40.8	45.6	21.6	19.7	22.2	23.1	17.7	18.3
LnGrp LOS	D	A	D	D	D	D	C	B	C	C	B	B
Approach Vol, veh/h		15			180			1675			1032	
Approach Delay, s/veh	41.1			45.8				20.6			18.2	
Approach LOS		D			D			C			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc),s	37.7	48.0		14.3	33.9	51.8		14.3				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax),s	43.5			34.1	5.1	47.3		34.1				
Max Q Clear Time (g_c+l1),s	25.3			2.6	2.5	14.0		9.3				
Green Ext Time (p_c), s	0.0	10.6		0.0	0.0	7.0		0.5				
Intersection Summary												
HCM 6th Ctrl Delay			21.4									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary

5: Euclid Street & Acacia Parkway

11/08/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↑↑↑	↗	↖	↑↑↑	↗
Traffic Volume (veh/h)	53	47	72	47	41	45	76	1478	34	13	985	37
Future Volume (veh/h)	53	47	72	47	41	45	76	1478	34	13	985	37
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	55	49	75	49	43	47	79	1540	35	14	1026	39
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	174	146	124	206	62	68	673	3537	80	29	1651	63
Arrive On Green	0.04	0.08	0.08	0.04	0.08	0.08	0.38	0.69	0.69	0.03	0.65	0.65
Sat Flow, veh/h	1781	1870	1585	1781	817	893	1781	5137	117	1781	5048	192
Grp Volume(v), veh/h	55	49	75	49	0	90	79	1021	554	14	692	373
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	0	1710	1781	1702	1849	1781	1702	1836
Q Serve(g_s), s	2.8	2.5	2.3	2.5	0.0	5.1	2.9	13.3	13.3	0.8	11.8	11.9
Cycle Q Clear(g_c), s	2.8	2.5	2.3	2.5	0.0	5.1	2.9	13.3	13.3	0.8	11.8	11.9
Prop In Lane	1.00		1.00	1.00		0.52	1.00		0.06	1.00		0.10
Lane Grp Cap(c), veh/h	174	146	124	206	0	130	673	2344	1274	29	1113	600
V/C Ratio(X)	0.32	0.34	0.61	0.24	0.00	0.69	0.12	0.44	0.44	0.49	0.62	0.62
Avail Cap(c_a), veh/h	195	638	541	230	0	583	673	2344	1274	89	1113	600
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(l)	1.00	1.00	1.00	1.00	0.00	1.00	0.58	0.58	0.58	0.97	0.97	0.97
Uniform Delay (d), s/veh	40.5	43.6	10.8	40.5	0.0	45.1	20.3	6.9	6.9	48.0	13.7	13.7
Incr Delay (d2), s/veh	1.0	1.3	4.7	0.6	0.0	6.4	0.0	0.3	0.6	11.9	2.5	4.7
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/l	1.3	1.2	1.9	1.1	0.0	2.4	1.2	4.0	4.4	0.4	3.4	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.6	45.0	15.5	41.0	0.0	51.5	20.3	7.3	7.6	59.9	16.2	18.4
LnGrp LOS	D	D	B	D	A	D	C	A	A	E	B	B
Approach Vol, veh/h		179			139			1654			1079	
Approach Delay, s/veh		31.6			47.8			8.0			17.5	
Approach LOS		C			D			A			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.1	73.4	8.2	12.3	42.3	37.2	8.4	12.1				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	37.8	5.1	34.1	10.1	32.7	5.1	34.1				
Max Q Clear Time (g_c+l), s	12.8	15.3	4.5	4.5	4.9	13.9	4.8	7.1				
Green Ext Time (p_c), s	0.0	0.0	11.2	0.0	0.5	0.1	6.5	0.0	0.5			
Intersection Summary												
HCM 6th Ctrl Delay			14.6									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary
6: Euclid Street & Garden Grove Boulevard

11/08/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑↑	↑	↑↑↑	↑↑↑		↑	↑↑↑	↑	↑	↑↑↑	↑
Traffic Volume (veh/h)	220	764	156	269	946	217	189	1199	253	159	842	113
Future Volume (veh/h)	220	764	156	269	946	217	189	1199	253	159	842	113
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	232	804	164	283	996	228	199	1262	266	167	886	119
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	212	2354	731	521	1916	438	260	2241	696	167	2241	696
Arrive On Green	0.15	0.15	0.15	0.46	0.46	0.46	0.44	0.44	0.44	0.44	0.44	0.44
Sat Flow, veh/h	456	5106	1585	1126	4154	949	561	5106	1585	341	5106	1585
Grp Volume(v), veh/h	232	804	164	283	816	408	199	1262	266	167	886	119
Grp Sat Flow(s), veh/h/ln	456	1702	1585	563	1702	1700	561	1702	1585	341	1702	1585
Q Serve(g_s), s	26.2	12.7	8.2	20.5	15.3	15.3	28.9	16.6	10.2	22.9	10.6	4.1
Cycle Q Clear(g_c), s	41.5	12.7	8.2	33.2	15.3	15.3	39.5	16.6	10.2	39.5	10.6	4.1
Prop In Lane	1.00		1.00	1.00		0.56	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	212	2354	731	521	1570	784	260	2241	696	167	2241	696
V/C Ratio(X)	1.09	0.34	0.22	0.54	0.52	0.52	0.77	0.56	0.38	1.00	0.40	0.17
Avail Cap(c_a), veh/h	212	2354	731	521	1570	784	260	2241	696	167	2241	696
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.87	0.87	0.87	0.78	0.78	0.78	1.00	1.00	1.00	0.95	0.95	0.95
Uniform Delay (d), s/veh	50.7	25.9	24.0	27.8	17.2	17.2	31.9	18.8	17.0	39.0	17.1	15.3
Incr Delay (d2), s/veh	84.3	0.1	0.1	0.9	0.2	0.5	19.1	1.0	1.6	68.3	0.5	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	5.7	3.1	2.6	5.5	5.5	5.6	6.2	3.7	6.8	3.9	1.5	
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	135.0	26.0	24.2	28.7	17.4	17.7	51.0	19.8	18.6	107.4	17.6	15.8
LnGrp LOS	F	C	C	C	B	B	D	B	B	F	B	B
Approach Vol, veh/h	1200			1507			1727			1172		
Approach Delay, s/veh	46.8			19.6			23.3			30.2		
Approach LOS	D			B			C			C		
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+R _c), s	44.0		46.0		44.0		46.0					
Change Period (Y+R _c), s	4.5		4.5		4.5		4.5					
Max Green Setting (Gmax), s	39.5		41.5		39.5		41.5					
Max Q Clear Time (g_c+l1), s	41.5		43.5		41.5		35.2					
Green Ext Time (p_c), s	0.0		0.0		0.0		4.7					
Intersection Summary												
HCM 6th Ctrl Delay		28.8										
HCM 6th LOS		C										

Intersection						
Int Delay, s/veh	1.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↑	↑	↓	↑	↑	
Traffic Vol, veh/h	43	41	38	571	307	46
Future Vol, veh/h	43	41	38	571	307	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	65	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	46	44	40	607	327	49
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1039	352	376	0	-	0
Stage 1	352	-	-	-	-	-
Stage 2	687	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	235	696	1194	-	-	-
Stage 1	716	-	-	-	-	-
Stage 2	539	-	-	-	-	-
Platoon blocked, %	1	-	-	-	-	-
Mov Cap-1 Maneuver	223	696	1194	-	-	-
Mov Cap-2 Maneuver	223	-	-	-	-	-
Stage 1	679	-	-	-	-	-
Stage 2	539	-	-	-	-	-
Approach	EB	NB	SB			
HCM Control Delay, s	18.1	0.5	0			
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1194	-	223	696	-	-
HCM Lane V/C Ratio	0.034	-	0.205	0.063	-	-
HCM Control Delay (s)	8.1	0	25.3	10.5	-	-
HCM Lane LOS	A	A	D	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.7	0.2	-	-

Intersection

Int Delay, s/veh 2.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖ ↗ ↘ ↙ ↖ ↗					
Traffic Vol, veh/h	96	27	10	512	296	53
Future Vol, veh/h	96	27	10	512	296	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	95	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	102	29	11	545	315	56

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	910	343	371	0	-	0
Stage 1	343	-	-	-	-	-
Stage 2	567	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	*312	704	1199	-	-	-
Stage 1	*723	-	-	-	-	-
Stage 2	*630	-	-	-	-	-
Platoon blocked, %	1	-	-	-	-	-
Mov Cap-1 Maneuver	*307	704	1199	-	-	-
Mov Cap-2 Maneuver	*307	-	-	-	-	-
Stage 1	*714	-	-	-	-	-
Stage 2	*630	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.8	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1199	-	307	704	-	-
HCM Lane V/C Ratio	0.009	-	0.333	0.041	-	-
HCM Control Delay (s)	8	0	22.5	10.3	-	-
HCM Lane LOS	A	A	C	B	-	-
HCM 95th %tile Q(veh)	0	-	1.4	0.1	-	-

Notes

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

HCM 6th Signalized Intersection Summary
9: 9th Street & Garden Grove Boulevard

11/08/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑↓		↑	↑↑↓			↔			↔	
Traffic Volume (veh/h)	124	874	10	11	1154	349	7	12	11	213	10	113
Future Volume (veh/h)	124	874	10	11	1154	349	7	12	11	213	10	113
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	131	920	11	12	1215	367	7	13	12	224	11	119
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	189	2832	34	315	2117	639	148	270	221	390	23	176
Arrive On Green	0.18	0.18	0.18	0.54	0.54	0.54	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	323	5201	62	601	3889	1174	279	758	622	912	64	494
Grp Volume(v), veh/h	131	602	329	12	1063	519	32	0	0	354	0	0
Grp Sat Flow(s), veh/h/ln	323	1702	1859	601	1702	1659	1660	0	0	1470	0	0
Q Serve(g_s), s	30.4	13.9	13.9	1.1	18.6	18.6	0.0	0.0	0.0	17.2	0.0	0.0
Cycle Q Clear(g_c), s	49.0	13.9	13.9	15.0	18.6	18.6	1.1	0.0	0.0	18.3	0.0	0.0
Prop In Lane	1.00		0.03	1.00		0.71	0.22		0.37	0.63		0.34
Lane Grp Cap(c), veh/h	189	1853	1012	315	1853	903	639	0	0	588	0	0
V/C Ratio(X)	0.69	0.32	0.33	0.04	0.57	0.57	0.05	0.00	0.00	0.60	0.00	0.00
Avail Cap(c_a), veh/h	189	1853	1012	315	1853	903	639	0	0	588	0	0
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.86	0.86	0.86	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	48.8	22.5	22.5	17.1	13.6	13.6	19.0	0.0	0.0	24.5	0.0	0.0
Incr Delay (d2), s/veh	16.5	0.4	0.7	0.2	1.3	2.7	0.1	0.0	0.0	4.5	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	4.0	6.3	7.0	0.2	6.5	6.7	0.5	0.0	0.0	6.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	65.3	22.9	23.2	17.3	14.9	16.2	19.2	0.0	0.0	29.0	0.0	0.0
LnGrp LOS	E	C	C	B	B	B	B	A	A	C	A	A
Approach Vol, veh/h		1062			1594			32			354	
Approach Delay, s/veh		28.2			15.3			19.2			29.0	
Approach LOS		C			B			B			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+R _c), s		53.5		36.5		53.5		36.5				
Change Period (Y+R _c), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		49.0		32.0		49.0		32.0				
Max Q Clear Time (g_c+l1), s		51.0		20.3		20.6		3.1				
Green Ext Time (p_c), s		0.0		1.6		13.2		0.1				
Intersection Summary												
HCM 6th Ctrl Delay			21.5									
HCM 6th LOS			C									

Intersection				
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	287	254	189	401
Demand Flow Rate, veh/h	293	259	193	409
Vehicles Circulating, veh/h	296	244	366	189
Vehicles Exiting, veh/h	302	315	223	314
Ped Vol Crossing Leg, #/h	12	12	19	19
Ped Cap Adj	0.998	0.998	0.997	0.997
Approach Delay, s/veh	6.5	5.7	5.9	6.8
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	293	259	193	409
Cap Entry Lane, veh/h	1020	1076	950	1138
Entry HV Adj Factor	0.980	0.980	0.979	0.981
Flow Entry, veh/h	287	254	189	401
Cap Entry, veh/h	998	1052	928	1113
V/C Ratio	0.288	0.241	0.204	0.360
Control Delay, s/veh	6.5	5.7	5.9	6.8
LOS	A	A	A	A
95th %tile Queue, veh	1	1	1	2

HCM 6th Signalized Intersection Summary
2: Main Street & Garden Grove Boulevard

11/21/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑↑	↑↑↑		↑↑↑	↑↑↑		↑↑↑	↑↑↑	↑↑↑	↑↑↑	↑↑↑	↑↑↑
Traffic Volume (veh/h)	37	695	36	100	1085	23	27	38	69	8	9	32
Future Volume (veh/h)	37	695	36	100	1085	23	27	38	69	8	9	32
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	43	799	41	115	1247	26	31	44	79	9	10	37
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	239	2225	114	389	2394	50	276	373	579	108	131	384
Arrive On Green	0.03	0.45	0.45	0.02	0.15	0.15	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1781	4974	254	1781	5148	107	617	1021	1585	182	358	1053
Grp Volume(v), veh/h	43	546	294	115	825	448	75	0	79	56	0	0
Grp Sat Flow(s), veh/h/ln	1781	1702	1825	1781	1702	1851	1638	0	1585	1594	0	0
Q Serve(g_s), s	1.3	10.6	10.6	3.4	22.3	22.3	0.0	0.0	3.3	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.3	10.6	10.6	3.4	22.3	22.3	2.7	0.0	3.3	2.2	0.0	0.0
Prop In Lane	1.00		0.14	1.00		0.06	0.41		1.00	0.16		0.66
Lane Grp Cap(c), veh/h	239	1523	816	389	1583	861	649	0	579	624	0	0
V/C Ratio(X)	0.18	0.36	0.36	0.30	0.52	0.52	0.12	0.00	0.14	0.09	0.00	0.00
Avail Cap(c_a), veh/h	293	1523	816	447	1583	861	649	0	579	624	0	0
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.72	0.72	0.72	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.1	18.2	18.2	14.6	32.1	32.1	21.0	0.0	21.2	20.9	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.7	1.2	0.3	0.9	1.6	0.4	0.0	0.5	0.3	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	0.5	4.0	4.5	1.4	10.2	11.3	1.2	0.0	1.3	0.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	16.4	18.8	19.4	14.9	33.0	33.7	21.4	0.0	21.7	21.1	0.0	0.0
LnGrp LOS	B	B	B	B	C	C	C	A	C	C	A	A
Approach Vol, veh/h		883			1388			154			56	
Approach Delay, s/veh		18.9			31.7			21.5			21.1	
Approach LOS		B			C			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+R _c), s	9.8	49.2		41.0	8.0	51.0		41.0				
Change Period (Y+R _c), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax _s)	41.5		36.5	6.5	43.5		36.5					
Max Q Clear Time (g _{c+l})	12.6		4.2	3.3	24.3		5.3					
Green Ext Time (p _c), s	0.1	5.6		0.3	0.0	8.1		0.7				
Intersection Summary												
HCM 6th Ctrl Delay		26.3										
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary
3: Euclid Street & Main Street/College Avenue

