

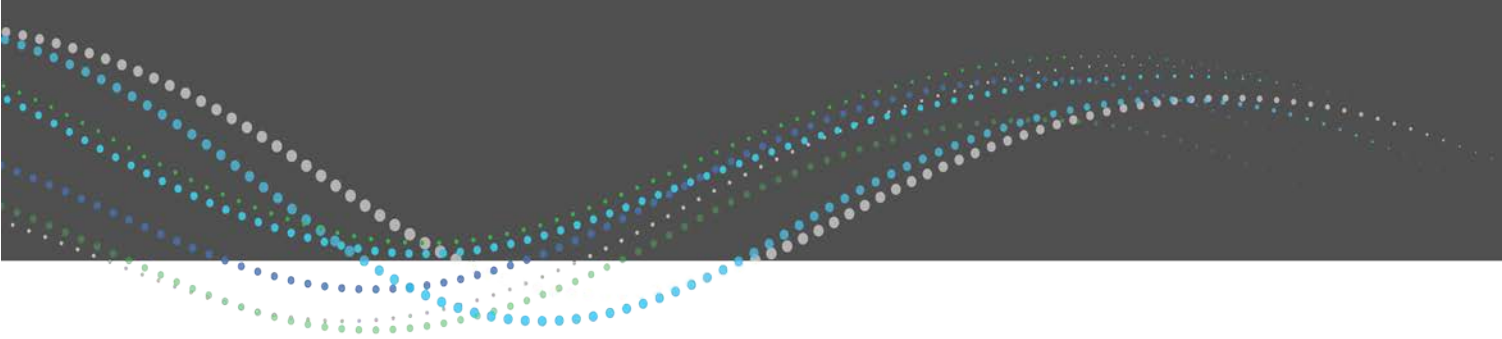
Appendix D-a Traffic Impact Analysis

Appendix

This page intentionally left blank.



Starlite Development Traffic Impact Analysis Draft Report



June 9 2021

Submitted to:



10045 | Prepared by Iteris, Inc.

TABLE OF CONTENTS

1	Introduction	5
1.1	Project Description	5
1.2	Study Area	5
1.3	Study Periods.....	8
2	Environmental Setting.....	9
2.1	Roadway Configurations	9
2.2	Existing Traffic Volumes	10
2.3	COVID-19 Period Analysis.....	13
3	Traffic Operations Analysis Methodology.....	15
3.1	Thresholds of Significance	16
4	Existing Conditions	17
5	Proposed Project Traffic.....	19
5.1	Project Trip Generation	19
5.2	Project Trip Distribution and Assignment	22
6	Existing Plus Project Conditions	25
6.1	Existing Plus Project Intersection Levels of Service.....	25
7	Opening Year 2023 Without Project Conditions.....	28
7.1	Ambient Growth.....	28
7.2	Cumulative Project Growth.....	28
7.3	Opening Year 2023 Without Project Intersection Levels of Service.....	31
8	Opening Year 2023 With Project Conditions	33
8.1	Opening Year 2023 With Project Intersection Levels of Service	33
8.2	Deficient Intersections	36
9	Project Site Considerations	38
9.1	Project Parking vs Code Requirements	38
9.2	Rosemead Bouelvard/Project Driveway	38
9.3	Chico Avenue/Project Driveway.....	41
9.4	Vehicle Stacking at Project Driveways.....	41
9.5	Line of Sight at Project Driveways.....	41
9.6	Pedestrian Safety.....	42
9.7	Truck Access	43

10	Construction Period.....	49
11	VMT Analysis Screening Eligibility	50
12	Conclusions.....	53
Appendix A – Existing Traffic Volumes		
Appendix B – LOS Calculation Sheets		
Appendix C – LOS Calculation Sheets for Rosemead Blvd/Project Dwy Alternatives61		

TABLES

Table 1: Study Area Roadways.....	9
Table 2 – Determining Covid-19 Factor on Existing Traffic Counts.....	13
Table 3: Intersection Level of Service Definitions – ICU and HCM Methodologies	16
Table 4: Existing Intersection Peak Hour Level of Service.....	17
Table 5: Existing Intersection plus Covid-19 Factor Peak Hour Level of Service.....	18
Table 6: Proposed Project Trip Generation.....	21
Table 7: Existing Plus Project Intersection Peak Hour Level of Service.....	26
Table 8: Cumulative Project	28
Table 9: Opening Year 2023 Without Project Intersection Peak Hour Level of Service	31
Table 10: Opening Year 2023 With Project Intersection Peak Hour Level of Service	34
Table 11: Rosemead Blvd/Fern Street Peak Hour Level of Service Comparison	37
Table 12 – Opening Year 2023 With Project With Changes to Rosemead Blvd/Project Dwy Peak Hour Level of Service.....	40
Table 13 – AASHTO Guidelines Stopping Sight Distance (15 MPH to 45 MPH)	42

FIGURES

Figure 1 – Project Site Plan	6
Figure 2 – Project Location and Study Intersections.....	7
Figure 3 – Existing Intersection Lane Configurations.....	11
Figure 4 – Existing Peak Hour Intersection Volumes	12
Figure 5 – Existing Peak Hour Intersection Volumes with Covid-19 Factor	14
Figure 6 – With Project Intersection Lane Configurations.....	20
Figure 7 – Project Trip Distribution	23
Figure 8 – Project Trip Assignment	24
Figure 9 – Existing Plus Project Peak Hour Intersection Volumes.....	27

Figure 10 – Location of Cumulative Project	29
Figure 11 – Cumulative Project Peak Hour Trip Assignment	30
Figure 12 – Opening Year 2023 Without Project Peak Hour Intersection Volumes	32
Figure 13 – Opening Year 2023 With Project Peak Hour Intersection Volumes.....	35
Figure 14 – Project Trip Distribution with Changes to Rosemead Blvd/Project Dwy Intersection	39
Figure 15 – Truck Turning Movements – Right Turns In	44
Figure 16 – Truck Turning Movements – Right Turns Out	45
Figure 17 – Truck Turning Movements – Left Turns In	46
Figure 18 – Truck Turning Movements – Left Turns Out	47
Figure 19 – Chico Avenue Driveway Revisions Based on Truck Access Analysis.....	48
Figure 20 – San Gabriel Valley Council of Governments VMT Evaluation Tool Report (Part 1)	51
Figure 21 – San Gabriel Valley Council of Governments VMT Evaluation Tool Report (Part 2)	52

DRAFT

1 INTRODUCTION

This report summarizes the results of a traffic analysis for the proposed Starlite Development housing project, hereinafter referred to as the "project", located at 2540 Rosemead Boulevard in the City of South El Monte. This report provides detailed information concerning the methodology, findings, and conclusions of the traffic analysis. Six (6) existing intersections in the vicinity of the project site were analyzed, in addition to two (2) intersections that will provide driveway access to the project site, for a total of eight (8) project intersections. This traffic analysis evaluates the effect of project trips on existing traffic conditions and on project opening year 2023 traffic conditions, taking into account growth in traffic due to other known development projects in the surrounding area as well as overall ambient growth in background traffic.

1.1 Project Description

The proposed project consists of a housing development containing a total of 207 housing units, with a mix of 38 multi-family housing units and 169 detached single-family housing units. The project site is currently a large asphalt lot with a minor structures and is occupied by the Rosemead Swap Meet, which itself occupies the grounds of the former Starlite Drive-In Theater. The Starlite Drive-In Theater sign on Rosemead Boulevard that now serves as a marquee for the Rosemead Swap Meet is planned to be preserved, rehabilitated, and used for the project.

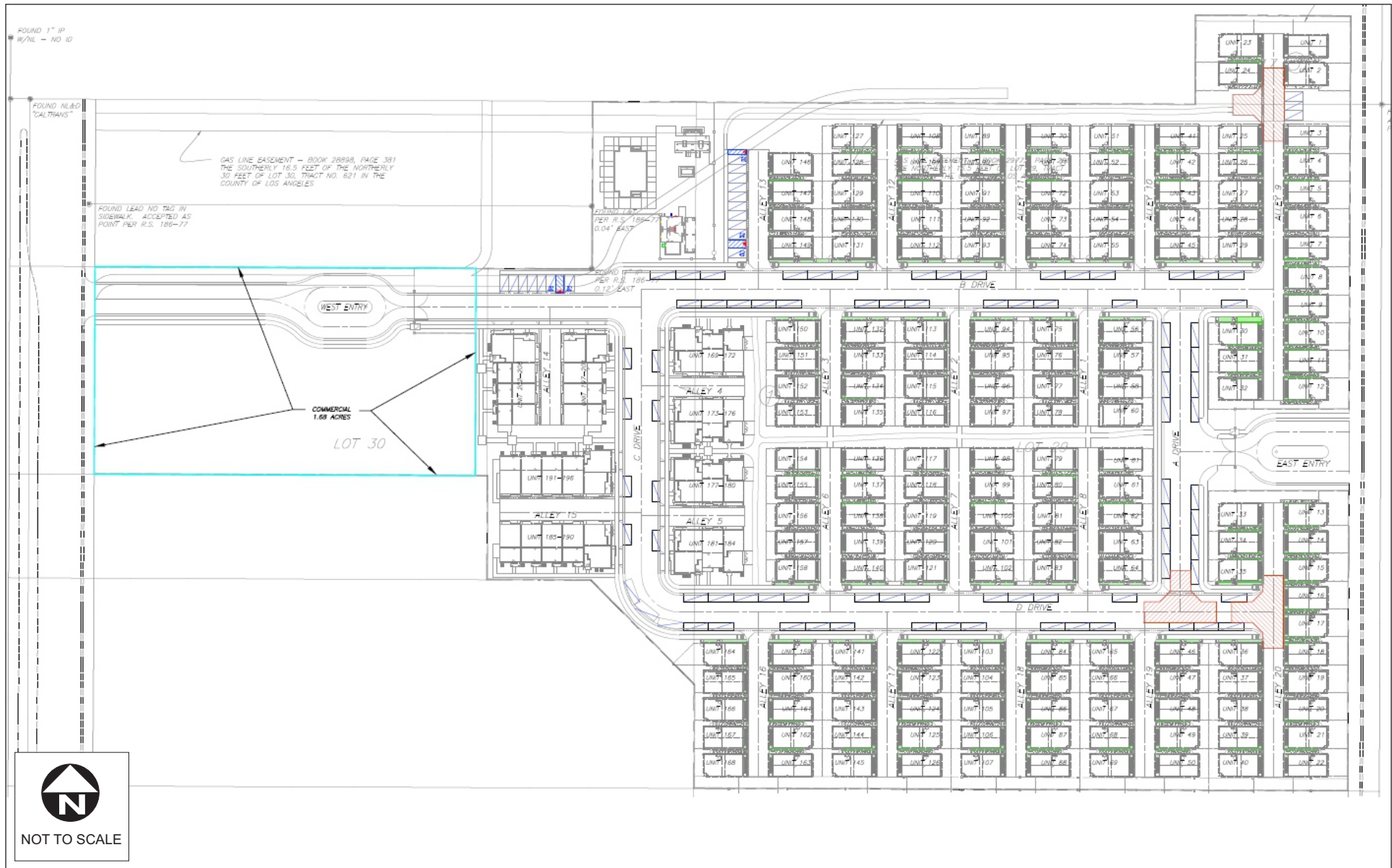
Access to the project site will be provided at two locations, one an existing driveway on Rosemead Boulevard that currently provides access to the west, as well as a future driveway on Chico Avenue south of Fern Street that will provide access to the east. As stated by City staff, unless the project is going to petition the City for a cut in the median on Rosemead Boulevard, the west driveway will allow for only right turns into and out of the project site. However, the east driveway on Chico Avenue will allow right and left turns both into and out of the project site. **Figure 1** shows the project site plan.

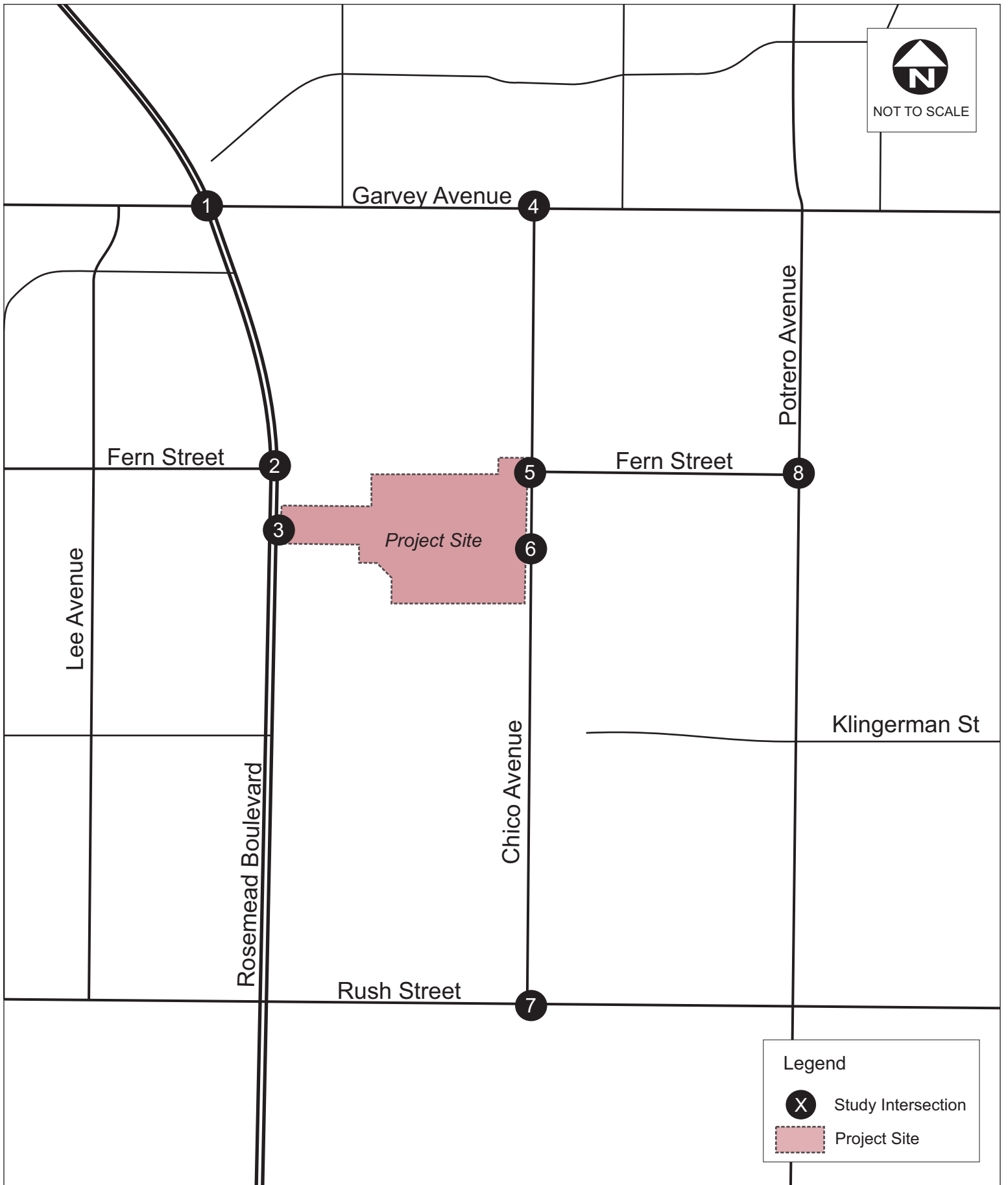
1.2 Study Area

The proposed study area for analysis includes the following eight (8) intersections in the vicinity of the project site, two of which are driveways for the project:

1. Rosemead Boulevard / Garvey Avenue;
2. Rosemead Boulevard / Fern Street;
3. Rosemead Boulevard / Project Driveway;
4. Chico Avenue / Garvey Avenue;
5. Chico Avenue / Fern Street;
6. Chico Avenue / Project Driveway;
7. Chico Avenue / Rush Street;
8. Potrero Avenue / Fern Street.

The project site location and proposed study intersections are shown in **Figure 2**.





1.3 Study Periods

Traffic operations were evaluated for each of the following scenarios during the weekday morning (7:00 – 9:00 AM) and evening (4:00 – 6:00 PM) peak periods during typical weekday conditions (during the school year):

- Existing Conditions;
- Existing Plus Project Conditions;
- Opening Year 2023 Without Project Conditions;
- Opening Year 2023 With Project Conditions;

Based on information provided by the project applicant, the projected opening year for the proposed project is 2023. The study area and study periods were confirmed with City staff.

DRAFT

2 ENVIRONMENTAL SETTING

This section presents an overview of the existing roadway system within the study area and the methodology used to determine existing traffic volumes.

2.1 Roadway Configurations

The existing configurations of the roadways within the study area are shown in **Table 1** and are further described below.

Table 1: Study Area Roadways

Roadway	Classification	Direction	Lanes		On-Street Parking	Bike Facility	Median	Speed Limit (mph)
			NB/EB	SB/WB				
Rosemead Boulevard	Major Arterial	NB/SB	3	3	Partial, both sides	No	Yes	45
Garvey Avenue	Major Arterial	EB/WB	2	2	Yes, both sides	No	No	35
Rush Street	Secondary Arterial	EB/WB	2	2	Partial, both sides	Class III	No	35
Chico Avenue	Residential/Industrial Collector	NB/SB	1	1	Yes, both sides	No	No	30
Fern Street	Local Street	EB/WB	1	1	Yes, both sides	No	No	25
Potrero Avenue	Local Street	NB/SB	1	1	Yes, both sides	No	No	25

Note: Roadway and bicycle facility classifications based on City of South El Monte General Plan Circulation Element, 2000

Rosemead Boulevard is a divided six-lane north/south-oriented major arterial roadway providing access to the project site at its west driveway. On-street parking is provided on both sides in some parts of the study area, with weekend restrictions. The roadway's speed limit in the study area is established as 45 miles per hour (mph).

Garvey Avenue is a divided four-lane east/west-oriented major arterial roadway with mostly commercial and light industrial frontage. Garvey Avenue includes on-street parking on both sides of the roadway, with a two-hour peak period restriction. The roadway's speed limit in the study area is established as 35 mph.

Rush Street is an east/west-oriented secondary arterial, with four lanes of undivided travel east of Rosemead Boulevard, and two lanes of undivided travel west of Rosemead Boulevard. Rush Street includes on-street parking within some parts of the study area, with some overnight restrictions, and mostly commercial and light industrial frontage. Rush Street is classified as a Class III bicycle route in the City's General Plan. The roadway's speed limit in the study area is established as 35 mph.

Chico Avenue is an undivided two-lane north/south-oriented residential/industrial collector roadway, with mostly light industrial and some residential frontage. On-street parking is provided on both sides throughout the length of the street within the study area, with a weekday overnight restriction, and a two-hour peak period restriction. The roadway's speed limit in the study area is established as 30 mph.