11/21/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	34	56	35	39	17	22	1110	25	9	1395	276
Future Volume (veh/h)	132	34	56	35	39	17	22	1110	25	9	1395	276
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	143	37	61	38	42	18	24	1207	27	10	1516	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	241	51	384	79	79	24	254	3431	77	373	3410	
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	1.00	1.00	1.00	0.67	0.67	0.00
Sat Flow, veh/h	728	209	1585	121	326	101	345	5139	115	451	5106	1585
Grp Volume(v), veh/h	180	0	61	98	0	0	24	799	435	10	1516	0
Grp Sat Flow(s),veh/h/ln	937	0	1585	548	0	0	345	1702	1850	451	1702	1585
Q Serve(g_s), s	0.0	0.0	3.0	2.5	0.0	0.0	1.6	0.0	0.0	0.8	14.0	0.0
Cycle Q Clear(g_c), s	19.3	0.0	3.0	21.8	0.0	0.0	15.7	0.0	0.0	0.8	14.0	0.0
Prop In Lane	0.79		1.00	0.39		0.18	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	292	0	384	183	0	0	254	2273	1235	373	3410	
V/C Ratio(X)	0.62	0.00	0.16	0.54	0.00	0.00	0.09	0.35	0.35	0.03	0.44	
Avail Cap(c_a), veh/h	509	0	626	420	0	0	254	2273	1235	373	3410	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	0.00	0.85	0.85	0.85	1.00	1.00	0.00
Uniform Delay (d), s/veh	35.9	0.0	29.9	35.4	0.0	0.0	1.6	0.0	0.0	5.6	7.9	0.0
Incr Delay (d2), s/veh	2.1	0.0	0.2	2.4	0.0	0.0	0.6	0.4	0.7	0.1	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	0.0	1.2	2.5	0.0	0.0	0.1	0.1	0.2	0.1	4.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.0	0.0	30.0	37.8	0.0	0.0	2.3	0.4	0.7	5.8	8.3	0.0
LnGrp LOS	D	A	C	D	A	A	A	A	A	A	A	
Approach Vol, veh/h	241			98			1258			1526	A	
Approach Delay, s/veh	36.0			37.8			0.5			8.3		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	71.3		28.7		71.3		28.7					
Change Period (Y+Rc), s	4.5		4.5		4.5		4.5					
Max Green Setting (Gmax), s	51.5		39.5		51.5		39.5					
Max Q Clear Time (g_c+l1), s	17.7		21.3		16.0		23.8					
Green Ext Time (p_c), s	10.3		1.2		14.2		0.4					
Intersection Summary												
HCM 6th Ctrl Delay			8.2									
HCM 6th LOS			A									
Notes												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

4: Euclid Street & Stanford Avenue

11/21/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗ ↘ ↙ ↖ ↗ ↘ ↙ ↖ ↗ ↘ ↙											
Traffic Volume (veh/h)	27	3	47	194	3	179	22	973	193	146	1357	12
Future Volume (veh/h)	27	3	47	194	3	179	22	973	193	146	1357	12
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	29	3	51	211	3	195	24	1058	210	159	1475	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	320	19	318	319	394	334	340	1513	300	535	2417	21
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.38	0.71	0.71	0.60	0.93	0.93
Sat Flow, veh/h	1185	89	1510	1350	1870	1585	1781	4274	847	1781	5220	46
Grp Volume(v), veh/h	29	0	54	211	3	195	24	842	426	159	962	526
Grp Sat Flow(s),veh/h/ln	1185	0	1599	1350	1870	1585	1781	1702	1718	1781	1702	1862
Q Serve(g_s), s	2.0	0.0	2.8	15.1	0.1	11.1	0.9	14.3	14.3	4.3	4.8	4.8
Cycle Q Clear(g_c), s	2.1	0.0	2.8	17.9	0.1	11.1	0.9	14.3	14.3	4.3	4.8	4.8
Prop In Lane	1.00		0.94	1.00		1.00	1.00		0.49	1.00		0.02
Lane Grp Cap(c), veh/h	320	0	337	319	394	334	340	1205	608	535	1576	862
V/C Ratio(X)	0.09	0.00	0.16	0.66	0.01	0.58	0.07	0.70	0.70	0.30	0.61	0.61
Avail Cap(c_a), veh/h	479	0	552	501	645	547	340	1205	608	535	1576	862
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00	0.92	0.92	0.92	0.91	0.91	0.91
Uniform Delay (d), s/veh	32.0	0.0	32.2	39.5	31.2	35.5	25.2	11.5	11.5	14.9	2.2	2.2
Incr Delay (d2), s/veh	0.1	0.0	0.2	2.3	0.0	1.6	0.1	3.1	6.1	0.3	1.6	2.9
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/lr	0.6	0.0	1.1	5.2	0.1	4.4	0.4	3.7	4.2	1.6	1.2	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.1	0.0	32.4	41.9	31.2	37.1	25.3	14.6	17.6	15.1	3.8	5.1
LnGrp LOS	C	A	C	D	C	D	C	B	B	B	A	A
Approach Vol, veh/h		83			409			1292			1647	
Approach Delay, s/veh		32.3			39.5			15.8			5.3	
Approach LOS		C			D			B			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	34.5	39.9		25.6	23.6	50.8		25.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	35.4			34.5	5.7	46.3		34.5				
Max Q Clear Time (g_c+l1), s	16.3			4.8	2.9	6.8		19.9				
Green Ext Time (p_c), s	0.3	8.2		0.4	0.0	13.1		1.2				
Intersection Summary												
HCM 6th Ctrl Delay			14.0									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary

5: Euclid Street & Acacia Parkway

11/21/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↑ ↘		↖ ↗	↑ ↘		↖ ↗	↑↑↑	↗	↖ ↗	↑↑↑	↗
Traffic Volume (veh/h)	75	65	60	48	91	56	41	1042	67	44	1472	44
Future Volume (veh/h)	75	65	60	48	91	56	41	1042	67	44	1472	44
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00		1.00	1.00		1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	82	71	66	53	100	62	45	1145	74	48	1618	48
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	199	117	109	211	129	80	490	1750	113	522	1911	57
Arrive On Green	0.05	0.13	0.13	0.04	0.12	0.12	0.55	0.71	0.71	0.59	0.75	0.75
Sat Flow, veh/h	1781	892	829	1781	1080	670	1781	4901	317	1781	5096	151
Grp Volume(v), veh/h	82	0	137	53	0	162	45	795	424	48	1081	585
Grp Sat Flow(s),veh/h/ln	1781	0	1721	1781	0	1750	1781	1702	1813	1781	1702	1843
Q Serve(g_s), s	4.0	0.0	7.5	2.6	0.0	9.0	1.2	12.5	12.6	1.2	21.7	21.8
Cycle Q Clear(g_c), s	4.0	0.0	7.5	2.6	0.0	9.0	1.2	12.5	12.6	1.2	21.7	21.8
Prop In Lane	1.00		0.48	1.00		0.38	1.00		0.17	1.00		0.08
Lane Grp Cap(c), veh/h	199	0	227	211	0	208	490	1215	647	522	1277	691
V/C Ratio(X)	0.41	0.00	0.60	0.25	0.00	0.78	0.09	0.65	0.65	0.09	0.85	0.85
Avail Cap(c_a), veh/h	199	0	587	234	0	597	490	1215	647	522	1277	691
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	0.91	0.91	0.91	0.86	0.86	0.86
Uniform Delay (d), s/veh	36.5	0.0	41.0	36.8	0.0	42.8	16.6	11.0	11.0	14.9	10.5	10.5
Incr Delay (d2), s/veh	1.4	0.0	2.6	0.6	0.0	6.1	0.1	2.5	4.7	0.1	6.1	10.7
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	1.8	0.0	3.4	1.2	0.0	4.2	0.5	3.3	3.9	0.5	4.6	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.9	0.0	43.6	37.4	0.0	48.9	16.7	13.5	15.7	15.0	16.7	21.2
LnGrp LOS	D	A	D	D	A	D	B	B	B	B	B	C
Approach Vol, veh/h		219			215			1264			1714	
Approach Delay, s/veh		41.4			46.1			14.3			18.2	
Approach LOS		D			D			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	33.8	40.2	8.4	17.7	32.0	42.0	9.6	16.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	35.7	5.1	34.1	5.3	37.5	5.1	34.1					
Max Q Clear Time (g_c+l3), s	14.6	4.6	9.5	3.2	23.8	6.0	11.0					
Green Ext Time (p_c), s	0.0	8.1	0.0	0.8	0.0	8.8	0.0	0.9				
Intersection Summary												
HCM 6th Ctrl Delay			20.0									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary
6: Euclid Street & Garden Grove Boulevard

11/21/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑↑	↑	↑↑↑	↑↑↑	↑↑↑	↑	↑↑↑	↑	↑↑↑	↑↑↑	↑
Traffic Volume (veh/h)	140	719	96	258	522	132	203	970	238	193	1335	110
Future Volume (veh/h)	140	719	96	258	522	132	203	970	238	193	1335	110
Initial Q (Q _b), 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											
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	154	790	105	284	574	145	223	1066	262	212	1467	121
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	266	1889	586	418	1511	374	246	2757	856	245	2757	856
Arrive On Green	0.12	0.12	0.12	0.37	0.37	0.37	0.54	0.54	0.54	1.00	1.00	1.00
Sat Flow, veh/h	733	5106	1585	1206	4083	1010	321	5106	1585	413	5106	1585
Grp Volume(v), veh/h	154	790	105	284	477	242	223	1066	262	212	1467	121
Grp Sat Flow(s), veh/h/ln	733	1702	1585	603	1702	1689	321	1702	1585	413	1702	1585
Q Serve(g_s), s	20.6	14.3	5.9	22.7	10.3	10.6	54.0	12.1	9.1	41.9	0.0	0.0
Cycle Q Clear(g_c), s	31.2	14.3	5.9	37.0	10.3	10.6	54.0	12.1	9.1	54.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.60	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	266	1889	586	418	1260	625	246	2757	856	245	2757	856
V/C Ratio(X)	0.58	0.42	0.18	0.68	0.38	0.39	0.91	0.39	0.31	0.87	0.53	0.14
Avail Cap(c_a), veh/h	266	1889	586	418	1260	625	246	2757	856	245	2757	856
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(l)	0.94	0.94	0.94	0.84	0.84	0.84	1.00	1.00	1.00	0.83	0.83	0.83
Uniform Delay (d), s/veh	46.5	33.9	30.3	39.1	23.1	23.2	29.0	13.4	12.7	9.9	0.0	0.0
Incr Delay (d2), s/veh	2.9	0.1	0.1	3.7	0.2	0.3	37.8	0.4	0.9	27.2	0.6	0.3
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	4.2	6.5	2.3	3.6	3.9	4.1	8.0	4.3	3.2	2.3	0.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	49.5	34.1	30.4	42.8	23.2	23.5	66.8	13.8	13.6	37.2	0.6	0.3
LnGrp LOS	D	C	C	D	C	C	E	B	B	D	A	A
Approach Vol, veh/h	1049			1003			1551			1800		
Approach Delay, s/veh	36.0			28.8			21.4			4.9		
Approach LOS	D			C			C			A		
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+R _c), s	58.5		41.5		58.5		41.5					
Change Period (Y+R _c), s	4.5		4.5		4.5		4.5					
Max Green Setting (Gmax), s	54.0		37.0		54.0		37.0					
Max Q Clear Time (g_c+l1), s	56.0		33.2		56.0		39.0					
Green Ext Time (p_c), s	0.0		2.2		0.0		0.0					
Intersection Summary												
HCM 6th Ctrl Delay		20.1										
HCM 6th LOS		C										

Intersection						
Int Delay, s/veh	4.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↑	↑	↔	↑		
Traffic Vol, veh/h	58	85	104	230	459	153
Future Vol, veh/h	58	85	104	230	459	153
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	65	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	70	102	125	277	553	184
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1172	645	737	0	-	0
Stage 1	645	-	-	-	-	-
Stage 2	527	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	196	476	878	-	-	-
Stage 1	526	-	-	-	-	-
Stage 2	609	-	-	-	-	-
Platoon blocked, %	1	-	-	-	-	-
Mov Cap-1 Maneuver	163	476	878	-	-	-
Mov Cap-2 Maneuver	163	-	-	-	-	-
Stage 1	438	-	-	-	-	-
Stage 2	609	-	-	-	-	-
Approach	EB	NB	SB			
HCM Control Delay, s	26	3	0			
HCM LOS	D					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	878	-	163	476	-	-
HCM Lane V/C Ratio	0.143	-	0.429	0.215	-	-
HCM Control Delay (s)	9.8	0	42.7	14.6	-	-
HCM Lane LOS	A	A	E	B	-	-
HCM 95th %tile Q(veh)	0.5	-	1.9	0.8	-	-

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗
Traffic Vol, veh/h	39	26	17	282	396	124
Future Vol, veh/h	39	26	17	282	396	124
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	95	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	47	31	20	340	477	149
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	932	552	626	0	-	0
Stage 1	552	-	-	-	-	-
Stage 2	380	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	290	537	965	-	-	-
Stage 1	581	-	-	-	-	-
Stage 2	742	-	-	-	-	-
Platoon blocked, %	1	-	-	-	-	-
Mov Cap-1 Maneuver	282	537	965	-	-	-
Mov Cap-2 Maneuver	282	-	-	-	-	-
Stage 1	566	-	-	-	-	-
Stage 2	742	-	-	-	-	-
Approach	EB	NB	SB			
HCM Control Delay, s	17	0.5	0			
HCM LOS	C	-				
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	965	-	282	537	-	-
HCM Lane V/C Ratio	0.021	-	0.167	0.058	-	-
HCM Control Delay (s)	8.8	0	20.3	12.1	-	-
HCM Lane LOS	A	A	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.6	0.2	-	-

HCM 6th Signalized Intersection Summary
9: 9th Street & Garden Grove Boulevard

11/21/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑↑	↑↑↑		↑↑↑	↑↑↑		↓↓	↓↓		↓↓	↓↓	
Traffic Volume (veh/h)	79	990	10	19	669	213	20	26	17	358	24	49
Future Volume (veh/h)	79	990	10	19	669	213	20	26	17	358	24	49
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	95	1193	12	23	806	257	24	31	20	431	29	59
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	218	2172	22	193	1600	506	287	364	218	642	38	78
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.48	0.48	0.48	0.48	0.48	0.48
Sat Flow, veh/h	531	5213	52	464	3840	1215	485	754	450	1177	79	161
Grp Volume(v), veh/h	95	779	426	23	714	349	75	0	0	519	0	0
Grp Sat Flow(s), veh/h/ln	531	1702	1861	464	1702	1652	1689	0	0	1417	0	0
Q Serve(g_s), s	14.5	15.6	15.6	3.6	13.9	14.1	0.0	0.0	0.0	24.5	0.0	0.0
Cycle Q Clear(g_c), s	28.6	15.6	15.6	19.1	13.9	14.1	2.0	0.0	0.0	26.5	0.0	0.0
Prop In Lane	1.00		0.03	1.00		0.74	0.32		0.27	0.83		0.11
Lane Grp Cap(c), veh/h	218	1418	775	193	1418	688	869	0	0	758	0	0
V/C Ratio(X)	0.44	0.55	0.55	0.12	0.50	0.51	0.09	0.00	0.00	0.68	0.00	0.00
Avail Cap(c_a), veh/h	218	1418	775	193	1418	688	869	0	0	758	0	0
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(l)	0.86	0.86	0.86	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	30.0	19.9	19.9	27.1	19.4	19.4	12.5	0.0	0.0	18.7	0.0	0.0
Incr Delay (d2), s/veh	5.4	1.3	2.4	1.3	1.3	2.7	0.2	0.0	0.0	5.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/lr2.1	5.9	6.7	0.4	5.3	5.5	0.8	0.0	0.0	9.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	35.4	21.2	22.3	28.4	20.7	22.1	12.7	0.0	0.0	23.6	0.0	0.0
LnGrp LOS	D	C	C	C	C	C	B	A	A	C	A	A
Approach Vol, veh/h	1300			1086			75			519		
Approach Delay, s/veh	22.6			21.3			12.7			23.6		
Approach LOS	C			C			B			C		
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+R _c), s	42.0		48.0		42.0		48.0					
Change Period (Y+R _c), s	4.5		4.5		4.5		4.5					
Max Green Setting (Gmax), s	37.5		43.5		37.5		43.5					
Max Q Clear Time (g_c+l1), s	30.6		28.5		21.1		4.0					
Green Ext Time (p_c), s	4.3		3.0		6.5		0.4					
Intersection Summary												
HCM 6th Ctrl Delay		22.0										
HCM 6th LOS		C										