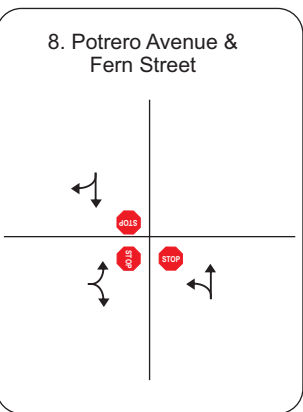
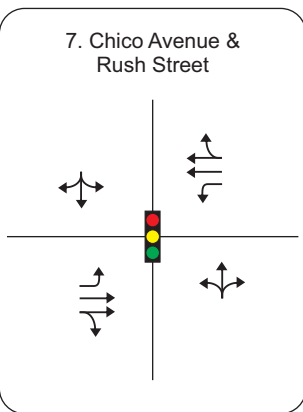
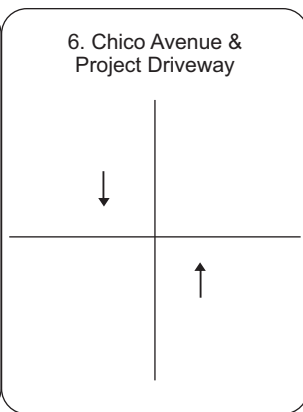
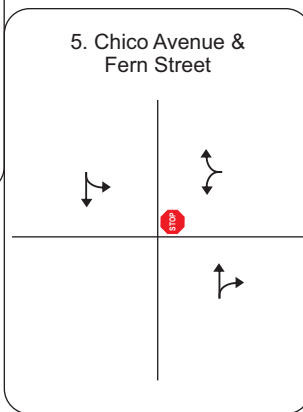
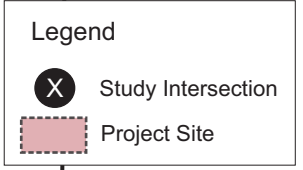
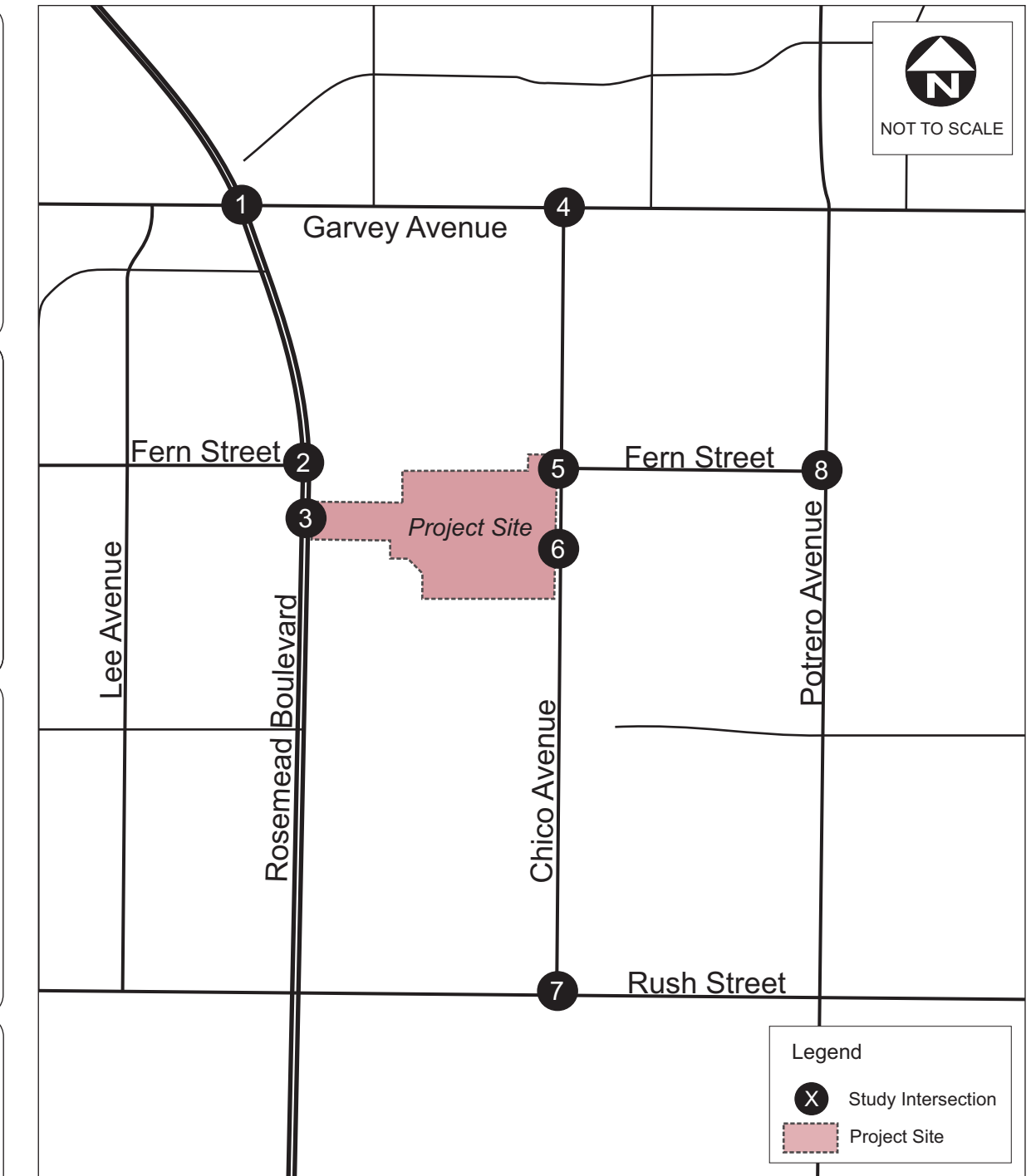
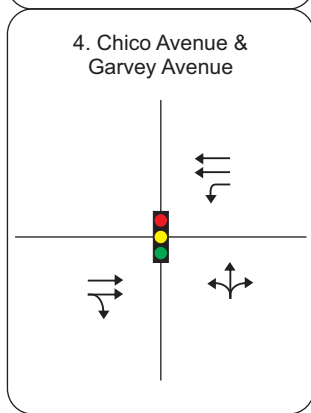
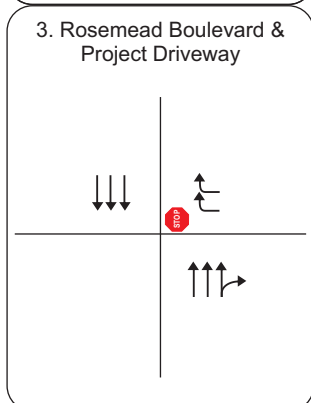
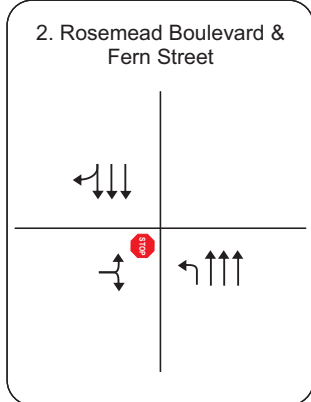
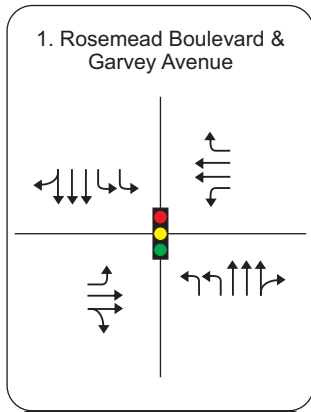
Fern Street is an undivided two-lane east/west-oriented local street with mostly residential and some light industrial frontage. On-street parking is provided on both sides throughout the length of the street within the study area, with a Thursday overnight restriction, and a Wednesday afternoon restriction. The roadway's speed limit in the study area is established as 25 mph.

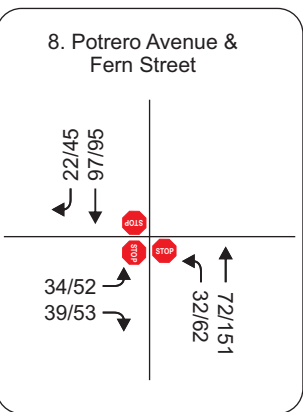
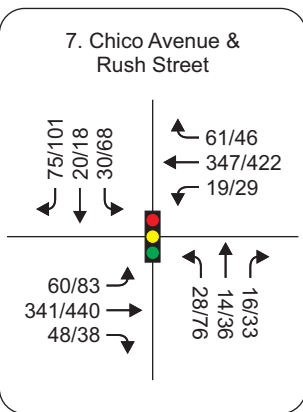
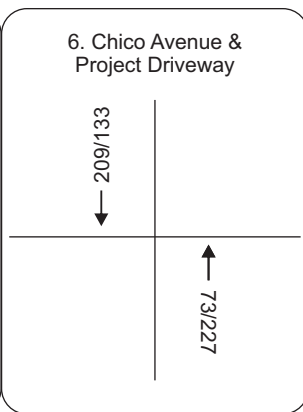
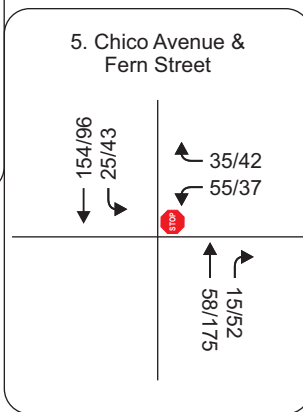
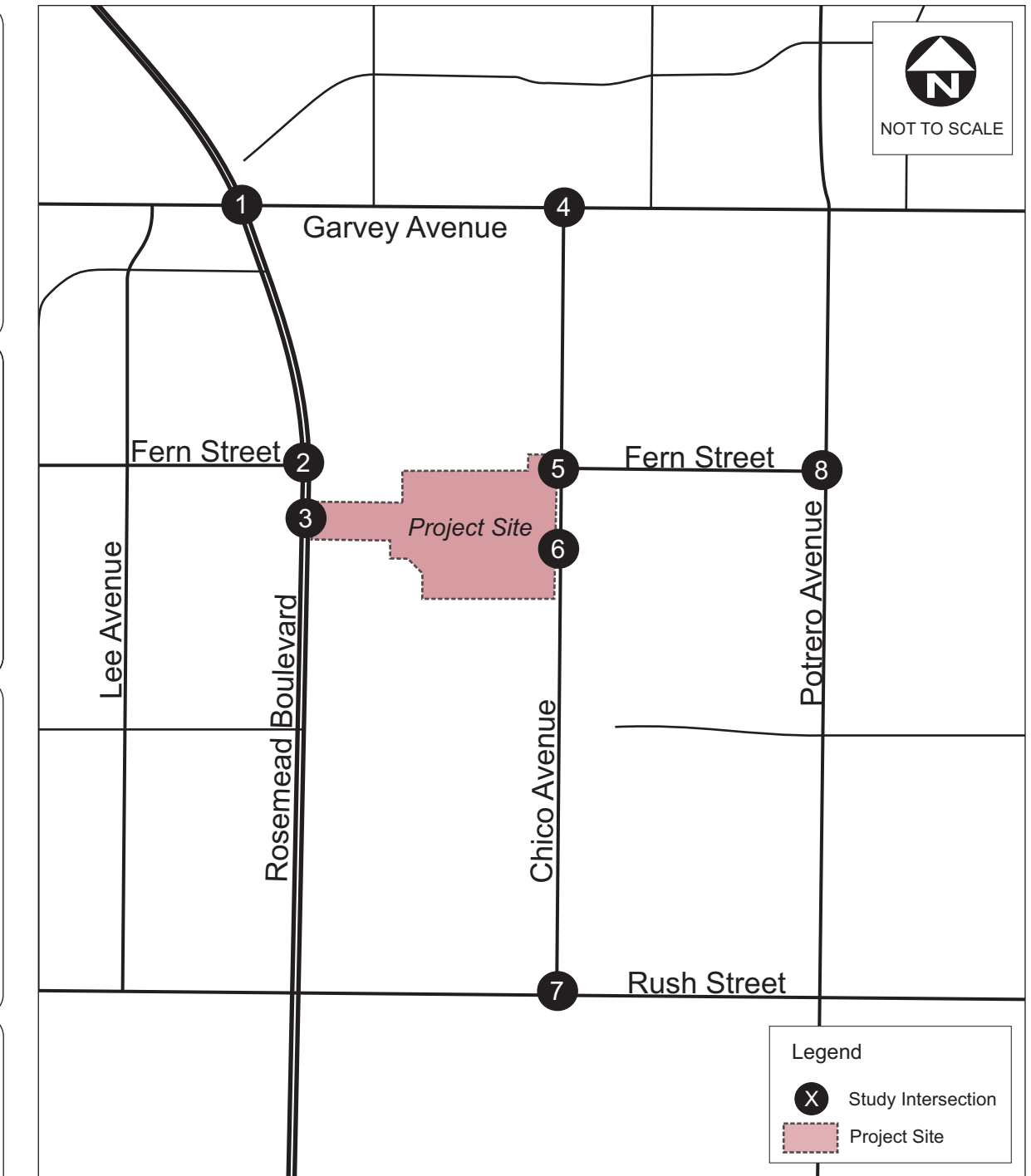
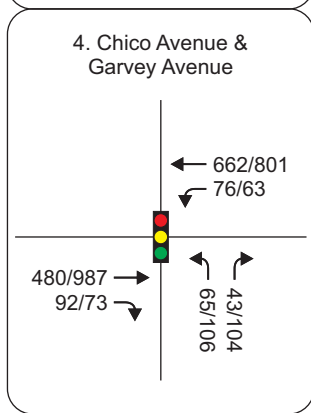
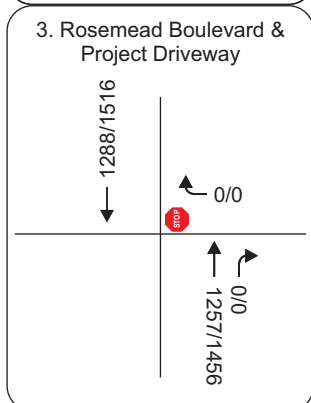
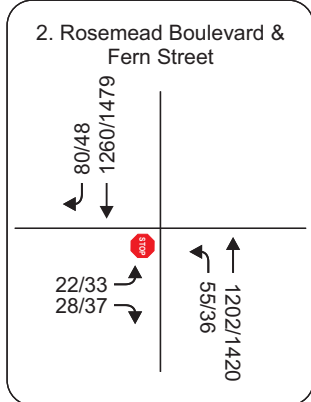
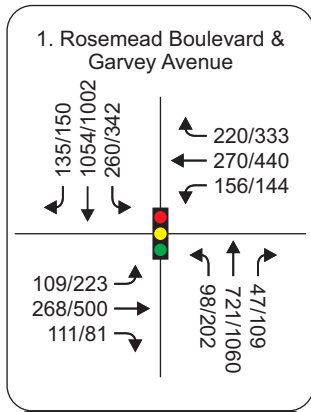
Potrero Avenue is an undivided two-lane north/south-oriented local street that traverses the study area between Rosemead Boulevard and Rush Street. The roadway has mostly residential frontage, with some light industrial as well as Potrero Elementary School, and provides unrestricted on-street parking on both sides of the street. The roadway's speed limit is 25 mph.

2.2 Existing Traffic Volumes

Existing traffic counts at the study intersections were conducted in March 2021, with the exception of Rosemead Boulevard/Garvey Avenue, where counts taken in January 2021 for a separate, nearby project were used. Existing counts at the Project Driveway intersections on both Rosemead Boulevard and Chico Avenue were derived from the counts taken at the adjacent intersections of Rosemead Boulevard/Fern Street and Chico Avenue/Fern Street, respectively.

All counts were conducted during the morning peak period (7:00 – 9:00 AM) and evening peak period (4:00 – 6:00 PM). The traffic impact analysis is based on the highest single hour of traffic during each time period at each location. Detailed vehicle turning movement data is included in **Appendix A**, while **Figure 3** shows the existing intersection configurations and **Figure 4** shows the existing peak hour volumes at the study intersections.





2.3 COVID-19 Period Analysis

Typically, traffic counts are collected on weekdays while schools are in session to avoid any holiday-related shifts in traffic patterns. However, due to the ongoing impacts of the COVID-19 pandemic, large numbers of office employees continue to work remotely from their homes, while schools in South El Monte remain closed to in-person learning at the time traffic counts were taken. To account for these impacts on existing traffic conditions, mainline freeway volumes provided by Caltrans' PeMS system were compared between February 2019 and February 2021 for both Interstate 10 (I-10) and California State Route 60 (SR-60), on either side of Rosemead Boulevard. The details of this comparison are shown below in **Table 2**.