Intersection				
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	222	132	186	310
Demand Flow Rate, veh/h	226	134	190	316
Vehicles Circulating, veh/h	231	254	246	110
Vehicles Exiting, veh/h	195	182	211	278
Ped Vol Crossing Leg, #/h	17	17	33	33
Ped Cap Adj	0.998	0.998	0.995	0.995
Approach Delay, s/veh	5.3	4.6	5.1	5.3
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	226	134	190	316
Cap Entry Lane, veh/h	1090	1065	1074	1233
Entry HV Adj Factor	0.981	0.981	0.980	0.980
Flow Entry, veh/h	222	132	186	310
Cap Entry, veh/h	1067	1043	1047	1203
V/C Ratio	0.208	0.126	0.178	0.257
Control Delay, s/veh	5.3	4.6	5.1	5.3
LOS	A	A	A	A
95th %tile Queue, veh	1	0	1	1

HCM 6th Signalized Intersection Summary
2: Main Street & Garden Grove Boulevard

11/21/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑↑	↑↑↑		↑↑↑	↑↑↑			↑	↑	↑	↑	↑
Traffic Volume (veh/h)	130	978	31	90	929	115	30	88	83	80	39	120
Future Volume (veh/h)	130	978	31	90	929	115	30	88	83	80	39	120
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	131	988	31	91	938	116	30	89	84	81	39	121
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	238	1871	59	323	1711	211	194	549	643	232	123	305
Arrive On Green	0.07	0.37	0.37	0.03	0.12	0.12	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	1781	5086	159	1781	4605	568	354	1353	1585	440	304	751
Grp Volume(v), veh/h	131	661	358	91	693	361	119	0	84	241	0	0
Grp Sat Flow(s), veh/h/ln	1781	1702	1842	1781	1702	1768	1707	0	1585	1496	0	0
Q Serve(g_s), s	4.7	13.7	13.7	0.0	17.2	17.3	0.0	0.0	3.0	5.8	0.0	0.0
Cycle Q Clear(g_c), s	4.7	13.7	13.7	0.0	17.2	17.3	3.6	0.0	3.0	9.7	0.0	0.0
Prop In Lane	1.00		0.09	1.00		0.32	0.25		1.00	0.34		0.50
Lane Grp Cap(c), veh/h	238	1252	677	323	1265	657	743	0	643	660	0	0
V/C Ratio(X)	0.55	0.53	0.53	0.28	0.55	0.55	0.16	0.00	0.13	0.37	0.00	0.00
Avail Cap(c_a), veh/h	316	1252	677	323	1265	657	743	0	643	660	0	0
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.81	0.81	0.81	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.9	22.3	22.3	30.7	32.4	32.4	17.0	0.0	16.8	18.7	0.0	0.0
Incr Delay (d2), s/veh	2.0	1.6	2.9	0.4	1.4	2.7	0.5	0.0	0.4	1.6	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/lr	2.0	5.4	6.1	1.8	8.0	8.6	1.6	0.0	1.2	3.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	25.8	23.9	25.3	31.0	33.8	35.1	17.4	0.0	17.2	20.2	0.0	0.0
LnGrp LOS	C	C	C	C	C	D	B	A	B	C	A	A
Approach Vol, veh/h	1150			1145			203			241		
Approach Delay, s/veh	24.6			34.0			17.3			20.2		
Approach LOS	C			C			B			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	1.4	37.6		41.0	11.1	37.9		41.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	3.9	33.1		36.5	10.5	29.5		36.5				
Max Q Clear Time (g_c+l1), s	12.0	15.7		11.7	6.7	19.3		5.6				
Green Ext Time (p_c), s	0.1	6.0		1.6	0.1	4.7		1.0				
Intersection Summary												
HCM 6th Ctrl Delay			27.6									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary
3: Euclid Street & Main Street/College Avenue

11/21/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	201	11	21	13	16	8	15	1612	17	14	892	331
Future Volume (veh/h)	201	11	21	13	16	8	15	1612	17	14	892	331
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	203	11	21	13	16	8	15	1628	17	14	901	0
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	313	13	515	72	80	27	379	2997	31	196	2937	
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.58	0.58	0.58	0.58	0.58	0.00
Sat Flow, veh/h	724	39	1585	55	246	83	618	5210	54	304	5106	1585
Grp Volume(v), veh/h	214	0	21	37	0	0	15	1064	581	14	901	0
Grp Sat Flow(s), veh/h/ln	763	0	1585	384	0	0	618	1702	1861	304	1702	1585
Q Serve(g_s), s	0.0	0.0	0.8	0.5	0.0	0.0	1.2	17.4	17.4	2.7	8.2	0.0
Cycle Q Clear(g_c), s	26.4	0.0	0.8	26.9	0.0	0.0	9.3	17.4	17.4	20.1	8.2	0.0
Prop In Lane	0.95		1.00	0.35		0.22	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	326	0	515	179	0	0	379	1958	1070	196	2937	
V/C Ratio(X)	0.66	0.00	0.04	0.21	0.00	0.00	0.04	0.54	0.54	0.07	0.31	
Avail Cap(c_a), veh/h	470	0	678	344	0	0	379	1958	1070	196	2937	
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	
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	0.00	0.84	0.84	0.84	1.00	1.00	0.00
Uniform Delay (d), s/veh	29.4	0.0	20.8	23.9	0.0	0.0	12.3	11.8	11.8	18.0	9.9	0.0
Incr Delay (d2), s/veh	2.3	0.0	0.0	0.6	0.0	0.0	0.2	0.9	1.7	0.7	0.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	4.6	0.0	0.3	0.6	0.0	0.0	0.2	5.9	6.6	0.2	2.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	31.7	0.0	20.8	24.4	0.0	0.0	12.4	12.7	13.5	18.7	10.1	0.0
LnGrp LOS	C	A	C	C	A	A	B	B	B	B	B	
Approach Vol, veh/h	235				37			1660			915	A
Approach Delay, s/veh	30.7				24.4			13.0			10.3	
Approach LOS	C				C			B			B	
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+R _c), s	56.3			33.7			56.3			33.7		
Change Period (Y+R _c), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	42.5			38.5			42.5			38.5		
Max Q Clear Time (g_c+l1), s	19.4			28.4			22.1			28.9		
Green Ext Time (p_c), s	12.2			0.9			6.3			0.1		
Intersection Summary												
HCM 6th Ctrl Delay				13.7								
HCM 6th LOS				B								
Notes												

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

4: Euclid Street & Stanford Avenue

11/21/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑ ↗	↑ ↘		↑ ↗	↑ ↘	↑ ↗	↑ ↗	↑ ↗ ↘		↑ ↗	↑ ↗ ↘	
Traffic Volume (veh/h)	4	1	10	92	3	78	13	1499	96	53	935	3
Future Volume (veh/h)	4	1	10	92	3	78	13	1499	96	53	935	3
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	4	1	10	96	3	81	14	1561	100	55	974	3
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	198	14	143	200	183	155	524	2133	137	592	2486	8
Arrive On Green	0.10	0.10	0.10	0.10	0.10	0.10	0.39	0.58	0.58	0.33	0.47	0.47
Sat Flow, veh/h	1314	146	1461	1404	1870	1585	1781	4904	314	1781	5255	16
Grp Volume(v), veh/h	4	0	11	96	3	81	14	1083	578	55	631	346
Grp Sat Flow(s),veh/h/ln	1314	0	1607	1404	1870	1585	1781	1702	1814	1781	1702	1867
Q Serve(g_s), s	0.3	0.0	0.6	6.7	0.1	4.9	0.5	23.3	23.3	2.1	12.0	12.0
Cycle Q Clear(g_c), s	0.4	0.0	0.6	7.3	0.1	4.9	0.5	23.3	23.3	2.1	12.0	12.0
Prop In Lane	1.00		0.91	1.00		1.00	1.00		0.17	1.00		0.01
Lane Grp Cap(c), veh/h	198	0	157	200	183	155	524	1481	789	592	1610	883
V/C Ratio(X)	0.02	0.00	0.07	0.48	0.02	0.52	0.03	0.73	0.73	0.09	0.39	0.39
Avail Cap(c_a), veh/h	518	0	548	542	638	541	524	1481	789	592	1610	883
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	1.00	0.88	0.88	0.88	0.97	0.97	0.97
Uniform Delay (d), s/veh	41.0	0.0	41.0	44.3	40.8	42.9	21.6	16.8	16.8	23.0	17.0	17.0
Incr Delay (d2), s/veh	0.0	0.0	0.2	1.8	0.0	2.7	0.0	2.8	5.3	0.1	0.7	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.3	2.4	0.1	2.0	0.2	7.4	8.4	0.9	4.5	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.0	0.0	41.2	46.1	40.8	45.6	21.6	19.7	22.1	23.1	17.7	18.3
LnGrp LOS	D	A	D	D	D	D	C	B	C	C	B	B
Approach Vol, veh/h		15			180			1675			1032	
Approach Delay, s/veh	41.1			45.8				20.5			18.2	
Approach LOS		D			D			C			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc),s	37.7	48.0		14.3	33.9	51.8		14.3				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax),s	43.5			34.1	5.1	47.3		34.1				
Max Q Clear Time (g_c+l1),s	25.3			2.6	2.5	14.0		9.3				
Green Ext Time (p_c), s	0.0	10.6		0.0	0.0	7.0		0.5				
Intersection Summary												
HCM 6th Ctrl Delay			21.4									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary

5: Euclid Street & Acacia Parkway

11/21/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↑ ↘		↖ ↗	↑ ↘		↖ ↗	↑↑↑	↗	↖ ↗	↑↑↑	↗
Traffic Volume (veh/h)	53	47	72	47	41	45	76	1478	34	13	985	37
Future Volume (veh/h)	53	47	72	47	41	45	76	1478	34	13	985	37
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	55	49	75	49	43	47	79	1540	35	14	1026	39
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	202	66	101	172	79	86	636	3432	78	29	1651	63
Arrive On Green	0.04	0.10	0.10	0.04	0.10	0.10	0.36	0.67	0.67	0.03	0.65	0.65
Sat Flow, veh/h	1781	667	1020	1781	817	893	1781	5137	117	1781	5048	192
Grp Volume(v), veh/h	55	0	124	49	0	90	79	1021	554	14	692	373
Grp Sat Flow(s),veh/h/ln	1781	0	1687	1781	0	1710	1781	1702	1849	1781	1702	1836
Q Serve(g_s), s	2.8	0.0	7.2	2.5	0.0	5.0	3.0	14.2	14.2	0.8	11.8	11.9
Cycle Q Clear(g_c), s	2.8	0.0	7.2	2.5	0.0	5.0	3.0	14.2	14.2	0.8	11.8	11.9
Prop In Lane	1.00		0.60	1.00		0.52	1.00		0.06	1.00		0.10
Lane Grp Cap(c), veh/h	202	0	166	172	0	165	636	2275	1236	29	1113	600
V/C Ratio(X)	0.27	0.00	0.75	0.28	0.00	0.55	0.12	0.45	0.45	0.49	0.62	0.62
Avail Cap(c_a), veh/h	223	0	575	197	0	583	636	2275	1236	89	1113	600
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(l)	1.00	0.00	1.00	1.00	0.00	1.00	0.58	0.58	0.58	0.97	0.97	0.97
Uniform Delay (d), s/veh	38.7	0.0	43.9	38.8	0.0	43.1	21.6	7.9	7.9	48.0	13.7	13.7
Incr Delay (d2), s/veh	0.7	0.0	6.5	0.9	0.0	2.8	0.1	0.4	0.7	11.9	2.5	4.7
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/lr	1.2	0.0	3.3	1.1	0.0	2.3	1.2	4.4	4.9	0.4	3.4	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.4	0.0	50.4	39.7	0.0	45.9	21.7	8.2	8.5	59.9	16.2	18.4
LnGrp LOS	D	A	D	D	A	D	C	A	A	E	B	B
Approach Vol, veh/h		179			139			1654			1079	
Approach Delay, s/veh		47.0			43.7			9.0			17.5	
Approach LOS		D			D			A			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.1	71.3	8.2	14.4	40.2	37.2	8.4	14.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	37.8	5.1	34.1	10.1	32.7	5.1	34.1				
Max Q Clear Time (g_c+l), s	12.8	16.2	4.5	9.2	5.0	13.9	4.8	7.0				
Green Ext Time (p_c), s	0.0	11.0	0.0	0.7	0.1	6.5	0.0	0.5				
Intersection Summary												
HCM 6th Ctrl Delay			15.8									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary
6: Euclid Street & Garden Grove Boulevard

11/21/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑↑	↑	↑↑↑	↑↑↑	↑↑↑	↑	↑↑↑	↑	↑↑↑	↑↑↑	↑
Traffic Volume (veh/h)	220	764	156	269	946	217	189	1199	253	159	842	113
Future Volume (veh/h)	220	764	156	269	946	217	189	1199	253	159	842	113
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	232	804	164	283	996	228	199	1262	266	167	886	119
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	212	2354	731	521	1916	438	260	2241	696	167	2241	696
Arrive On Green	0.15	0.15	0.15	0.46	0.46	0.46	0.44	0.44	0.44	0.44	0.44	0.44
Sat Flow, veh/h	456	5106	1585	1126	4154	949	561	5106	1585	341	5106	1585
Grp Volume(v), veh/h	232	804	164	283	816	408	199	1262	266	167	886	119
Grp Sat Flow(s), veh/h/ln	456	1702	1585	563	1702	1700	561	1702	1585	341	1702	1585
Q Serve(g_s), s	26.2	12.7	8.2	20.5	15.3	15.3	28.9	16.6	10.2	22.9	10.6	4.1
Cycle Q Clear(g_c), s	41.5	12.7	8.2	33.2	15.3	15.3	39.5	16.6	10.2	39.5	10.6	4.1
Prop In Lane	1.00		1.00	1.00		0.56	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	212	2354	731	521	1570	784	260	2241	696	167	2241	696
V/C Ratio(X)	1.09	0.34	0.22	0.54	0.52	0.52	0.77	0.56	0.38	1.00	0.40	0.17
Avail Cap(c_a), veh/h	212	2354	731	521	1570	784	260	2241	696	167	2241	696
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.87	0.87	0.87	0.78	0.78	0.78	1.00	1.00	1.00	0.94	0.94	0.94
Uniform Delay (d), s/veh	50.7	25.9	24.0	27.8	17.2	17.2	31.9	18.8	17.0	39.0	17.1	15.3
Incr Delay (d2), s/veh	84.3	0.1	0.1	0.9	0.2	0.5	19.1	1.0	1.6	68.0	0.5	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	5.7	3.1	2.6	5.5	5.5	5.6	6.2	3.7	6.8	3.9	1.5	
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	135.0	26.0	24.2	28.7	17.4	17.7	51.0	19.8	18.6	107.0	17.6	15.8
LnGrp LOS	F	C	C	C	B	B	D	B	B	F	B	B
Approach Vol, veh/h	1200			1507			1727			1172		
Approach Delay, s/veh	46.8			19.6			23.3			30.2		
Approach LOS	D			B			C			C		
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+R _c), s	44.0		46.0		44.0		46.0					
Change Period (Y+R _c), s	4.5		4.5		4.5		4.5					
Max Green Setting (Gmax), s	39.5		41.5		39.5		41.5					
Max Q Clear Time (g_c+l1), s	41.5		43.5		41.5		35.2					
Green Ext Time (p_c), s	0.0		0.0		0.0		4.7					
Intersection Summary												
HCM 6th Ctrl Delay		28.8										
HCM 6th LOS		C										