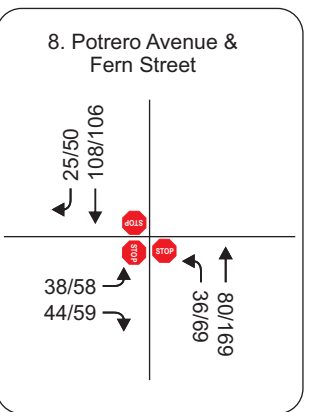
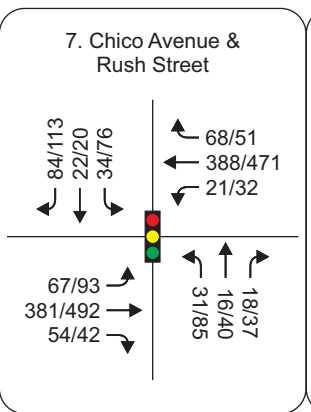
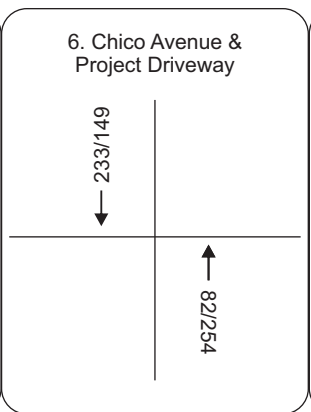
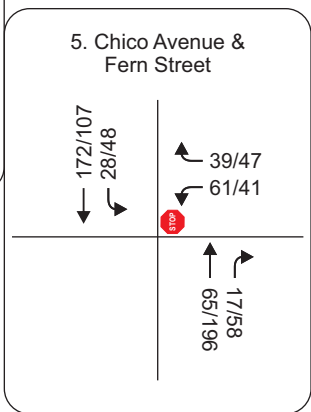
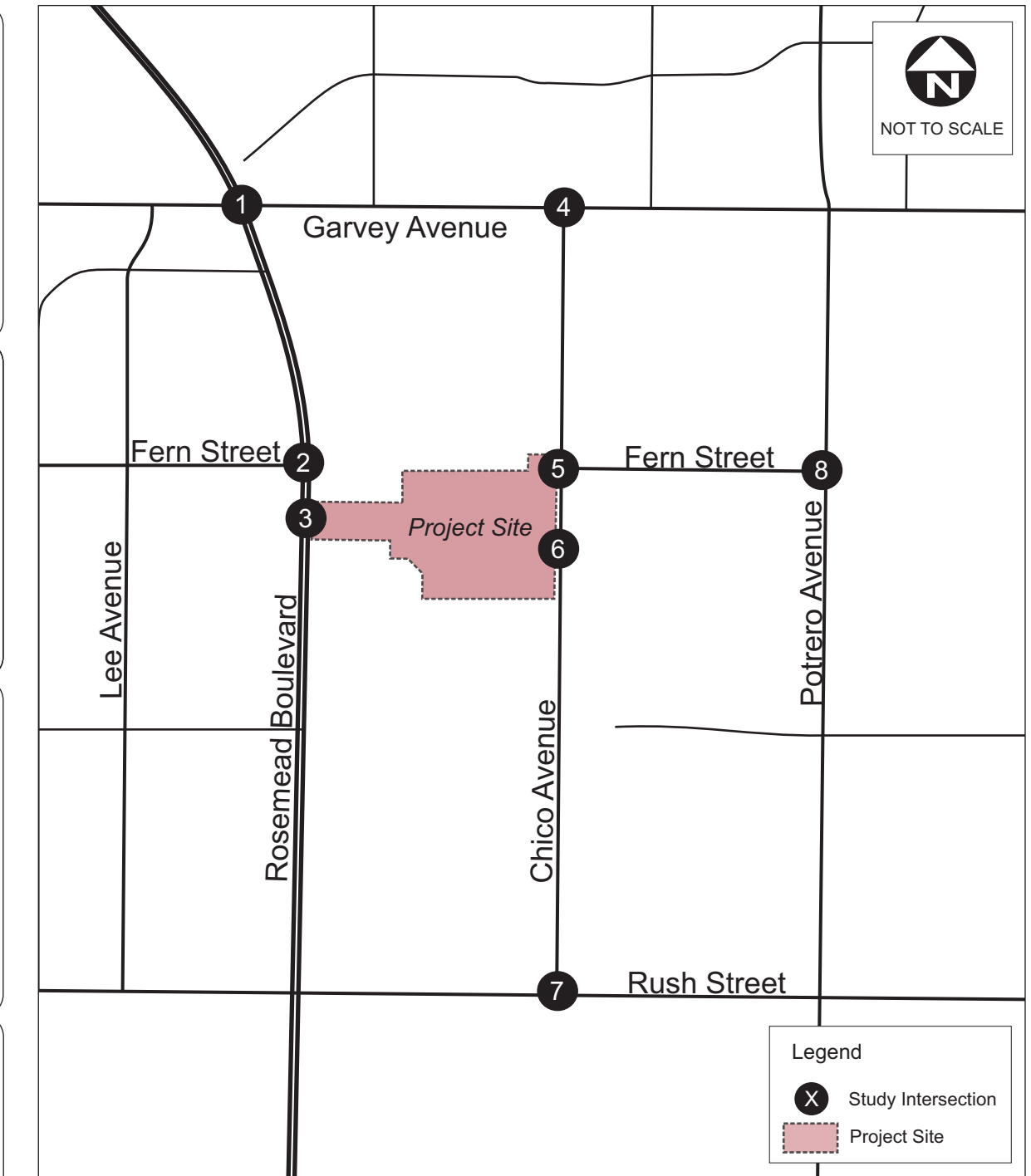
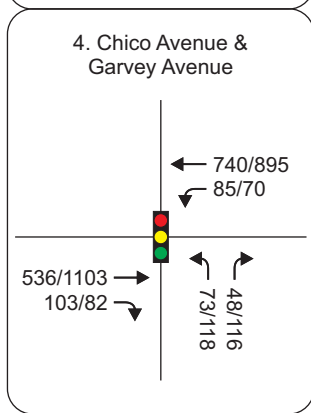
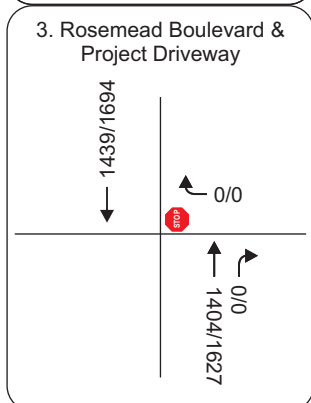
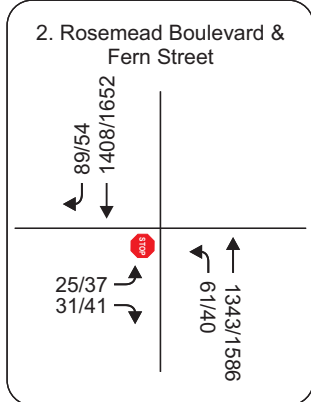
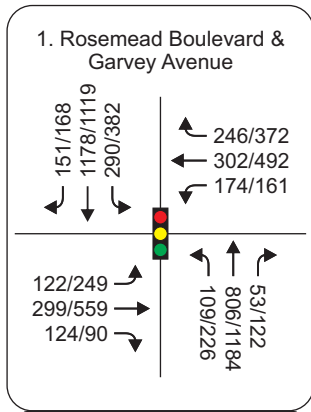
A comparison of the total mainline freeway traffic volumes reveals a reduction in volume of approximately 75,000 vehicles in February 2021 when compared to February 2019. This translates to existing traffic conditions occurring at approximately 89.5% of pre-pandemic traffic levels, giving a multiplier of around 1.12 to be applied to existing traffic counts in order to approximate what traffic conditions would otherwise be without the impacts from the COVID-19 pandemic. Existing peak hour volumes at the study intersections, adjusted with this "COVID-19 factor" multiplier, can be seen in **Figure 5**.

Table 2 – Determining Covid-19 Factor on Existing Traffic Counts

Count Location	February 2019			February 2021		
	EB	WB	Total	EB	WB	Total
SR-60 east of Rosemead Blvd*	114,916	106,434	221,350	85,846	82,893	168,739
SR-60 west of Rosemead Blvd**	117,040	-	117,040	93,982	-	93,982
SR-60 Total			338,390			262,721
I-10 east of Rosemead Blvd	94,797	90,275	185,072	93,791	94,047	189,491
I-10 west of Rosemead Blvd	93,602	95,889	189,491	93,510	94,081	187,591
I-10 Total			374,563			375,429
Total – Both Freeways			712,953			638,150

*Eastbound volumes for SR-60 east of Rosemead Blvd were not available for February 2019; February 2018 volumes were used.

**There is no count data for this location in the westbound direction – however, this data was not necessary to compare changes in overall traffic conditions between study years.



3 TRAFFIC OPERATIONS ANALYSIS METHODOLOGY

The quality of traffic operations is characterized using the concept of level of service (LOS). Level of service is defined by a range of grades from A (best) to F (worst). At intersections, LOS “A” represents relatively free flow operating conditions with little or no delay. LOS “F” is characterized by extremely unstable flow conditions, severe congestion and delays with traffic volumes at or near the intersection’s design capacity. This typically results in long vehicular queues extending from all approaches to intersection.

Analysis of traffic operations are conducted according to the traffic impact analysis guidelines provided by the City of South El Monte. Per the City’s guidelines, at signalized intersections within City jurisdiction, LOS analysis is performed using Intersection Capacity Utilization (ICU) operations methodology, utilizing Synchro 10 software. Also per the City’s guidelines, LOS analysis of traffic operations for unsignalized intersections is conducted utilizing the Highway Capacity Manual (HCM) methodology, which uses vehicular delay criteria to determine LOS. **Table 3** presents a brief description of each level of service letter grade, as well as the range of delays or V/C ratios associated with each grade for signalized and unsignalized intersections.

DRAFT

Table 3: Intersection Level of Service Definitions – ICU and HCM Methodologies

Level Of Service	Description	Volume to Capacity (V/C) Ratio	HCM Average Delay (sec) - Signalized Intersections	HCM Average Delay (sec) - Unsignalized Intersections
A	Excellent operation. All approaches to the intersection appear quite open, turning movements are easily made, and nearly all drivers find freedom of operation.	0.000-0.600	≤ 10	≤ 10
B	Very good operation. Many drivers begin to feel somewhat restricted within platoons of vehicles. This represents stable flow. An approach to an intersection may occasionally be fully utilized and traffic queues start to form.	>0.600-0.700	>10-20	>10-15
C	Good operation. Occasionally drivers may have to wait more than 60 seconds, and back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted.	>0.700-0.800	>20-35	>15-25
D	Fair operation. Cars are sometimes required to wait more than 60 seconds during short peaks. There are no long-standing traffic queues.	>0.800-0.900	>35-55	>25-35
E	Poor operation. Some long-standing vehicular queues develop on critical approaches to intersections. Delays may be up to several minutes.	>0.900-1.000	>55-80	>35-50
F	Forced flow. Represents jammed conditions. Backups form locations downstream or on the cross street may restrict or prevent movement of vehicles out of the intersection approach lanes; therefore, volumes carried are not predictable. Potential for stop and go type traffic flow.	> 1.000	>80	>50

3.1 Thresholds of Significance

The City of South El Monte Transportation Study Guidelines targets LOS D or better for acceptable intersection operations. Signalized intersections typically require improvements when the addition of project traffic results in the degradation of intersection operations from LOS D or better to LOS E or F and will increase the V/C by 0.01 or more. Unsignalized intersections will require improvements if the addition of project traffic results in the degradation of intersection operations from LOS D or better to LOS E or F and if the intersection meets peak hour signal warrants either caused by the project volumes or if project volumes are added to an intersection that meets peak hour signal warrants in baseline scenarios. Furthermore, if a project contributes 2% or more of the total traffic at any intersection expected to be deficient, improvements should be considered.

4 EXISTING CONDITIONS

A level of service analysis was conducted to evaluate existing intersection operations during the AM and PM peak hours at the study intersections. **Table 4** summarizes the existing LOS at the study intersections, while **Table 5** summarizes existing LOS at the study intersections with the “COVID-19 factor” multiplier taken into account to approximate normal traffic conditions. LOS calculation sheets are provided in **Appendix B**.

Table 4: Existing Intersection Peak Hour Level of Service

	Intersection	Control Type	AM Peak Hour			PM Peak Hour		
			V/C	Delay (sec)	LOS	V/C	Delay (sec)	LOS
1	Rosemead Blvd / Garvey Ave	Signalized	0.67	-	B	0.95	-	E
2	Rosemead Blvd / Fern St	TWSC	-	49.0	E	-	125.2	F
3	Rosemead Blvd / Project Dwy	TWSC	-	0.0	A	-	0.0	A
4	Chico Ave / Garvey Ave	Signalized	0.45	-	A	0.68	-	B
5	Chico Ave / Fern St	TWSC	-	10.8	B	-	11.6	B
6	Chico / Project Dwy	Uncontrolled	-	0.0	A	-	0.0	A
7	Chico Ave / Rush St	Signalized	0.61	-	B	0.62	-	B
8	Potrero Ave / Fern St	AWSC	-	8.0	A	-	9.1	A

Notes: V/C = Volume to Capacity Ratio; LOS = Level of Service; TWSC = two-way stop-controlled; AWSC = all-way stop-controlled.

As shown in **Table 4**, the signalized Rosemead Boulevard/Garvey Avenue intersection is currently operating at LOS E during the PM peak hour, while the unsignalized Rosemead Boulevard/Fern Street intersection is currently operating at LOS E during the AM peak hour and at LOS F during the PM peak hour. It should be noted the analysis methodology for unsignalized intersections, such as used at the Rosemead Boulevard/Fern Street is especially sensitive at intersections involving a large-volume street with a minor street. The delay value represents the low volumes of vehicles turning to and from Fern Street having to wait for enough clearance of vehicles traveling along the free-flow Rosemead Boulevard to make their turns—which is the critical movement delay value shown in the table.