Intersection						
Int Delay, s/veh	1.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↑	↑	↔	↑		
Traffic Vol, veh/h	43	41	38	571	307	46
Future Vol, veh/h	43	41	38	571	307	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	65	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	46	44	40	607	327	49
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1039	352	376	0	-	0
Stage 1	352	-	-	-	-	-
Stage 2	687	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	235	696	1194	-	-	-
Stage 1	716	-	-	-	-	-
Stage 2	539	-	-	-	-	-
Platoon blocked, %	1	-	-	-	-	-
Mov Cap-1 Maneuver	223	696	1194	-	-	-
Mov Cap-2 Maneuver	223	-	-	-	-	-
Stage 1	679	-	-	-	-	-
Stage 2	539	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	18.1	0.5		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1194	-	223	696	-	-
HCM Lane V/C Ratio	0.034	-	0.205	0.063	-	-
HCM Control Delay (s)	8.1	0	25.3	10.5	-	-
HCM Lane LOS	A	A	D	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.7	0.2	-	-

Intersection

Int Delay, s/veh 2.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↑	↑	↔	↑		
Traffic Vol, veh/h	96	27	10	512	296	53
Future Vol, veh/h	96	27	10	512	296	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	95	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	102	29	11	545	315	56

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	910	343	371	0	-	0
Stage 1	343	-	-	-	-	-
Stage 2	567	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	*312	704	1199	-	-	-
Stage 1	*723	-	-	-	-	-
Stage 2	*630	-	-	-	-	-
Platoon blocked, %	1	-	-	-	-	-
Mov Cap-1 Maneuver	*307	704	1199	-	-	-
Mov Cap-2 Maneuver	*307	-	-	-	-	-
Stage 1	*714	-	-	-	-	-
Stage 2	*630	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.8	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1199	-	307	704	-	-
HCM Lane V/C Ratio	0.009	-	0.333	0.041	-	-
HCM Control Delay (s)	8	0	22.5	10.3	-	-
HCM Lane LOS	A	A	C	B	-	-
HCM 95th %tile Q(veh)	0	-	1.4	0.1	-	-

Notes

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

HCM 6th Signalized Intersection Summary
9: 9th Street & Garden Grove Boulevard

11/21/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑↑	↑↑↑		↑↑↑	↑↑↑		↓	↓		↓	↓	↓
Traffic Volume (veh/h)	124	874	10	11	1154	349	7	12	11	213	10	113
Future Volume (veh/h)	124	874	10	11	1154	349	7	12	11	213	10	113
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	131	920	11	12	1215	367	7	13	12	224	11	119
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	189	2832	34	315	2117	639	148	270	221	390	23	176
Arrive On Green	0.18	0.18	0.18	0.54	0.54	0.54	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	323	5201	62	601	3889	1174	279	758	622	912	64	494
Grp Volume(v), veh/h	131	602	329	12	1063	519	32	0	0	354	0	0
Grp Sat Flow(s), veh/h/ln	323	1702	1859	601	1702	1659	1660	0	0	1470	0	0
Q Serve(g_s), s	30.4	13.9	13.9	1.1	18.6	18.6	0.0	0.0	0.0	17.2	0.0	0.0
Cycle Q Clear(g_c), s	49.0	13.9	13.9	15.0	18.6	18.6	1.1	0.0	0.0	18.3	0.0	0.0
Prop In Lane	1.00		0.03	1.00		0.71	0.22		0.37	0.63		0.34
Lane Grp Cap(c), veh/h	189	1853	1012	315	1853	903	639	0	0	588	0	0
V/C Ratio(X)	0.69	0.32	0.33	0.04	0.57	0.57	0.05	0.00	0.00	0.60	0.00	0.00
Avail Cap(c_a), veh/h	189	1853	1012	315	1853	903	639	0	0	588	0	0
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.86	0.86	0.86	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	48.8	22.5	22.5	17.1	13.6	13.6	19.0	0.0	0.0	24.5	0.0	0.0
Incr Delay (d2), s/veh	16.5	0.4	0.7	0.2	1.3	2.7	0.1	0.0	0.0	4.5	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	4.0	6.3	7.0	0.2	6.5	6.7	0.5	0.0	0.0	6.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	65.3	22.9	23.2	17.3	14.9	16.2	19.2	0.0	0.0	29.0	0.0	0.0
LnGrp LOS	E	C	C	B	B	B	B	A	A	C	A	A
Approach Vol, veh/h	1062			1594			32			354		
Approach Delay, s/veh	28.2			15.3			19.2			29.0		
Approach LOS	C			B			B			C		
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+R _c), s	53.5		36.5		53.5		36.5					
Change Period (Y+R _c), s	4.5		4.5		4.5		4.5					
Max Green Setting (Gmax), s	49.0		32.0		49.0		32.0					
Max Q Clear Time (g_c+l1), s	51.0		20.3		20.6		3.1					
Green Ext Time (p_c), s	0.0		1.6		13.2		0.1					
Intersection Summary												
HCM 6th Ctrl Delay		21.5										
HCM 6th LOS		C										

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	100.0	100.0	45.0	45.0
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	7	7	3	2
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated	Actuated	Actuated	Actuated
Corresponding Signal Phase	4	8	2	6
Effective Walk Time (s)	29.0	29.0	15.0	15.0
Right Corner Size A (ft)	8.0	20.0	7.0	6.0
Right Corner Size B (ft)	7.0	6.0	5.0	20.0
Right Corner Curb Radius (ft)	8.0	8.0	5.0	9.0
Right Corner Total Area (sq.ft)	42.24	106.24	29.62	102.58
Ped. Left-Right Flow Rate (p/h)	10	2	5	6
Ped. Right-Left Flow Rate (p/h)	10	1	6	6
Ped. R. Sidewalk Flow Rate (p/h)	6	6	1	10
Veh. Perm. L. Flow in Walk (v/h)	0	0	27	8
Veh. Perm. R. Flow in Walk (v/h)	36	23	69	32
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	40	40	25	25
Right Corner Area per Ped (sq.ft)	1012.8	4538.7	1754.9	2184.2
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq.ft)	1941.7	13025.0	1387.5	1410.9
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (s/p)	25.2	25.2	36.1	36.1
Pedestrian Compliance Code	Fair	Fair	Poor	Poor
Pedestrian Crosswalk Score	2.99	3.00	2.07	1.80
Pedestrian Crosswalk LOS	C	C	B	B

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	75.0	75.0	100.0	100.0
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	2	7	7
Number of Right-Turn Islands	1	0	0	0
Type of Control	Actuated	Actuated	Actuated	Actuated
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	23.0	23.0	29.0	29.0
Right Corner Size A (ft)	8.0	6.0	4.0	5.0
Right Corner Size B (ft)	8.0	8.0	6.0	4.0
Right Corner Curb Radius (ft)	8.0	6.0	4.0	4.0
Right Corner Total Area (sq.ft)	50.24	40.26	20.56	16.56
Ped. Left-Right Flow Rate (p/h)	7	6	3	1
Ped. Right-Left Flow Rate (p/h)	6	5	3	2
Ped. R. Sidewalk Flow Rate (p/h)	3	2	5	6
Veh. Perm. L. Flow in Walk (v/h)	132	25	22	9
Veh. Perm. R. Flow in Walk (v/h)	56	17	25	276
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	25	25	40	40
Right Corner Area per Ped (sq.ft)	2040.9	2251.1	826.7	662.8
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq.ft)	2043.0	2673.4	6450.9	11705.9
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (s/p)	29.6	29.6	25.2	25.2
Pedestrian Compliance Code	Fair	Fair	Fair	Fair
Pedestrian Crosswalk Score	2.34	1.81	3.15	3.19
Pedestrian Crosswalk LOS	B	B	C	C

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	50.0	70.0	90.0	90.0
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	4	7	7
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated	Actuated	Actuated	Actuated
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	17.0	23.0	27.0	27.0
Right Corner Size A (ft)	5.0	6.0	6.0	8.0
Right Corner Size B (ft)	10.0	6.0	10.0	6.0
Right Corner Curb Radius (ft)	5.0	6.0	6.0	6.0
Right Corner Total Area (sq.ft)	44.62	28.26	52.26	40.26
Ped. Left-Right Flow Rate (p/h)	9	1	8	108
Ped. Right-Left Flow Rate (p/h)	8	1	8	108
Ped. R. Sidewalk Flow Rate (p/h)	8	108	1	8
Veh. Perm. L. Flow in Walk (v/h)	27	194	0	0
Veh. Perm. R. Flow in Walk (v/h)	47	179	193	12
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	25	25	40	40
Right Corner Area per Ped (sq.ft)	964.6	66.9	2459.5	133.8
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq.ft)	1113.0	11128.7	2066.3	164.4
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (s/p)	34.4	29.6	26.6	26.6
Pedestrian Compliance Code	Poor	Fair	Fair	Fair
Pedestrian Crosswalk Score	2.01	2.56	3.15	3.13
Pedestrian Crosswalk LOS	B	C	C	C

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	75.0	75.0	90.0	90.0
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	4	3	7	7
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated	Actuated	Actuated	Actuated
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	23.0	23.0	27.0	27.0
Right Corner Size A (ft)	5.0	10.0	10.0	4.0
Right Corner Size B (ft)	5.0	10.0	10.0	4.0
Right Corner Curb Radius (ft)	5.0	10.0	10.0	4.0
Right Corner Total Area (sq.ft)	19.62	78.50	78.50	12.56
Ped. Left-Right Flow Rate (p/h)	10	2	4	14
Ped. Right-Left Flow Rate (p/h)	10	3	4	15
Ped. R. Sidewalk Flow Rate (p/h)	4	15	3	10
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	60	56	67	44
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	25	25	40	40
Right Corner Area per Ped (sq.ft)	536.1	1430.1	4402.7	176.8
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq.ft)	1451.6	5830.3	4396.4	1223.9
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (s/p)	29.6	29.6	26.6	26.6
Pedestrian Compliance Code	Fair	Fair	Fair	Fair
Pedestrian Crosswalk Score	2.21	2.04	3.14	3.14
Pedestrian Crosswalk LOS	B	B	C	C

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	105.0	105.0	105.0	105.0
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	8	8	8	8
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated	Actuated	Actuated	Actuated
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	30.0	30.0	30.0	30.0
Right Corner Size A (ft)	6.0	10.0	4.0	6.0
Right Corner Size B (ft)	6.0	6.0	4.0	8.0
Right Corner Curb Radius (ft)	6.0	6.0	4.0	6.0
Right Corner Total Area (sq.ft)	28.26	52.26	12.56	40.26
Ped. Left-Right Flow Rate (p/h)	8	3	7	9
Ped. Right-Left Flow Rate (p/h)	8	3	6	8
Ped. R. Sidewalk Flow Rate (p/h)	6	8	3	8
Veh. Perm. L. Flow in Walk (v/h)	140	258	203	93
Veh. Perm. R. Flow in Walk (v/h)	96	132	238	110
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	40	40	40	40
Right Corner Area per Ped (sq.ft)	713.6	1505.4	501.3	871.8
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq.ft)	2346.0	5889.2	2660.2	2235.9
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (s/p)	24.5	24.5	24.5	24.5
Pedestrian Compliance Code	Fair	Fair	Fair	Fair
Pedestrian Crosswalk Score	3.23	3.45	3.55	3.36
Pedestrian Crosswalk LOS	C	C	D	C

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	85.0	85.0	50.0	50.0
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	7	7	2	2
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated	Actuated	Actuated	Actuated
Corresponding Signal Phase	4	8	2	6
Effective Walk Time (s)	25.0	25.0	17.0	17.0
Right Corner Size A (ft)	4.0	6.0	6.0	6.0
Right Corner Size B (ft)	5.0	6.0	10.0	6.0
Right Corner Curb Radius (ft)	4.0	6.0	6.0	6.0
Right Corner Total Area (sq.ft)	16.56	28.26	52.26	28.26
Ped. Left-Right Flow Rate (p/h)	10	2	11	3
Ped. Right-Left Flow Rate (p/h)	10	3	12	3
Ped. R. Sidewalk Flow Rate (p/h)	12	3	3	10
Veh. Perm. L. Flow in Walk (v/h)	79	19	20	358
Veh. Perm. R. Flow in Walk (v/h)	10	213	17	49
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	40	40	35	35
Right Corner Area per Ped (sq.ft)	258.2	1802.5	1501.0	695.3
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq.ft)	1775.2	6609.2	967.4	2025.2
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (s/p)	23.5	23.5	29.6	29.6
Pedestrian Compliance Code	Fair	Fair	Fair	Fair
Pedestrian Crosswalk Score	3.10	3.11	1.82	2.73
Pedestrian Crosswalk LOS	C	C	B	C

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	100.0	100.0	45.0	45.0
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	7	7	3	2
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated	Actuated	Actuated	Actuated
Corresponding Signal Phase	4	8	2	6
Effective Walk Time (s)	29.0	29.0	15.0	15.0
Right Corner Size A (ft)	8.0	20.0	7.0	6.0
Right Corner Size B (ft)	7.0	6.0	5.0	20.0
Right Corner Curb Radius (ft)	8.0	8.0	5.0	9.0
Right Corner Total Area (sq.ft)	42.24	106.24	29.62	102.58
Ped. Left-Right Flow Rate (p/h)	10	7	5	7
Ped. Right-Left Flow Rate (p/h)	9	7	6	7
Ped. R. Sidewalk Flow Rate (p/h)	6	7	7	9
Veh. Perm. L. Flow in Walk (v/h)	0	0	30	80
Veh. Perm. R. Flow in Walk (v/h)	0	0	83	120
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	40	40	25	25
Right Corner Area per Ped (sq.ft)	1044.1	2718.9	820.1	2185.5
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq.ft)	2303.3	3126.9	1524.8	1012.2
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (s/p)	20.7	20.7	31.2	31.2
Pedestrian Compliance Code	Fair	Fair	Poor	Poor
Pedestrian Crosswalk Score	2.99	3.00	2.08	2.06
Pedestrian Crosswalk LOS	C	C	B	B

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	75.0	75.0	100.0	100.0
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	2	7	7
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated	Actuated	Actuated	Actuated
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	23.0	23.0	29.0	29.0
Right Corner Size A (ft)	8.0	6.0	4.0	5.0
Right Corner Size B (ft)	8.0	8.0	6.0	4.0
Right Corner Curb Radius (ft)	8.0	6.0	4.0	4.0
Right Corner Total Area (sq.ft)	50.24	40.26	20.56	16.56
Ped. Left-Right Flow Rate (p/h)	5	1	6	0
Ped. Right-Left Flow Rate (p/h)	4	1	6	1
Ped. R. Sidewalk Flow Rate (p/h)	6	1	1	4
Veh. Perm. L. Flow in Walk (v/h)	201	13	15	14
Veh. Perm. R. Flow in Walk (v/h)	21	8	17	331
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	25	25	40	40
Right Corner Area per Ped (sq.ft)	1664.3	9050.7	1221.2	1051.6
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq.ft)	3252.2	16602.3	3608.2	38596.1
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (s/p)	24.9	24.9	20.7	20.7
Pedestrian Compliance Code	Fair	Fair	Fair	Fair
Pedestrian Crosswalk Score	2.37	1.75	3.08	3.17
Pedestrian Crosswalk LOS	B	B	C	C

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	50.0	70.0	90.0	90.0
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	4	7	7
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated	Actuated	Actuated	Actuated
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	17.0	23.0	27.0	27.0
Right Corner Size A (ft)	5.0	6.0	6.0	8.0
Right Corner Size B (ft)	10.0	6.0	10.0	6.0
Right Corner Curb Radius (ft)	5.0	6.0	6.0	6.0
Right Corner Total Area (sq.ft)	44.62	28.26	52.26	40.26
Ped. Left-Right Flow Rate (p/h)	13	7	7	25
Ped. Right-Left Flow Rate (p/h)	12	7	6	25
Ped. R. Sidewalk Flow Rate (p/h)	6	25	7	12
Veh. Perm. L. Flow in Walk (v/h)	4	92	13	53
Veh. Perm. R. Flow in Walk (v/h)	10	78	96	3
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	25	25	40	40
Right Corner Area per Ped (sq.ft)	895.6	273.5	1369.8	400.5
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq.ft)	821.6	1887.4	2650.8	704.7
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (s/p)	34.4	29.6	26.6	26.6
Pedestrian Compliance Code	Poor	Fair	Fair	Fair
Pedestrian Crosswalk Score	1.95	2.32	3.11	3.16
Pedestrian Crosswalk LOS	B	B	C	C

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	75.0	75.0	90.0	90.0
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	4	3	7	7
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated	Actuated	Actuated	Actuated
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	23.0	23.0	27.0	27.0
Right Corner Size A (ft)	5.0	10.0	10.0	4.0
Right Corner Size B (ft)	5.0	10.0	10.0	4.0
Right Corner Curb Radius (ft)	5.0	10.0	10.0	4.0
Right Corner Total Area (sq.ft)	19.62	78.50	78.50	12.56
Ped. Left-Right Flow Rate (p/h)	0	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	72	45	34	37
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	25	25	40	40
Right Corner Area per Ped (sq.ft)	0.0	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-	-
Ped. Circulation Area (sq.ft)	0.0	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-	-
Pedestrian Delay (s/p)	29.6	29.6	26.6	26.6
Pedestrian Compliance Code	Fair	Fair	Fair	Fair
Pedestrian Crosswalk Score	2.19	2.00	3.10	3.09
Pedestrian Crosswalk LOS	B	B	C	C

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	105.0	105.0	105.0	105.0
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	8	8	8	8
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated	Actuated	Actuated	Actuated
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	30.0	30.0	30.0	30.0
Right Corner Size A (ft)	6.0	10.0	4.0	6.0
Right Corner Size B (ft)	6.0	6.0	4.0	8.0
Right Corner Curb Radius (ft)	6.0	6.0	4.0	6.0
Right Corner Total Area (sq.ft)	28.26	52.26	12.56	40.26
Ped. Left-Right Flow Rate (p/h)	8	6	8	11
Ped. Right-Left Flow Rate (p/h)	9	7	8	11
Ped. R. Sidewalk Flow Rate (p/h)	8	11	7	9
Veh. Perm. L. Flow in Walk (v/h)	220	269	189	159
Veh. Perm. R. Flow in Walk (v/h)	156	217	253	113
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	40	40	40	40
Right Corner Area per Ped (sq.ft)	610.0	1012.7	304.3	745.0
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq.ft)	2356.9	2960.6	2444.8	1889.0
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (s/p)	20.0	20.0	20.0	20.0
Pedestrian Compliance Code	Fair	Fair	Fair	Fair
Pedestrian Crosswalk Score	3.42	3.53	3.47	3.40
Pedestrian Crosswalk LOS	C	D	C	C

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	85.0	85.0	50.0	50.0
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	7	7	2	2
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated	Actuated	Actuated	Actuated
Corresponding Signal Phase	4	8	2	6
Effective Walk Time (s)	25.0	25.0	17.0	17.0
Right Corner Size A (ft)	4.0	6.0	6.0	6.0
Right Corner Size B (ft)	5.0	6.0	10.0	6.0
Right Corner Curb Radius (ft)	4.0	6.0	6.0	6.0
Right Corner Total Area (sq.ft)	16.56	28.26	52.26	28.26
Ped. Left-Right Flow Rate (p/h)	4	1	6	1
Ped. Right-Left Flow Rate (p/h)	3	1	6	1
Ped. R. Sidewalk Flow Rate (p/h)	6	1	1	3
Veh. Perm. L. Flow in Walk (v/h)	124	11	7	213
Veh. Perm. R. Flow in Walk (v/h)	10	349	11	113
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	40	40	35	35
Right Corner Area per Ped (sq.ft)	583.8	5073.5	3118.8	2106.6
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq.ft)	4964.5	15409.4	1900.3	7190.3
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (s/p)	23.5	23.5	29.6	29.6
Pedestrian Compliance Code	Fair	Fair	Fair	Fair
Pedestrian Crosswalk Score	3.20	3.10	1.76	2.50
Pedestrian Crosswalk LOS	C	C	B	C

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	100.0	100.0	45.0	45.0
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	7	7	3	2
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated	Actuated	Actuated	Actuated
Corresponding Signal Phase	4	8	2	6
Effective Walk Time (s)	29.0	29.0	15.0	15.0
Right Corner Size A (ft)	8.0	20.0	7.0	6.0
Right Corner Size B (ft)	7.0	6.0	5.0	20.0
Right Corner Curb Radius (ft)	8.0	8.0	5.0	9.0
Right Corner Total Area (sq.ft)	42.24	106.24	29.62	102.58
Ped. Left-Right Flow Rate (p/h)	10	2	5	6
Ped. Right-Left Flow Rate (p/h)	10	1	6	6
Ped. R. Sidewalk Flow Rate (p/h)	6	6	1	10
Veh. Perm. L. Flow in Walk (v/h)	0	0	27	8
Veh. Perm. R. Flow in Walk (v/h)	36	23	69	32
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	40	40	25	25
Right Corner Area per Ped (sq.ft)	1012.8	4538.7	1754.9	2184.2
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq.ft)	1941.7	13025.0	1387.5	1410.9
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (s/p)	25.2	25.2	36.1	36.1
Pedestrian Compliance Code	Fair	Fair	Poor	Poor
Pedestrian Crosswalk Score	2.99	3.00	2.07	1.80
Pedestrian Crosswalk LOS	C	C	B	B

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	75.0	75.0	100.0	100.0
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	2	7	7
Number of Right-Turn Islands	1	0	0	0
Type of Control	Actuated	Actuated	Actuated	Actuated
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	23.0	23.0	29.0	29.0
Right Corner Size A (ft)	8.0	6.0	4.0	5.0
Right Corner Size B (ft)	8.0	8.0	6.0	4.0
Right Corner Curb Radius (ft)	8.0	6.0	4.0	4.0
Right Corner Total Area (sq.ft)	50.24	40.26	20.56	16.56
Ped. Left-Right Flow Rate (p/h)	7	6	3	1
Ped. Right-Left Flow Rate (p/h)	6	5	3	2
Ped. R. Sidewalk Flow Rate (p/h)	3	2	5	6
Veh. Perm. L. Flow in Walk (v/h)	132	25	22	9
Veh. Perm. R. Flow in Walk (v/h)	56	17	25	276
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	25	25	40	40
Right Corner Area per Ped (sq.ft)	2040.9	2251.1	826.7	662.8
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq.ft)	2043.0	2673.4	6450.9	11705.9
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (s/p)	29.6	29.6	25.2	25.2
Pedestrian Compliance Code	Fair	Fair	Fair	Fair
Pedestrian Crosswalk Score	2.34	1.81	3.15	3.19
Pedestrian Crosswalk LOS	B	B	C	C

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	50.0	70.0	90.0	90.0
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	4	7	7
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated	Actuated	Actuated	Actuated
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	17.0	23.0	27.0	27.0
Right Corner Size A (ft)	5.0	6.0	6.0	8.0
Right Corner Size B (ft)	10.0	6.0	10.0	6.0
Right Corner Curb Radius (ft)	5.0	6.0	6.0	6.0
Right Corner Total Area (sq.ft)	44.62	28.26	52.26	40.26
Ped. Left-Right Flow Rate (p/h)	9	1	8	108
Ped. Right-Left Flow Rate (p/h)	8	1	8	108
Ped. R. Sidewalk Flow Rate (p/h)	8	108	1	8
Veh. Perm. L. Flow in Walk (v/h)	27	194	0	0
Veh. Perm. R. Flow in Walk (v/h)	47	179	193	12
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	25	25	40	40
Right Corner Area per Ped (sq.ft)	964.6	66.9	2459.5	133.8
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq.ft)	1113.0	11128.7	2066.3	164.4
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (s/p)	34.4	29.6	26.6	26.6
Pedestrian Compliance Code	Poor	Fair	Fair	Fair
Pedestrian Crosswalk Score	2.01	2.56	3.15	3.13
Pedestrian Crosswalk LOS	B	C	C	C

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	75.0	75.0	90.0	90.0
Crosswalk Width (ft)	10.0	10.0	10.0	10.0
Total Number of Lanes Crossed	4	3	7	7
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated	Actuated	Actuated	Actuated
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	23.0	23.0	27.0	27.0
Right Corner Size A (ft)	5.0	10.0	10.0	4.0
Right Corner Size B (ft)	5.0	10.0	10.0	4.0
Right Corner Curb Radius (ft)	5.0	10.0	10.0	4.0
Right Corner Total Area (sq.ft)	19.62	78.50	78.50	12.56
Ped. Left-Right Flow Rate (p/h)	10	2	4	14
Ped. Right-Left Flow Rate (p/h)	10	3	4	15
Ped. R. Sidewalk Flow Rate (p/h)	4	15	3	10
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	60	56	67	44
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	25	25	40	40
Right Corner Area per Ped (sq.ft)	536.1	1430.1	4402.7	176.8
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq.ft)	1209.2	4858.1	3663.2	1019.5
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (s/p)	29.6	29.6	26.6	26.6
Pedestrian Compliance Code	Fair	Fair	Fair	Fair
Pedestrian Crosswalk Score	2.21	2.04	3.14	3.14
Pedestrian Crosswalk LOS	B	B	C	C

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	105.0	105.0	105.0	105.0
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	8	8	8	8
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated	Actuated	Actuated	Actuated
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	30.0	30.0	30.0	30.0
Right Corner Size A (ft)	6.0	10.0	4.0	6.0
Right Corner Size B (ft)	6.0	6.0	4.0	8.0
Right Corner Curb Radius (ft)	6.0	6.0	4.0	6.0
Right Corner Total Area (sq.ft)	28.26	52.26	12.56	40.26
Ped. Left-Right Flow Rate (p/h)	8	3	7	9
Ped. Right-Left Flow Rate (p/h)	8	3	6	8
Ped. R. Sidewalk Flow Rate (p/h)	6	8	3	8
Veh. Perm. L. Flow in Walk (v/h)	140	258	203	93
Veh. Perm. R. Flow in Walk (v/h)	96	132	238	110
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	40	40	40	40
Right Corner Area per Ped (sq.ft)	713.6	1505.4	501.3	871.8
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq.ft)	2346.0	5889.2	2660.2	2235.9
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (s/p)	24.5	24.5	24.5	24.5
Pedestrian Compliance Code	Fair	Fair	Fair	Fair
Pedestrian Crosswalk Score	3.23	3.45	3.55	3.36
Pedestrian Crosswalk LOS	C	C	D	C

Approach

Approach Direction	NB
Median Present?	No
Approach Delay(s)	7.3
Level of Service	B

Crosswalk

Length (ft)	40
Lanes Crossed	2
Veh Vol Crossed	689
Ped Vol Crossed	25
Yield Rate(%)	90
Ped Platooning	Yes
Critical Headway (s)	21.43
Prob of Delayed X-ing	0.99
Prob of Blocked Lane	0.89
Delay for adq Gap	439.16
Avg Ped Delay (s)	7.32

Approach

Approach Direction	SB
Median Present?	No
Approach Delay(s)	7.3
Level of Service	B

Crosswalk

Length (ft)	40
Lanes Crossed	2
Veh Vol Crossed	689
Ped Vol Crossed	28
Yield Rate(%)	90
Ped Platooning	Yes
Critical Headway (s)	21.43
Prob of Delayed X-ing	0.99
Prob of Blocked Lane	0.89
Delay for adq Gap	439.16
Avg Ped Delay (s)	7.32

Approach

Approach Direction	NB
Median Present?	No
Approach Delay(s)	7.7
Level of Service	B

Crosswalk

Length (ft)	70
Lanes Crossed	2
Veh Vol Crossed	678
Ped Vol Crossed	13
Yield Rate(%)	90
Ped Platooning	Yes
Critical Headway (s)	30.00
Prob of Delayed X-ing	1.00
Prob of Blocked Lane	0.97
Delay for adq Gap	4636.89
Avg Ped Delay (s)	7.70

Approach

Approach Direction	SB
Median Present?	No
Approach Delay(s)	7.7
Level of Service	B

Crosswalk

Length (ft)	70
Lanes Crossed	2
Veh Vol Crossed	678
Ped Vol Crossed	13
Yield Rate(%)	90
Ped Platooning	Yes
Critical Headway (s)	30.00
Prob of Delayed X-ing	1.00
Prob of Blocked Lane	0.97
Delay for adq Gap	4636.89
Avg Ped Delay (s)	7.70

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	85.0	85.0	50.0	50.0
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	7	7	2	2
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated	Actuated	Actuated	Actuated
Corresponding Signal Phase	4	8	2	6
Effective Walk Time (s)	25.0	25.0	17.0	17.0
Right Corner Size A (ft)	4.0	6.0	6.0	6.0
Right Corner Size B (ft)	5.0	6.0	10.0	6.0
Right Corner Curb Radius (ft)	4.0	6.0	6.0	6.0
Right Corner Total Area (sq.ft)	16.56	28.26	52.26	28.26
Ped. Left-Right Flow Rate (p/h)	10	2	11	3
Ped. Right-Left Flow Rate (p/h)	10	3	12	3
Ped. R. Sidewalk Flow Rate (p/h)	12	3	3	10
Veh. Perm. L. Flow in Walk (v/h)	79	19	20	358
Veh. Perm. R. Flow in Walk (v/h)	10	213	17	49
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	40	40	35	35
Right Corner Area per Ped (sq.ft)	258.2	1802.5	1501.0	695.3
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq.ft)	1775.2	6609.2	967.4	2025.2
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (s/p)	23.5	23.5	29.6	29.6
Pedestrian Compliance Code	Fair	Fair	Fair	Fair
Pedestrian Crosswalk Score	3.10	3.11	1.82	2.73
Pedestrian Crosswalk LOS	C	C	B	C