Table 5: Existing Intersection plus Covid-19 Factor Peak Hour Level of Service

	Intersection	Control Type	AM Peak Hour			PM Peak Hour		
			V/C	Delay (sec)	LOS	V/C	Delay (sec)	LOS
1	Rosemead Blvd / Garvey Ave	Signalized	0.73	-	C	1.10	-	F
2	Rosemead Blvd / Fern St	TWSC	-	92.0	F	-	341.1	F
3	Rosemead Blvd / Project Dwy	TWSC	-	0.0	A	-	0.0	A
4	Chico Ave / Garvey Ave	Signalized	0.48	-	A	0.71	-	C
5	Chico Ave / Fern St	TWSC	-	11.3	B	-	12.2	B
6	Chico / Project Dwy	Uncontrolled	-	0.0	A	-	0.0	A
7	Chico Ave / Rush St	Signalized	0.63	-	B	0.70	-	B
8	Potrero Ave / Fern St	AWSC	-	8.1	A	-	9.5	A

Notes: V/C = Volume to Capacity Ratio; LOS = Level of Service; TWSC = two-way stop-controlled; AWSC = all-way stop-controlled.

As shown in **Table 5**, the signalized Rosemead Boulevard/Garvey Avenue intersection is currently operating at LOS F during the PM peak hour, while the unsignalized Rosemead Boulevard/Fern Street intersection is currently operating at LOS F during both the AM and PM peak hours.

5 PROPOSED PROJECT TRAFFIC

This section describes the methodology used to determine project trip generation and the distribution of project traffic within the study area.

The first step in analyzing traffic conditions with the project is to estimate the number of new trips expected to be generated by the proposed project. The proposed project consists of 207 residential units, including 38 multi-family residential units and 169 detached single-family housing units. The project site is currently occupied by the Rosemead Swap Meet, which operates during non-pandemic times only on Saturdays and Sundays. Access to the proposed project will be provided through what is expected to be a right-in, right-out only driveway on Rosemead Boulevard to the west and a full-access driveway on Chico Avenue to the east.

To account for the addition of project access at the Rosemead Boulevard/Project Driveway and Chico Avenue/Project Driveway intersections, with project intersection lane configurations are shown in **Figure 6**.

5.1 Project Trip Generation

The trip generation analysis was completed in a two-step process. First, the number of trips generated by the proposed development was calculated by multiplying the trip generation rate for low-rise multi-family housing and for detached single-family housing by the proposed number of units for each use in the project. The result of this calculation is shown in **Table 6**. Trip generation rates for the proposed project were calculated based on the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition.

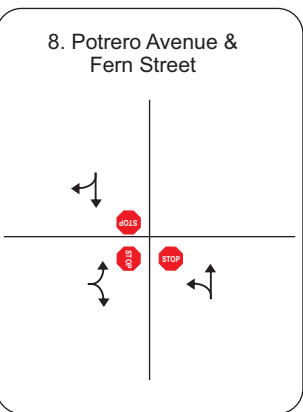
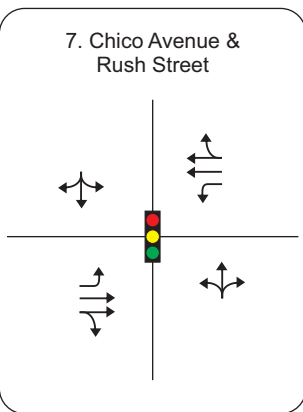
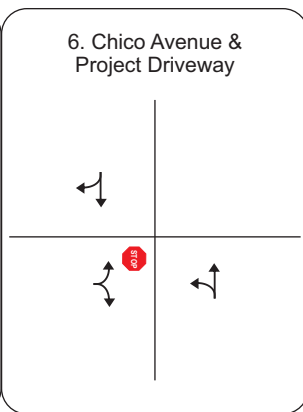
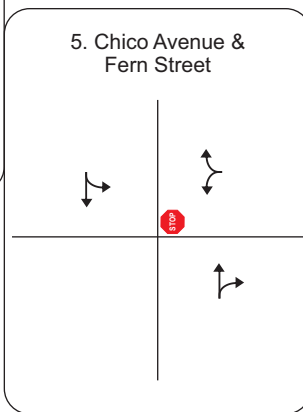
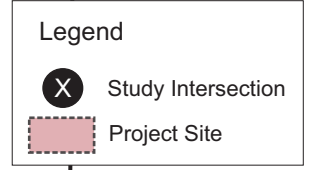
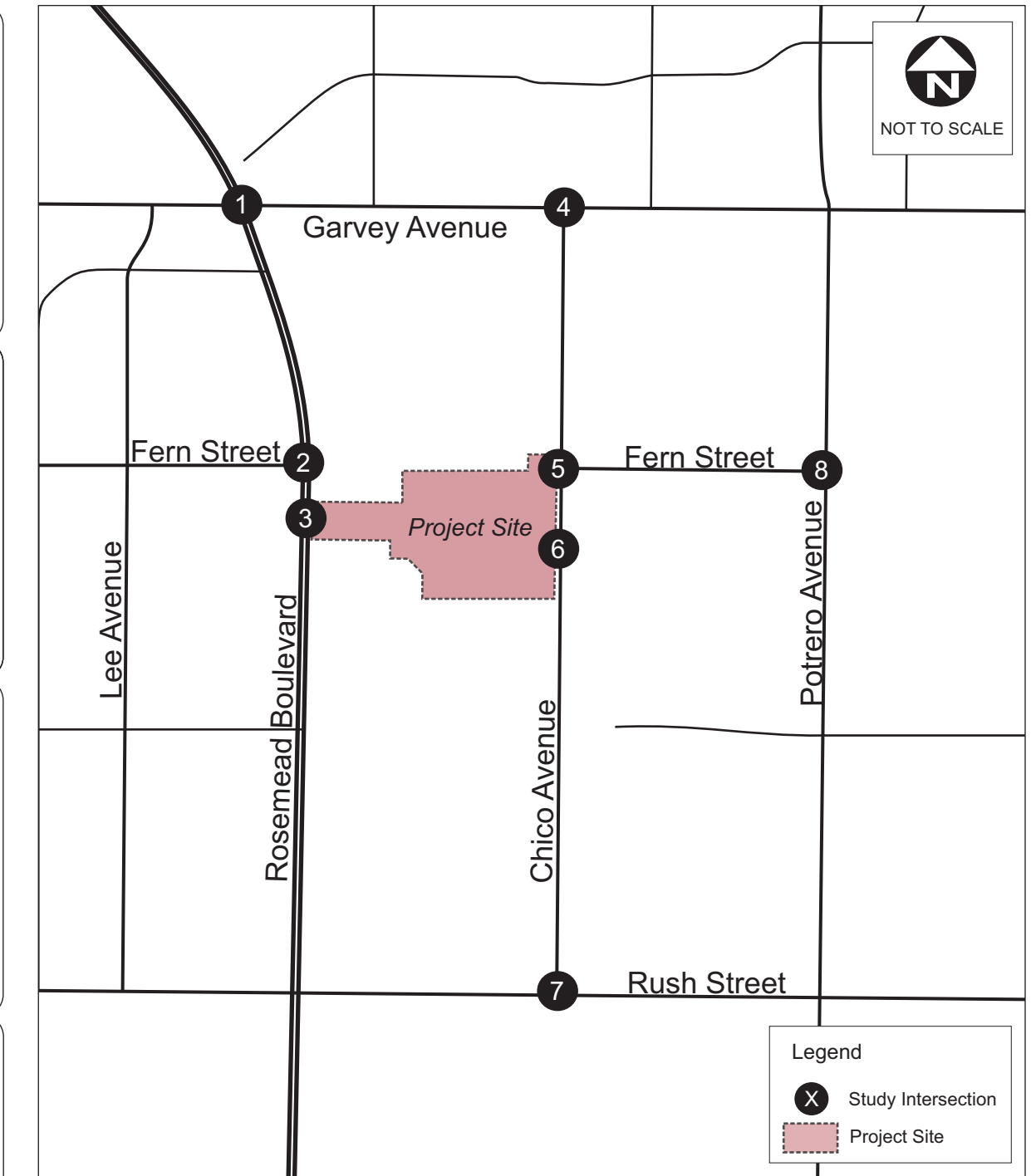
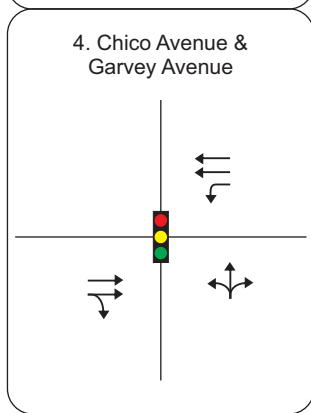
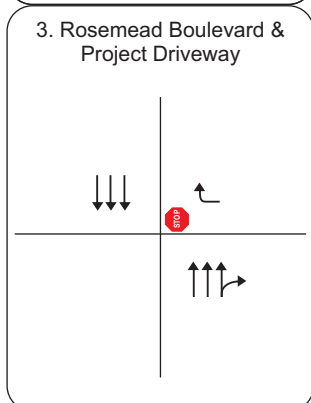
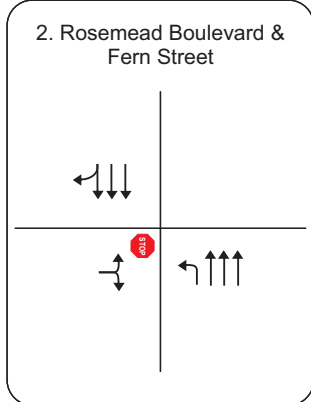
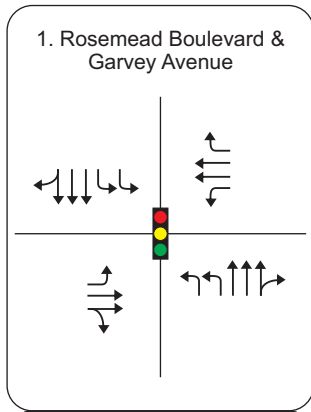