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	100.0	100.0	45.0	45.0
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	7	7	3	2
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated	Actuated	Actuated	Actuated
Corresponding Signal Phase	4	8	2	6
Effective Walk Time (s)	29.0	29.0	15.0	15.0
Right Corner Size A (ft)	8.0	20.0	7.0	6.0
Right Corner Size B (ft)	7.0	6.0	5.0	20.0
Right Corner Curb Radius (ft)	8.0	8.0	5.0	9.0
Right Corner Total Area (sq.ft)	42.24	106.24	29.62	102.58
Ped. Left-Right Flow Rate (p/h)	10	7	5	7
Ped. Right-Left Flow Rate (p/h)	9	7	6	7
Ped. R. Sidewalk Flow Rate (p/h)	6	7	7	9
Veh. Perm. L. Flow in Walk (v/h)	0	0	30	80
Veh. Perm. R. Flow in Walk (v/h)	0	0	83	120
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	40	40	25	25
Right Corner Area per Ped (sq.ft)	1044.1	2718.9	820.1	2185.5
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq.ft)	2303.3	3126.9	1524.8	1012.2
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (s/p)	20.7	20.7	31.2	31.2
Pedestrian Compliance Code	Fair	Fair	Poor	Poor
Pedestrian Crosswalk Score	2.99	3.00	2.08	2.06
Pedestrian Crosswalk LOS	C	C	B	B

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	75.0	75.0	100.0	100.0
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	2	7	7
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated	Actuated	Actuated	Actuated
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	23.0	23.0	29.0	29.0
Right Corner Size A (ft)	8.0	6.0	4.0	5.0
Right Corner Size B (ft)	8.0	8.0	6.0	4.0
Right Corner Curb Radius (ft)	8.0	6.0	4.0	4.0
Right Corner Total Area (sq.ft)	50.24	40.26	20.56	16.56
Ped. Left-Right Flow Rate (p/h)	5	1	6	0
Ped. Right-Left Flow Rate (p/h)	4	1	6	1
Ped. R. Sidewalk Flow Rate (p/h)	6	1	1	4
Veh. Perm. L. Flow in Walk (v/h)	201	13	15	14
Veh. Perm. R. Flow in Walk (v/h)	21	8	17	331
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	25	25	40	40
Right Corner Area per Ped (sq.ft)	1664.3	9050.7	1221.2	1051.6
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq.ft)	3252.2	16602.3	3608.2	38596.1
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (s/p)	24.9	24.9	20.7	20.7
Pedestrian Compliance Code	Fair	Fair	Fair	Fair
Pedestrian Crosswalk Score	2.37	1.75	3.08	3.17
Pedestrian Crosswalk LOS	B	B	C	C

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	50.0	70.0	90.0	90.0
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	4	7	7
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated	Actuated	Actuated	Actuated
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	17.0	23.0	27.0	27.0
Right Corner Size A (ft)	5.0	6.0	6.0	8.0
Right Corner Size B (ft)	10.0	6.0	10.0	6.0
Right Corner Curb Radius (ft)	5.0	6.0	6.0	6.0
Right Corner Total Area (sq.ft)	44.62	28.26	52.26	40.26
Ped. Left-Right Flow Rate (p/h)	13	7	7	25
Ped. Right-Left Flow Rate (p/h)	12	7	6	25
Ped. R. Sidewalk Flow Rate (p/h)	6	25	7	12
Veh. Perm. L. Flow in Walk (v/h)	4	92	13	53
Veh. Perm. R. Flow in Walk (v/h)	10	78	96	3
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	25	25	40	40
Right Corner Area per Ped (sq.ft)	895.6	273.5	1369.8	400.5
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq.ft)	821.6	1887.4	2650.8	704.7
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (s/p)	34.4	29.6	26.6	26.6
Pedestrian Compliance Code	Poor	Fair	Fair	Fair
Pedestrian Crosswalk Score	1.95	2.32	3.11	3.16
Pedestrian Crosswalk LOS	B	B	C	C

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	75.0	75.0	90.0	90.0
Crosswalk Width (ft)	10.0	10.0	10.0	10.0
Total Number of Lanes Crossed	3	3	7	7
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated	Actuated	Actuated	Actuated
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	23.0	23.0	27.0	27.0
Right Corner Size A (ft)	5.0	10.0	10.0	4.0
Right Corner Size B (ft)	5.0	10.0	10.0	4.0
Right Corner Curb Radius (ft)	5.0	10.0	10.0	4.0
Right Corner Total Area (sq.ft)	19.62	78.50	78.50	12.56
Ped. Left-Right Flow Rate (p/h)	0	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	72	45	34	37
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	25	25	40	40
Right Corner Area per Ped (sq.ft)	0.0	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-	-
Ped. Circulation Area (sq.ft)	0.0	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-	-
Pedestrian Delay (s/p)	29.6	29.6	26.6	26.6
Pedestrian Compliance Code	Fair	Fair	Fair	Fair
Pedestrian Crosswalk Score	2.03	2.00	3.10	3.09
Pedestrian Crosswalk LOS	B	B	C	C

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	105.0	105.0	105.0	105.0
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	8	8	8	8
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated	Actuated	Actuated	Actuated
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	30.0	30.0	30.0	30.0
Right Corner Size A (ft)	6.0	10.0	4.0	6.0
Right Corner Size B (ft)	6.0	6.0	4.0	8.0
Right Corner Curb Radius (ft)	6.0	6.0	4.0	6.0
Right Corner Total Area (sq.ft)	28.26	52.26	12.56	40.26
Ped. Left-Right Flow Rate (p/h)	8	6	8	11
Ped. Right-Left Flow Rate (p/h)	9	7	8	11
Ped. R. Sidewalk Flow Rate (p/h)	8	11	7	9
Veh. Perm. L. Flow in Walk (v/h)	220	269	189	159
Veh. Perm. R. Flow in Walk (v/h)	156	217	253	113
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	40	40	40	40
Right Corner Area per Ped (sq.ft)	610.0	1012.7	304.3	745.0
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq.ft)	2356.9	2960.6	2444.8	1889.0
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (s/p)	20.0	20.0	20.0	20.0
Pedestrian Compliance Code	Fair	Fair	Fair	Fair
Pedestrian Crosswalk Score	3.42	3.53	3.47	3.40
Pedestrian Crosswalk LOS	C	D	C	C

Approach

Approach Direction	NB
Median Present?	No
Approach Delay(s)	5.8
Level of Service	B

Crosswalk

Length (ft)	40
Lanes Crossed	2
Veh Vol Crossed	878
Ped Vol Crossed	1
Yield Rate(%)	90
Ped Platooning	Yes
Critical Headway (s)	21.43
Prob of Delayed X-ing	0.99
Prob of Blocked Lane	0.93
Delay for adq Gap	741.44
Avg Ped Delay (s)	5.84

Approach

Approach Direction	SB
Median Present?	No
Approach Delay(s)	5.8
Level of Service	B

Crosswalk

Length (ft)	40
Lanes Crossed	2
Veh Vol Crossed	878
Ped Vol Crossed	0
Yield Rate(%)	90
Ped Platooning	Yes
Critical Headway (s)	21.43
Prob of Delayed X-ing	0.99
Prob of Blocked Lane	0.93
Delay for adq Gap	741.44
Avg Ped Delay (s)	5.84

Approach

Approach Direction	NB
Median Present?	No
Approach Delay(s)	6.5
Level of Service	B

Crosswalk

Length (ft)	70
Lanes Crossed	2
Veh Vol Crossed	808
Ped Vol Crossed	5
Yield Rate(%)	90
Ped Platooning	Yes
Critical Headway (s)	30.00
Prob of Delayed X-ing	1.00
Prob of Blocked Lane	0.98
Delay for adq Gap	14351.66
Avg Ped Delay (s)	6.51

Approach

Approach Direction	SB
Median Present?	No
Approach Delay(s)	6.5
Level of Service	B

Crosswalk

Length (ft)	70
Lanes Crossed	2
Veh Vol Crossed	808
Ped Vol Crossed	5
Yield Rate(%)	90
Ped Platooning	Yes
Critical Headway (s)	30.00
Prob of Delayed X-ing	1.00
Prob of Blocked Lane	0.98
Delay for adq Gap	14351.66
Avg Ped Delay (s)	6.51

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	85.0	85.0	50.0	50.0
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	7	7	2	2
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated	Actuated	Actuated	Actuated
Corresponding Signal Phase	4	8	2	6
Effective Walk Time (s)	25.0	25.0	17.0	17.0
Right Corner Size A (ft)	4.0	6.0	6.0	6.0
Right Corner Size B (ft)	5.0	6.0	10.0	6.0
Right Corner Curb Radius (ft)	4.0	6.0	6.0	6.0
Right Corner Total Area (sq.ft)	16.56	28.26	52.26	28.26
Ped. Left-Right Flow Rate (p/h)	4	1	6	1
Ped. Right-Left Flow Rate (p/h)	3	1	6	1
Ped. R. Sidewalk Flow Rate (p/h)	6	1	1	3
Veh. Perm. L. Flow in Walk (v/h)	124	11	7	213
Veh. Perm. R. Flow in Walk (v/h)	10	349	11	113
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	40	40	35	35
Right Corner Area per Ped (sq.ft)	583.8	5073.5	3118.8	2106.6
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq.ft)	4964.5	15409.4	1900.3	7190.3
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (s/p)	23.5	23.5	29.6	29.6
Pedestrian Compliance Code	Fair	Fair	Fair	Fair
Pedestrian Crosswalk Score	3.20	3.10	1.76	2.50
Pedestrian Crosswalk LOS	C	C	B	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	883	1388	154	56
Effct. Green for Bike (s)	42.1	47.9	36.5	36.5
Cross Street Width (ft)	36.0	24.0	84.8	84.2
Through Lanes Number	3	3	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	842	958	730	730
Bicycle Delay (s/bike)	16.8	13.6	20.2	20.2
Bicycle Compliance	Fair	Fair	Fair	Fair
Bicycle LOS Score	2.60	2.69	3.11	2.94
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	241	98	1258	1826
Effct. Green for Bike (s)	20.7	20.7	70.3	70.3
Cross Street Width (ft)	84.5	87.7	34.6	38.0
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	414	414	1406	1406
Bicycle Delay (s/bike)	31.4	31.4	4.4	4.4
Bicycle Compliance	Poor	Poor	Good	Good
Bicycle LOS Score	3.25	3.06	2.78	3.15
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	1	22	4	2
Total Flow Rate (veh/h)	83	409	1292	1647
Effct. Green for Bike (s)	26.5	26.5	46.4	60.4
Cross Street Width (ft)	88.9	84.0	47.9	36.5
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	530	530	928	1208
Bicycle Delay (s/bike)	27.0	27.3	14.4	7.8
Bicycle Compliance	Fair	Fair	Fair	Good
Bicycle LOS Score	3.06	3.52	3.00	3.02
Bicycle LOS	C	D	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	3	1	6	2
Total Flow Rate (veh/h)	219	215	1264	1714
Effct. Green for Bike (s)	16.1	15.9	59.9	61.0
Cross Street Width (ft)	85.0	88.1	36.2	49.2
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	322	318	1198	1220
Bicycle Delay (s/bike)	35.2	35.4	8.1	7.6
Bicycle Compliance	Poor	Poor	Good	Good
Bicycle LOS Score	3.22	3.26	2.81	3.26
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	1	5	6	3
Total Flow Rate (veh/h)	1049	1003	1551	1800
Effct. Green for Bike (s)	33.2	33.2	57.8	57.8
Cross Street Width (ft)	96.7	96.1	96.7	107.5
Through Lanes Number	3	3	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	664	664	1156	1156
Bicycle Delay (s/bike)	22.3	22.4	8.9	8.9
Bicycle Compliance	Fair	Fair	Good	Good
Bicycle LOS Score	3.62	3.58	3.89	4.19
Bicycle LOS	D	D	D	D

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	6	0	0
Total Flow Rate (veh/h)	1300	1086	75	519
Effct. Green for Bike (s)	37.5	37.5	43.5	43.5
Cross Street Width (ft)	24.1	24.1	95.3	96.0
Through Lanes Number	3	3	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	833	833	967	967
Bicycle Delay (s/bike)	15.3	15.4	12.0	12.0
Bicycle Compliance	Fair	Fair	Fair	Fair
Bicycle LOS Score	2.64	2.53	3.14	3.88
Bicycle LOS	C	C	C	D

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	1150	1145	203	241
Effct. Green for Bike (s)	35.4	30.8	36.5	36.5
Cross Street Width (ft)	36.0	24.0	84.8	84.2
Through Lanes Number	3	3	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	787	684	811	811
Bicycle Delay (s/bike)	16.6	19.5	15.9	15.9
Bicycle Compliance	Fair	Fair	Fair	Fair
Bicycle LOS Score	2.74	2.56	3.19	3.25
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	235	37	1660	1249
Effct. Green for Bike (s)	21.7	21.7	59.3	59.3
Cross Street Width (ft)	84.5	87.6	34.6	37.9
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	482	482	1318	1318
Bicycle Delay (s/bike)	25.9	25.9	5.2	5.2
Bicycle Compliance	Fair	Fair	Good	Good
Bicycle LOS Score	3.24	2.96	3.00	2.83
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	1	6	1	0
Total Flow Rate (veh/h)	15	180	1675	1032
Effct. Green for Bike (s)	19.4	19.4	61.3	69.7
Cross Street Width (ft)	88.9	84.0	47.9	36.5
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	388	388	1226	1394
Bicycle Delay (s/bike)	32.5	32.6	7.5	4.6
Bicycle Compliance	Poor	Poor	Good	Good
Bicycle LOS Score	2.94	3.14	3.21	2.69
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	1	1	3	2
Total Flow Rate (veh/h)	179	139	1654	1079
Effct. Green for Bike (s)	14.0	14.0	70.3	60.6
Cross Street Width (ft)	85.0	88.1	36.2	49.2
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	280	280	1406	1212
Bicycle Delay (s/bike)	37.0	37.0	4.4	7.8
Bicycle Compliance	Poor	Poor	Good	Good
Bicycle LOS Score	3.16	3.14	3.02	2.91
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	2	4	4	5
Total Flow Rate (veh/h)	1200	1507	1727	1172
Effct. Green for Bike (s)	41.5	41.5	39.5	39.5
Cross Street Width (ft)	96.7	96.1	96.7	107.5
Through Lanes Number	3	3	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	922	922	878	878
Bicycle Delay (s/bike)	13.1	13.1	14.2	14.2
Bicycle Compliance	Fair	Fair	Fair	Fair
Bicycle LOS Score	3.70	3.86	3.99	3.85
Bicycle LOS	D	D	D	D

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	3	0	2	0
Total Flow Rate (veh/h)	1062	1594	32	354
Effct. Green for Bike (s)	49.0	49.0	32.0	32.0
Cross Street Width (ft)	24.1	24.1	95.3	96.0
Through Lanes Number	3	3	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	1089	1089	711	711
Bicycle Delay (s/bike)	9.4	9.3	18.7	18.7
Bicycle Compliance	Good	Good	Fair	Fair
Bicycle LOS Score	2.51	2.81	3.07	3.61
Bicycle LOS	C	C	C	D