Table 6: Proposed Project Trip Generation

Land Use (ITE Code)	# of Units	Trip Generation Rates							Trip Generation						
		AM Peak Hour			PM Peak Hour			Daily	AM Peak Hour			PM Peak Hour			Daily
		In	Out	Total	In	Out	Total		In	Out	Total	In	Out	Total	
Multi-Family Housing (Low-Rise) (220)	38	23%	77%	0.46	63%	37%	0.56	7.32	4	13	17	13	8	21	278
Single-Family Detached Housing (221)	169	25%	75%	0.74	63%	37%	0.99	9.44	31	94	125	105	62	167	1,595
								Total*	35	110	143	119	70	189	1,874

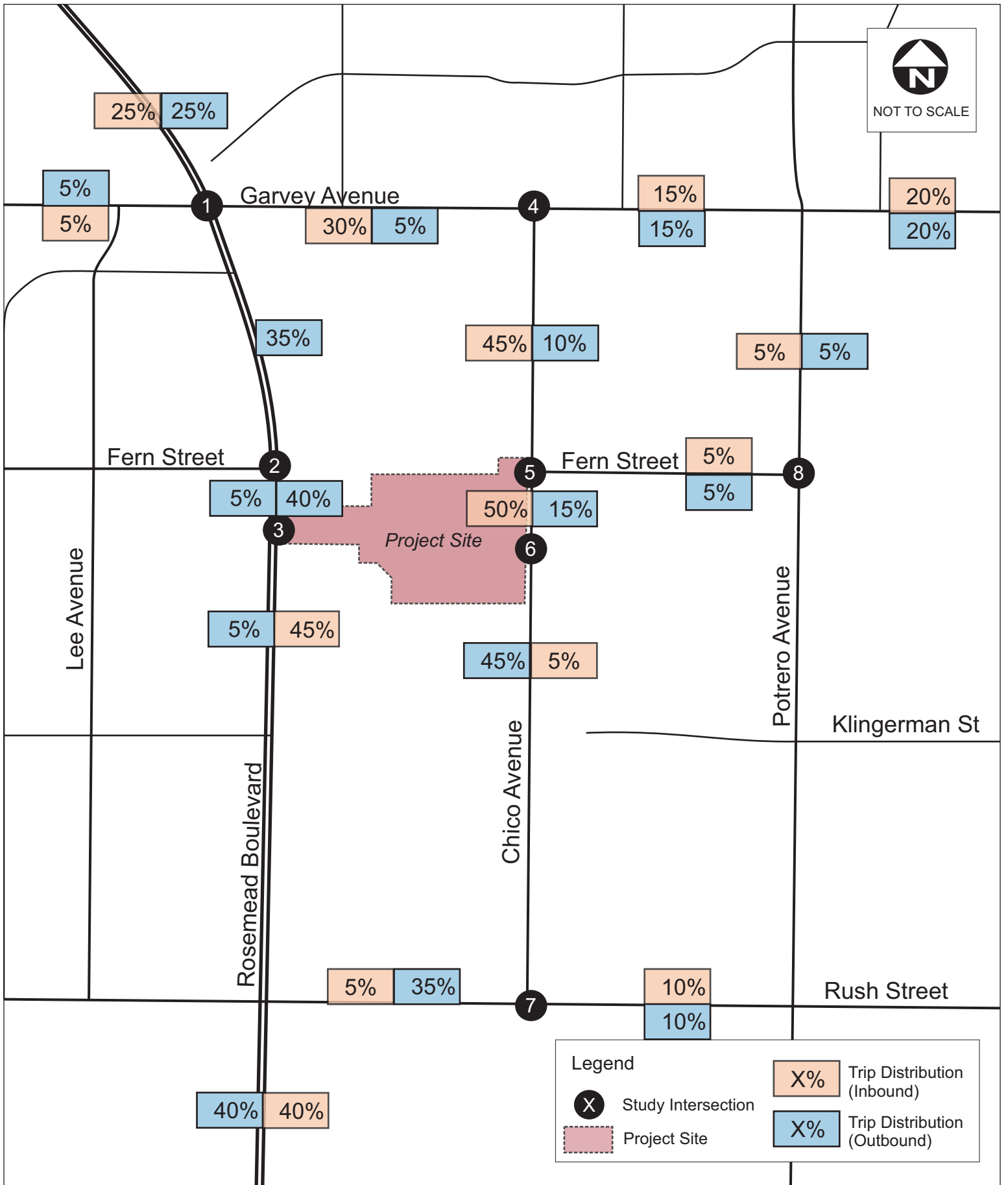
**Difference due to rounding.*

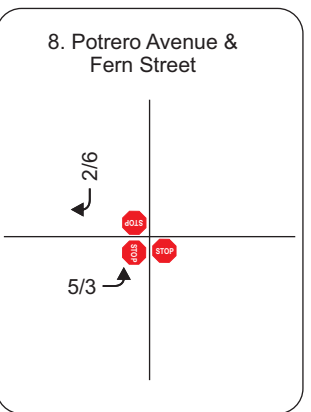
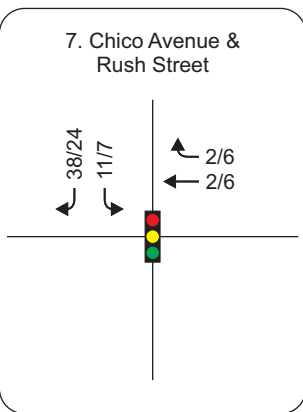
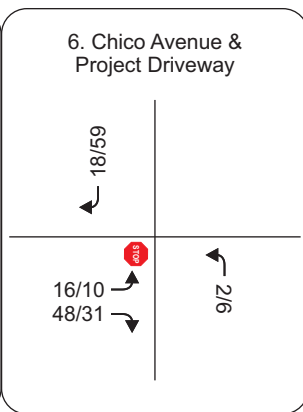
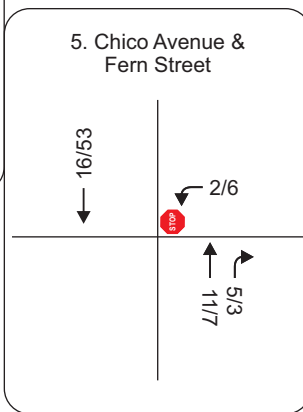
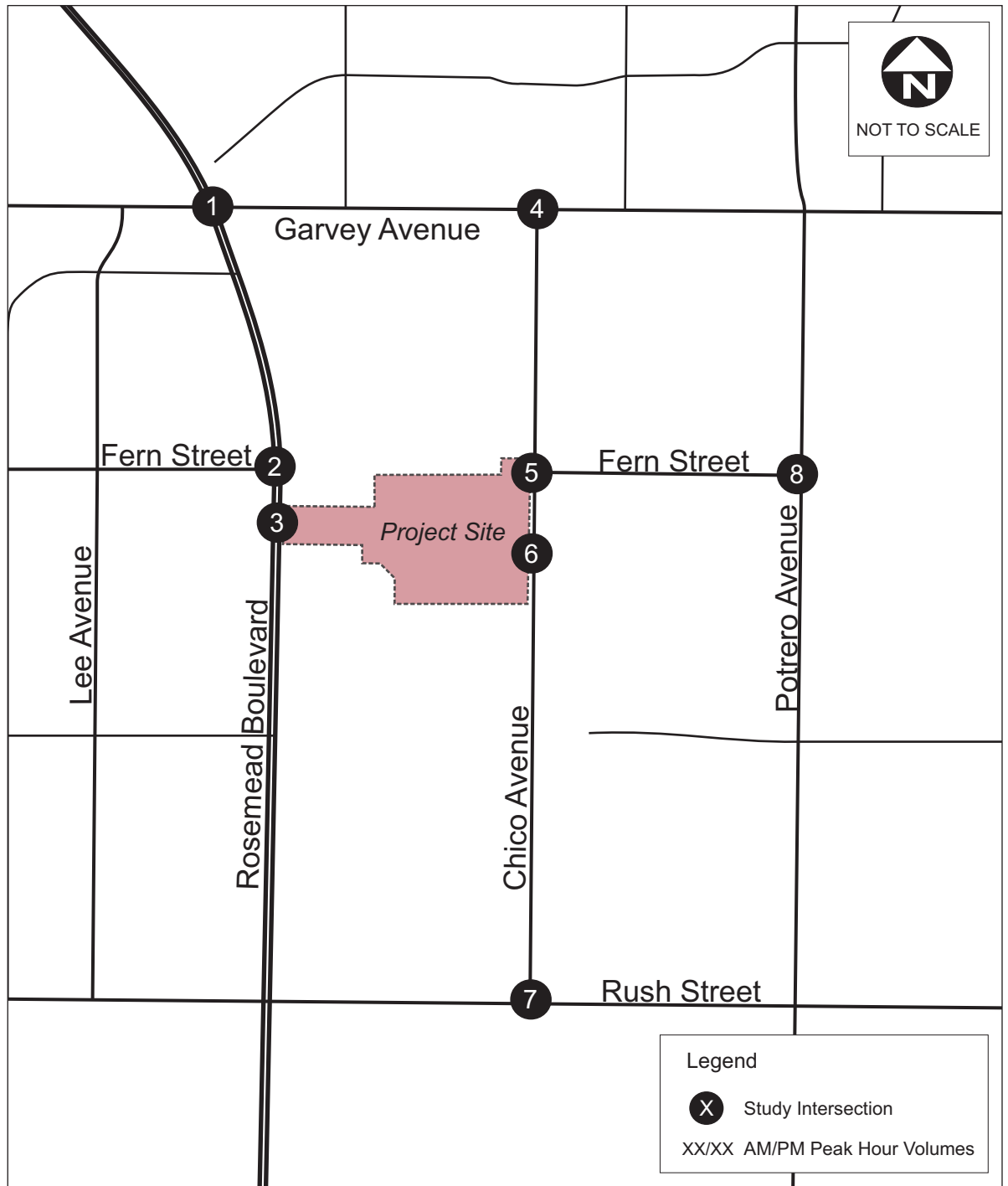
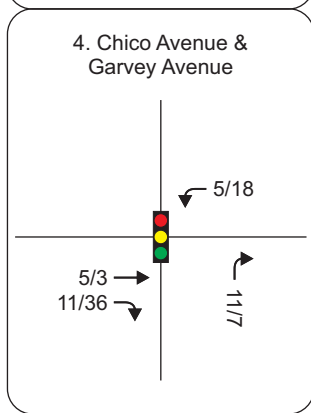
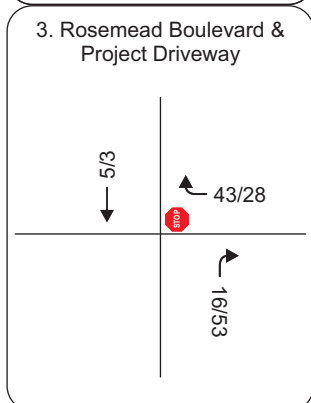
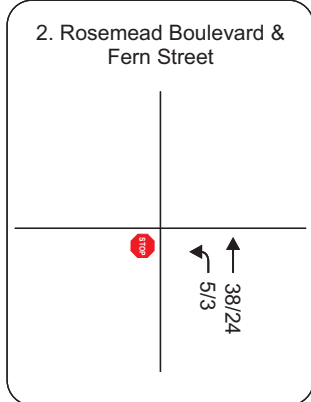
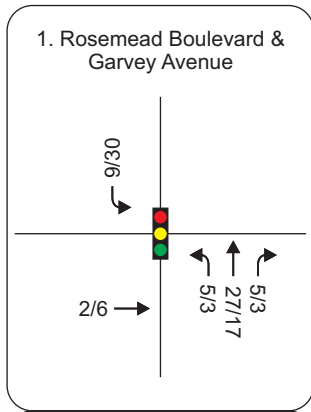
As shown in **Table 6**, the proposed project is forecast to generate 143 new AM peak hour trips, 189 new PM peak hour trips, and 1,874 new daily trips. Because the current project site is only in use on weekends, no credit for existing site traffic is taken into consideration with this analysis.