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	883	1388	154	56
Effct. Green for Bike (s)	42.1	47.9	36.5	36.5
Cross Street Width (ft)	36.0	24.0	84.8	84.2
Through Lanes Number	3	3	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	842	958	730	730
Bicycle Delay (s/bike)	16.8	13.6	20.2	20.2
Bicycle Compliance	Fair	Fair	Fair	Fair
Bicycle LOS Score	2.60	2.69	3.11	2.94
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	241	98	1258	1826
Effct. Green for Bike (s)	20.7	20.7	70.3	70.3
Cross Street Width (ft)	84.5	87.7	34.6	38.0
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	414	414	1406	1406
Bicycle Delay (s/bike)	31.4	31.4	4.4	4.4
Bicycle Compliance	Poor	Poor	Good	Good
Bicycle LOS Score	3.25	3.06	2.78	3.15
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	1	22	4	2
Total Flow Rate (veh/h)	83	409	1292	1647
Effct. Green for Bike (s)	26.5	26.5	46.4	60.4
Cross Street Width (ft)	88.9	84.0	48.0	36.5
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	530	530	928	1208
Bicycle Delay (s/bike)	27.0	27.3	14.4	7.8
Bicycle Compliance	Fair	Fair	Fair	Good
Bicycle LOS Score	3.06	3.52	3.00	3.02
Bicycle LOS	C	D	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	3	1	6	2
Total Flow Rate (veh/h)	219	215	1264	1714
Effct. Green for Bike (s)	16.1	15.9	59.9	61.0
Cross Street Width (ft)	85.0	88.0	36.1	49.2
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	322	318	1198	1220
Bicycle Delay (s/bike)	35.2	35.4	8.1	7.6
Bicycle Compliance	Poor	Poor	Good	Good
Bicycle LOS Score	3.22	3.26	2.81	3.26
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	1	5	6	3
Total Flow Rate (veh/h)	1049	1003	1551	1800
Effct. Green for Bike (s)	33.2	33.2	57.8	57.8
Cross Street Width (ft)	96.7	96.1	96.7	107.5
Through Lanes Number	3	3	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	664	664	1156	1156
Bicycle Delay (s/bike)	22.3	22.4	8.9	8.9
Bicycle Compliance	Fair	Fair	Good	Good
Bicycle LOS Score	3.62	3.58	3.89	4.19
Bicycle LOS	D	D	D	D

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	6	0	0
Total Flow Rate (veh/h)	1300	1086	75	519
Effct. Green for Bike (s)	37.5	37.5	43.5	43.5
Cross Street Width (ft)	24.1	24.1	95.3	96.0
Through Lanes Number	3	3	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	833	833	967	967
Bicycle Delay (s/bike)	15.3	15.4	12.0	12.0
Bicycle Compliance	Fair	Fair	Fair	Fair
Bicycle LOS Score	2.64	2.53	3.14	3.88
Bicycle LOS	C	C	C	D

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	1150	1145	203	241
Effct. Green for Bike (s)	35.4	30.8	36.5	36.5
Cross Street Width (ft)	36.0	24.0	84.8	84.2
Through Lanes Number	3	3	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	787	684	811	811
Bicycle Delay (s/bike)	16.6	19.5	15.9	15.9
Bicycle Compliance	Fair	Fair	Fair	Fair
Bicycle LOS Score	2.74	2.56	3.19	3.25
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	235	37	1660	1249
Effct. Green for Bike (s)	21.7	21.7	59.3	59.3
Cross Street Width (ft)	84.5	87.6	34.6	37.9
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	482	482	1318	1318
Bicycle Delay (s/bike)	25.9	25.9	5.2	5.2
Bicycle Compliance	Fair	Fair	Good	Good
Bicycle LOS Score	3.24	2.96	3.00	2.83
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	1	6	1	0
Total Flow Rate (veh/h)	15	180	1675	1032
Effct. Green for Bike (s)	19.4	19.4	61.3	69.7
Cross Street Width (ft)	88.9	84.0	48.0	36.5
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	388	388	1226	1394
Bicycle Delay (s/bike)	32.5	32.6	7.5	4.6
Bicycle Compliance	Poor	Poor	Good	Good
Bicycle LOS Score	2.94	3.14	3.22	2.69
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	1	1	3	2
Total Flow Rate (veh/h)	179	139	1654	1079
Effct. Green for Bike (s)	14.0	14.0	70.3	60.6
Cross Street Width (ft)	85.0	88.0	36.1	49.2
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	280	280	1406	1212
Bicycle Delay (s/bike)	37.0	37.0	4.4	7.8
Bicycle Compliance	Poor	Poor	Good	Good
Bicycle LOS Score	3.16	3.14	3.02	2.91
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	2	4	4	5
Total Flow Rate (veh/h)	1200	1507	1727	1172
Effct. Green for Bike (s)	41.5	41.5	39.5	39.5
Cross Street Width (ft)	96.7	96.1	96.7	107.5
Through Lanes Number	3	3	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	922	922	878	878
Bicycle Delay (s/bike)	13.1	13.1	14.2	14.2
Bicycle Compliance	Fair	Fair	Fair	Fair
Bicycle LOS Score	3.70	3.86	3.99	3.85
Bicycle LOS	D	D	D	D

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	3	0	2	0
Total Flow Rate (veh/h)	1062	1594	32	354
Effct. Green for Bike (s)	49.0	49.0	32.0	32.0
Cross Street Width (ft)	24.1	24.1	95.3	96.0
Through Lanes Number	3	3	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	1089	1089	711	711
Bicycle Delay (s/bike)	9.4	9.3	18.7	18.7
Bicycle Compliance	Good	Good	Fair	Fair
Bicycle LOS Score	2.51	2.81	3.07	3.61
Bicycle LOS	C	C	C	D

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	883	1388	154	56
Effct. Green for Bike (s)	42.1	47.9	36.5	36.5
Cross Street Width (ft)	36.0	24.0	84.8	84.2
Through Lanes Number	3	3	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	Yes
Bicycle Lane Capacity (bike/h)	842	958	730	730
Bicycle Delay (s/bike)	16.8	13.6	20.2	20.2
Bicycle Compliance	Fair	Fair	Fair	Fair
Bicycle LOS Score	2.60	2.69	3.11	2.94
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	241	98	1258	1826
Effct. Green for Bike (s)	20.7	20.7	70.3	70.3
Cross Street Width (ft)	84.5	87.7	34.6	38.0
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	Yes	No	No
Bicycle Lane Capacity (bike/h)	414	414	1406	1406
Bicycle Delay (s/bike)	31.4	31.4	4.4	4.4
Bicycle Compliance	Poor	Poor	Good	Good
Bicycle LOS Score	3.25	3.06	2.78	3.15
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	1	22	4	2
Total Flow Rate (veh/h)	83	409	1292	1647
Effct. Green for Bike (s)	26.5	26.5	46.4	60.4
Cross Street Width (ft)	88.9	84.0	47.9	36.5
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	530	530	928	1208
Bicycle Delay (s/bike)	27.0	27.3	14.4	7.8
Bicycle Compliance	Fair	Fair	Fair	Good
Bicycle LOS Score	3.06	3.52	3.00	3.02
Bicycle LOS	C	D	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	3	1	6	2
Total Flow Rate (veh/h)	219	215	1264	1714
Effct. Green for Bike (s)	16.1	15.9	59.9	61.0
Cross Street Width (ft)	85.0	88.1	36.2	49.2
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	Yes	Yes	No	No
Bicycle Lane Capacity (bike/h)	322	318	1198	1220
Bicycle Delay (s/bike)	35.2	35.4	8.1	7.6
Bicycle Compliance	Poor	Poor	Good	Good
Bicycle LOS Score	3.22	3.26	2.81	3.26
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	1	5	6	3
Total Flow Rate (veh/h)	1049	1003	1551	1800
Effct. Green for Bike (s)	33.2	33.2	57.8	57.8
Cross Street Width (ft)	96.7	96.1	96.7	107.5
Through Lanes Number	3	3	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	664	664	1156	1156
Bicycle Delay (s/bike)	22.3	22.4	8.9	8.9
Bicycle Compliance	Fair	Fair	Good	Good
Bicycle LOS Score	3.62	3.58	3.89	4.19
Bicycle LOS	D	D	D	D

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	6	0	0
Total Flow Rate (veh/h)	1300	1086	75	519
Effct. Green for Bike (s)	37.5	37.5	43.5	43.5
Cross Street Width (ft)	24.1	24.1	95.3	96.0
Through Lanes Number	3	3	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	Yes
Bicycle Lane Capacity (bike/h)	833	833	967	967
Bicycle Delay (s/bike)	15.3	15.4	12.0	12.0
Bicycle Compliance	Fair	Fair	Fair	Fair
Bicycle LOS Score	2.64	2.53	3.14	3.88
Bicycle LOS	C	C	C	D

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	1150	1145	203	241
Effct. Green for Bike (s)	35.4	30.8	36.5	36.5
Cross Street Width (ft)	36.0	24.0	84.8	84.2
Through Lanes Number	3	3	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	Yes
Bicycle Lane Capacity (bike/h)	787	684	811	811
Bicycle Delay (s/bike)	16.6	19.5	15.9	15.9
Bicycle Compliance	Fair	Fair	Fair	Fair
Bicycle LOS Score	2.74	2.56	3.19	3.25
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	235	37	1660	1249
Effct. Green for Bike (s)	21.7	21.7	59.3	59.3
Cross Street Width (ft)	84.5	87.6	34.6	37.9
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	Yes	No	No
Bicycle Lane Capacity (bike/h)	482	482	1318	1318
Bicycle Delay (s/bike)	25.9	25.9	5.2	5.2
Bicycle Compliance	Fair	Fair	Good	Good
Bicycle LOS Score	3.24	2.96	3.00	2.83
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	1	6	1	0
Total Flow Rate (veh/h)	15	180	1675	1032
Effct. Green for Bike (s)	19.4	19.4	61.3	69.7
Cross Street Width (ft)	88.9	84.0	47.9	36.5
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	388	388	1226	1394
Bicycle Delay (s/bike)	32.5	32.6	7.5	4.6
Bicycle Compliance	Poor	Poor	Good	Good
Bicycle LOS Score	2.94	3.14	3.21	2.69
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	1	1	3	2
Total Flow Rate (veh/h)	179	139	1654	1079
Effct. Green for Bike (s)	14.0	14.0	70.3	60.6
Cross Street Width (ft)	85.0	88.1	36.2	49.2
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	Yes	Yes	No	No
Bicycle Lane Capacity (bike/h)	280	280	1406	1212
Bicycle Delay (s/bike)	37.0	37.0	4.4	7.8
Bicycle Compliance	Poor	Poor	Good	Good
Bicycle LOS Score	3.16	3.14	3.02	2.91
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	2	4	4	5
Total Flow Rate (veh/h)	1200	1507	1727	1172
Effct. Green for Bike (s)	41.5	41.5	39.5	39.5
Cross Street Width (ft)	96.7	96.1	96.7	107.5
Through Lanes Number	3	3	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	922	922	878	878
Bicycle Delay (s/bike)	13.1	13.1	14.2	14.2
Bicycle Compliance	Fair	Fair	Fair	Fair
Bicycle LOS Score	3.70	3.86	3.99	3.85
Bicycle LOS	D	D	D	D

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	3	0	2	0
Total Flow Rate (veh/h)	1062	1594	32	354
Effct. Green for Bike (s)	49.0	49.0	32.0	32.0
Cross Street Width (ft)	24.1	24.1	95.3	96.0
Through Lanes Number	3	3	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	Yes
Bicycle Lane Capacity (bike/h)	1089	1089	711	711
Bicycle Delay (s/bike)	9.4	9.3	18.7	18.7
Bicycle Compliance	Good	Good	Fair	Fair
Bicycle LOS Score	2.51	2.81	3.07	3.61
Bicycle LOS	C	C	C	D

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	883	1388	154	56
Effct. Green for Bike (s)	42.1	47.9	36.5	36.5
Cross Street Width (ft)	36.0	24.0	84.8	84.2
Through Lanes Number	3	3	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	842	958	730	730
Bicycle Delay (s/bike)	16.8	13.6	20.2	20.2
Bicycle Compliance	Fair	Fair	Fair	Fair
Bicycle LOS Score	2.60	2.69	3.11	2.94
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	241	98	1258	1826
Effct. Green for Bike (s)	20.7	20.7	70.3	70.3
Cross Street Width (ft)	84.5	87.7	34.6	38.0
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	Yes	No	No
Bicycle Lane Capacity (bike/h)	414	414	1406	1406
Bicycle Delay (s/bike)	31.4	31.4	4.4	4.4
Bicycle Compliance	Poor	Poor	Good	Good
Bicycle LOS Score	3.25	3.06	2.78	3.15
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	1	22	4	2
Total Flow Rate (veh/h)	83	409	1292	1647
Effct. Green for Bike (s)	26.5	26.5	46.4	60.4
Cross Street Width (ft)	88.9	84.0	48.0	36.5
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	7.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	7.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	Yes	No	No
Bicycle Lane Capacity (bike/h)	530	530	928	1208
Bicycle Delay (s/bike)	27.0	27.3	14.4	7.8
Bicycle Compliance	Fair	Fair	Fair	Good
Bicycle LOS Score	3.06	2.02	3.00	3.02
Bicycle LOS	C	B	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	3	1	6	2
Total Flow Rate (veh/h)	219	215	1264	1714
Effct. Green for Bike (s)	16.1	15.9	59.9	61.0
Cross Street Width (ft)	85.0	88.0	36.1	49.2
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	5.0	5.0	0.0	0.0
Striped Parking Lane Width (ft)	7.5	7.5	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	Yes	Yes	No	No
Bicycle Lane Capacity (bike/h)	322	318	1198	1220
Bicycle Delay (s/bike)	35.2	35.4	8.1	7.6
Bicycle Compliance	Poor	Poor	Good	Good
Bicycle LOS Score	2.15	2.19	2.81	3.26
Bicycle LOS	B	B	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	1	5	6	3
Total Flow Rate (veh/h)	1049	1003	1551	1800
Effct. Green for Bike (s)	33.2	33.2	57.8	57.8
Cross Street Width (ft)	96.7	96.1	96.7	107.5
Through Lanes Number	3	3	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	664	664	1156	1156
Bicycle Delay (s/bike)	22.3	22.4	8.9	8.9
Bicycle Compliance	Fair	Fair	Good	Good
Bicycle LOS Score	3.62	3.58	3.89	4.19
Bicycle LOS	D	D	D	D

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	6	0	0
Total Flow Rate (veh/h)	1300	1086	75	519
Effct. Green for Bike (s)	37.5	37.5	43.5	43.5
Cross Street Width (ft)	24.1	24.1	95.3	96.0
Through Lanes Number	3	3	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	8.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	Yes
Bicycle Lane Capacity (bike/h)	833	833	967	967
Bicycle Delay (s/bike)	15.3	15.4	12.0	12.0
Bicycle Compliance	Fair	Fair	Fair	Fair
Bicycle LOS Score	2.64	2.53	3.14	3.88
Bicycle LOS	C	C	C	D

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	1150	1145	203	241
Effct. Green for Bike (s)	35.4	30.8	36.5	36.5
Cross Street Width (ft)	36.0	24.0	84.8	84.2
Through Lanes Number	3	3	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	787	684	811	811
Bicycle Delay (s/bike)	16.6	19.5	15.9	15.9
Bicycle Compliance	Fair	Fair	Fair	Fair
Bicycle LOS Score	2.74	2.56	3.19	3.25
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	235	37	1660	1249
Effct. Green for Bike (s)	21.7	21.7	59.3	59.3
Cross Street Width (ft)	84.5	87.6	34.6	37.9
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	Yes	No	No
Bicycle Lane Capacity (bike/h)	482	482	1318	1318
Bicycle Delay (s/bike)	25.9	25.9	5.2	5.2
Bicycle Compliance	Fair	Fair	Good	Good
Bicycle LOS Score	3.24	2.96	3.00	2.83
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	1	6	1	0
Total Flow Rate (veh/h)	15	180	1675	1032
Effct. Green for Bike (s)	19.4	19.4	61.3	69.7
Cross Street Width (ft)	88.9	84.0	48.0	36.5
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	7.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	7.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	Yes	No	No
Bicycle Lane Capacity (bike/h)	388	388	1226	1394
Bicycle Delay (s/bike)	32.5	32.6	7.5	4.6
Bicycle Compliance	Poor	Poor	Good	Good
Bicycle LOS Score	2.94	1.64	3.22	2.69
Bicycle LOS	C	B	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	1	1	3	2
Total Flow Rate (veh/h)	179	139	1654	1079
Effct. Green for Bike (s)	14.0	14.0	70.3	60.6
Cross Street Width (ft)	85.0	88.0	36.1	49.2
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	5.0	5.0	0.0	0.0
Striped Parking Lane Width (ft)	7.5	7.5	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	Yes	Yes	No	No
Bicycle Lane Capacity (bike/h)	280	280	1406	1212
Bicycle Delay (s/bike)	37.0	37.0	4.4	7.8
Bicycle Compliance	Poor	Poor	Good	Good
Bicycle LOS Score	2.08	2.06	3.02	2.91
Bicycle LOS	B	B	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	2	4	4	5
Total Flow Rate (veh/h)	1200	1507	1727	1172
Effct. Green for Bike (s)	41.5	41.5	39.5	39.5
Cross Street Width (ft)	96.7	96.1	96.7	107.5
Through Lanes Number	3	3	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	922	922	878	878
Bicycle Delay (s/bike)	13.1	13.1	14.2	14.2
Bicycle Compliance	Fair	Fair	Fair	Fair
Bicycle LOS Score	3.70	3.86	3.99	3.85
Bicycle LOS	D	D	D	D

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	3	0	2	0
Total Flow Rate (veh/h)	1062	1594	32	354
Effct. Green for Bike (s)	49.0	49.0	32.0	32.0
Cross Street Width (ft)	24.1	24.1	95.3	96.0
Through Lanes Number	3	3	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	8.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	Yes
Bicycle Lane Capacity (bike/h)	1089	1089	711	711
Bicycle Delay (s/bike)	9.4	9.3	18.7	18.7
Bicycle Compliance	Good	Good	Fair	Fair
Bicycle LOS Score	2.51	2.81	3.07	3.61
Bicycle LOS	C	C	C	D

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	883	1388	154	56
Effct. Green for Bike (s)	42.1	47.9	36.5	36.5
Cross Street Width (ft)	36.0	24.0	84.8	84.2
Through Lanes Number	3	3	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	Yes
Bicycle Lane Capacity (bike/h)	842	958	730	730
Bicycle Delay (s/bike)	16.8	13.6	20.2	20.2
Bicycle Compliance	Fair	Fair	Fair	Fair
Bicycle LOS Score	2.60	2.69	3.11	2.94
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	241	98	1258	1826
Effct. Green for Bike (s)	20.7	20.7	70.3	70.3
Cross Street Width (ft)	84.5	87.7	34.6	38.0
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	Yes	No	No
Bicycle Lane Capacity (bike/h)	414	414	1406	1406
Bicycle Delay (s/bike)	31.4	31.4	4.4	4.4
Bicycle Compliance	Poor	Poor	Good	Good
Bicycle LOS Score	3.25	3.06	2.78	3.15
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	1	22	4	2
Total Flow Rate (veh/h)	83	409	1292	1647
Effct. Green for Bike (s)	26.5	26.5	46.4	60.4
Cross Street Width (ft)	88.9	84.0	47.9	36.5
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	530	530	928	1208
Bicycle Delay (s/bike)	27.0	27.3	14.4	7.8
Bicycle Compliance	Fair	Fair	Fair	Good
Bicycle LOS Score	3.06	3.52	3.00	3.02
Bicycle LOS	C	D	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	3	1	6	2
Total Flow Rate (veh/h)	219	215	1264	1714
Effct. Green for Bike (s)	16.1	15.9	59.9	61.0
Cross Street Width (ft)	85.0	88.1	36.2	49.2
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	Yes	Yes	No	No
Bicycle Lane Capacity (bike/h)	322	318	1198	1220
Bicycle Delay (s/bike)	35.2	35.4	8.1	7.6
Bicycle Compliance	Poor	Poor	Good	Good
Bicycle LOS Score	3.22	3.26	2.81	3.26
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	1	5	6	3
Total Flow Rate (veh/h)	1049	1003	1551	1800
Effct. Green for Bike (s)	33.2	33.2	57.8	57.8
Cross Street Width (ft)	96.7	96.1	96.7	107.5
Through Lanes Number	3	3	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	664	664	1156	1156
Bicycle Delay (s/bike)	22.3	22.4	8.9	8.9
Bicycle Compliance	Fair	Fair	Good	Good
Bicycle LOS Score	3.62	3.58	3.89	4.19
Bicycle LOS	D	D	D	D

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	6	0	0
Total Flow Rate (veh/h)	1300	1086	75	519
Effct. Green for Bike (s)	37.5	37.5	43.5	43.5
Cross Street Width (ft)	24.1	24.1	95.3	96.0
Through Lanes Number	3	3	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	Yes
Bicycle Lane Capacity (bike/h)	833	833	967	967
Bicycle Delay (s/bike)	15.3	15.4	12.0	12.0
Bicycle Compliance	Fair	Fair	Fair	Fair
Bicycle LOS Score	2.64	2.53	3.14	3.88
Bicycle LOS	C	C	C	D

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	1150	1145	203	241
Effct. Green for Bike (s)	35.4	30.8	36.5	36.5
Cross Street Width (ft)	36.0	24.0	84.8	84.2
Through Lanes Number	3	3	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	Yes
Bicycle Lane Capacity (bike/h)	787	684	811	811
Bicycle Delay (s/bike)	16.6	19.5	15.9	15.9
Bicycle Compliance	Fair	Fair	Fair	Fair
Bicycle LOS Score	2.74	2.56	3.19	3.25
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	235	37	1660	1249
Effct. Green for Bike (s)	21.7	21.7	59.3	59.3
Cross Street Width (ft)	84.5	87.6	34.6	37.9
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	Yes	No	No
Bicycle Lane Capacity (bike/h)	482	482	1318	1318
Bicycle Delay (s/bike)	25.9	25.9	5.2	5.2
Bicycle Compliance	Fair	Fair	Good	Good
Bicycle LOS Score	3.24	2.96	3.00	2.83
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	1	6	1	0
Total Flow Rate (veh/h)	15	180	1675	1032
Effct. Green for Bike (s)	19.4	19.4	61.3	69.7
Cross Street Width (ft)	88.9	84.0	47.9	36.5
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	388	388	1226	1394
Bicycle Delay (s/bike)	32.5	32.6	7.5	4.6
Bicycle Compliance	Poor	Poor	Good	Good
Bicycle LOS Score	2.94	3.14	3.21	2.69
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	1	1	3	2
Total Flow Rate (veh/h)	179	139	1654	1079
Effct. Green for Bike (s)	14.0	14.0	70.3	60.6
Cross Street Width (ft)	85.0	88.1	36.2	49.2
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	Yes	Yes	No	No
Bicycle Lane Capacity (bike/h)	280	280	1406	1212
Bicycle Delay (s/bike)	37.0	37.0	4.4	7.8
Bicycle Compliance	Poor	Poor	Good	Good
Bicycle LOS Score	3.16	3.14	3.02	2.91
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	2	4	4	5
Total Flow Rate (veh/h)	1200	1507	1727	1172
Effct. Green for Bike (s)	41.5	41.5	39.5	39.5
Cross Street Width (ft)	96.7	96.1	96.7	107.5
Through Lanes Number	3	3	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	922	922	878	878
Bicycle Delay (s/bike)	13.1	13.1	14.2	14.2
Bicycle Compliance	Fair	Fair	Fair	Fair
Bicycle LOS Score	3.70	3.86	3.99	3.85
Bicycle LOS	D	D	D	D

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	3	0	2	0
Total Flow Rate (veh/h)	1062	1594	32	354
Effct. Green for Bike (s)	49.0	49.0	32.0	32.0
Cross Street Width (ft)	24.1	24.1	95.3	96.0
Through Lanes Number	3	3	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	Yes
Bicycle Lane Capacity (bike/h)	1089	1089	711	711
Bicycle Delay (s/bike)	9.4	9.3	18.7	18.7
Bicycle Compliance	Good	Good	Fair	Fair
Bicycle LOS Score	2.51	2.81	3.07	3.61
Bicycle LOS	C	C	C	D

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	883	1388	154	56
Effct. Green for Bike (s)	42.1	47.9	36.5	36.5
Cross Street Width (ft)	36.0	24.0	84.8	84.2
Through Lanes Number	3	3	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	842	958	730	730
Bicycle Delay (s/bike)	16.8	13.6	20.2	20.2
Bicycle Compliance	Fair	Fair	Fair	Fair
Bicycle LOS Score	2.60	2.69	3.11	2.94
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	241	98	1258	1826
Effct. Green for Bike (s)	20.7	20.7	70.3	70.3
Cross Street Width (ft)	84.5	87.7	34.6	38.0
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	Yes	No	No
Bicycle Lane Capacity (bike/h)	414	414	1406	1406
Bicycle Delay (s/bike)	31.4	31.4	4.4	4.4
Bicycle Compliance	Poor	Poor	Good	Good
Bicycle LOS Score	3.25	3.06	2.78	3.15
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	1	22	4	2
Total Flow Rate (veh/h)	83	409	1292	1647
Effct. Green for Bike (s)	26.5	26.5	46.4	60.4
Cross Street Width (ft)	88.9	84.0	48.0	36.5
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	7.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	7.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	Yes	No	No
Bicycle Lane Capacity (bike/h)	530	530	928	1208
Bicycle Delay (s/bike)	27.0	27.3	14.4	7.8
Bicycle Compliance	Fair	Fair	Fair	Good
Bicycle LOS Score	3.06	2.02	3.00	3.02
Bicycle LOS	C	B	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	3	1	6	2
Total Flow Rate (veh/h)	219	215	1264	1714
Effct. Green for Bike (s)	16.5	16.3	59.5	60.6
Cross Street Width (ft)	85.0	88.0	36.1	49.2
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	5.0	5.0	0.0	0.0
Striped Parking Lane Width (ft)	7.5	7.5	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	Yes	Yes	No	No
Bicycle Lane Capacity (bike/h)	330	326	1190	1212
Bicycle Delay (s/bike)	34.9	35.0	8.2	7.8
Bicycle Compliance	Poor	Poor	Good	Good
Bicycle LOS Score	2.15	2.19	2.81	3.26
Bicycle LOS	B	B	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	1	5	6	3
Total Flow Rate (veh/h)	1049	1003	1551	1800
Effct. Green for Bike (s)	33.2	33.2	57.8	57.8
Cross Street Width (ft)	96.7	96.1	96.7	107.5
Through Lanes Number	3	3	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	664	664	1156	1156
Bicycle Delay (s/bike)	22.3	22.4	8.9	8.9
Bicycle Compliance	Fair	Fair	Good	Good
Bicycle LOS Score	3.62	3.58	3.89	4.19
Bicycle LOS	D	D	D	D

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	6	0	0
Total Flow Rate (veh/h)	1300	1086	75	519
Effct. Green for Bike (s)	37.5	37.5	43.5	43.5
Cross Street Width (ft)	24.1	24.1	95.3	96.0
Through Lanes Number	3	3	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	8.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	Yes
Bicycle Lane Capacity (bike/h)	833	833	967	967
Bicycle Delay (s/bike)	15.3	15.4	12.0	12.0
Bicycle Compliance	Fair	Fair	Fair	Fair
Bicycle LOS Score	2.64	2.53	3.14	3.88
Bicycle LOS	C	C	C	D

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	1150	1145	203	241
Effct. Green for Bike (s)	35.4	30.8	36.5	36.5
Cross Street Width (ft)	36.0	24.0	84.8	84.2
Through Lanes Number	3	3	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	787	684	811	811
Bicycle Delay (s/bike)	16.6	19.5	15.9	15.9
Bicycle Compliance	Fair	Fair	Fair	Fair
Bicycle LOS Score	2.74	2.56	3.19	3.25
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	235	37	1660	1249
Effct. Green for Bike (s)	21.7	21.7	59.3	59.3
Cross Street Width (ft)	84.5	87.6	34.6	37.9
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	Yes	No	No
Bicycle Lane Capacity (bike/h)	482	482	1318	1318
Bicycle Delay (s/bike)	25.9	25.9	5.2	5.2
Bicycle Compliance	Fair	Fair	Good	Good
Bicycle LOS Score	3.24	2.96	3.00	2.83
Bicycle LOS	C	C	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	1	6	1	0
Total Flow Rate (veh/h)	15	180	1675	1032
Effct. Green for Bike (s)	19.4	19.4	61.3	69.7
Cross Street Width (ft)	88.9	84.0	48.0	36.5
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	7.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	7.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	Yes	No	No
Bicycle Lane Capacity (bike/h)	388	388	1226	1394
Bicycle Delay (s/bike)	32.5	32.6	7.5	4.6
Bicycle Compliance	Poor	Poor	Good	Good
Bicycle LOS Score	2.94	1.64	3.22	2.69
Bicycle LOS	C	B	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	1	1	3	2
Total Flow Rate (veh/h)	179	139	1654	1079
Effct. Green for Bike (s)	15.9	15.9	65.5	55.7
Cross Street Width (ft)	84.0	88.0	36.1	37.6
Through Lanes Number	1	1	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	5.0	5.0	0.0	0.0
Striped Parking Lane Width (ft)	7.5	7.5	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	Yes	Yes	No	No
Bicycle Lane Capacity (bike/h)	318	318	1310	1114
Bicycle Delay (s/bike)	35.4	35.4	6.0	9.8
Bicycle Compliance	Poor	Poor	Good	Good
Bicycle LOS Score	2.07	2.06	3.02	2.73
Bicycle LOS	B	B	C	C

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	2	4	4	5
Total Flow Rate (veh/h)	1200	1507	1727	1172
Effct. Green for Bike (s)	41.5	41.5	39.5	39.5
Cross Street Width (ft)	96.7	96.1	96.7	107.5
Through Lanes Number	3	3	3	3
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	922	922	878	878
Bicycle Delay (s/bike)	13.1	13.1	14.2	14.2
Bicycle Compliance	Fair	Fair	Fair	Fair
Bicycle LOS Score	3.70	3.86	3.99	3.85
Bicycle LOS	D	D	D	D

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	3	0	2	0
Total Flow Rate (veh/h)	1062	1594	32	354
Effct. Green for Bike (s)	49.0	49.0	32.0	32.0
Cross Street Width (ft)	24.1	24.1	95.3	96.0
Through Lanes Number	3	3	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Striped Parking Lane Width (ft)	0.0	0.0	0.0	8.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	Yes
Bicycle Lane Capacity (bike/h)	1089	1089	711	711
Bicycle Delay (s/bike)	9.4	9.3	18.7	18.7
Bicycle Compliance	Good	Good	Fair	Fair
Bicycle LOS Score	2.51	2.81	3.07	3.61
Bicycle LOS	C	C	C	D