5.2 Project Trip Distribution and Assignment

Trip distribution assumptions are used to determine the origin and destination of new vehicle trips associated with the project. Project trip distribution is based on the circulation network in the vicinity of the project as well as information provided by the project applicant. The project trip distribution is shown in **Figure 7**.

The new trips generated by the project, as shown in **Table 6**, were then assigned to the surrounding roadway system based on the distribution pattern shown in **Figure 7** to estimate the project-related peak-hour traffic at each of the study intersections. **Figure 8** illustrates the proposed project trip assignment onto the roadway network during the AM and PM peak hours.





6 EXISTING PLUS PROJECT CONDITIONS

Existing plus project conditions were developed by adding trips forecast to be generated by the proposed project, as described in **Section 5**, to existing volumes, as described in **Section 4**. Existing plus project traffic volumes are illustrated in **Figure 9**.

6.1 Existing Plus Project Intersection Levels of Service

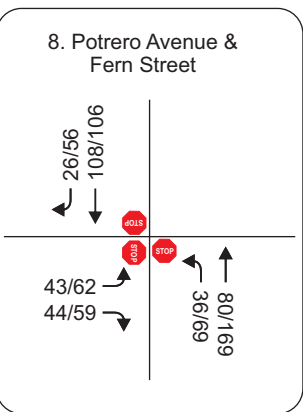
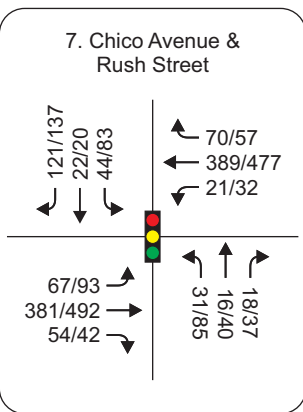
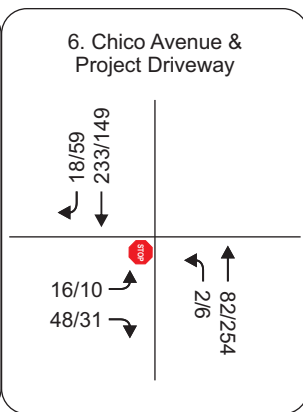
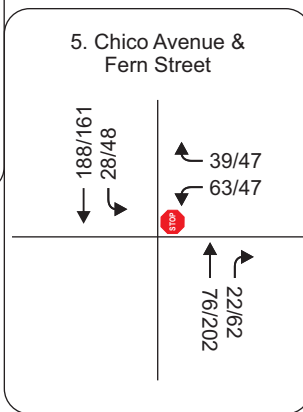
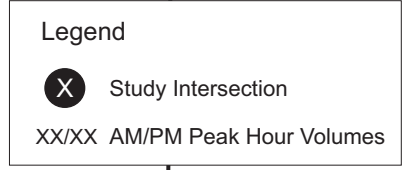
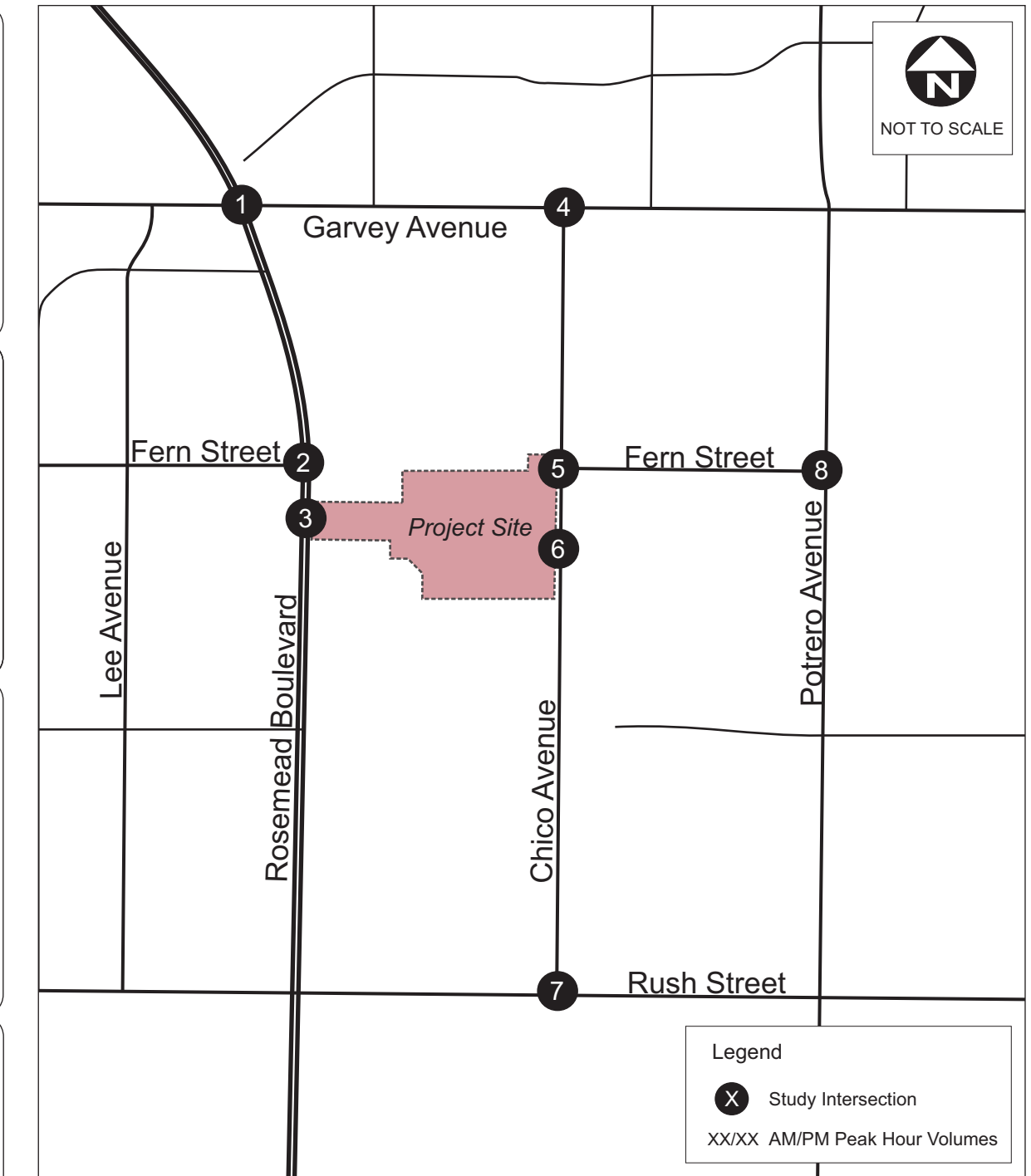
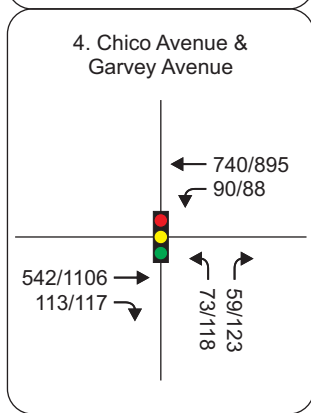
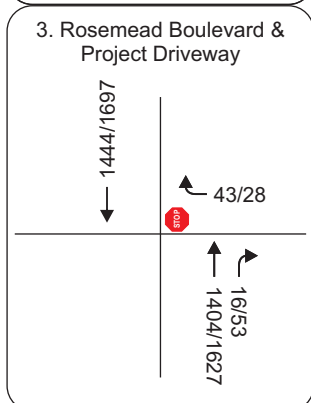
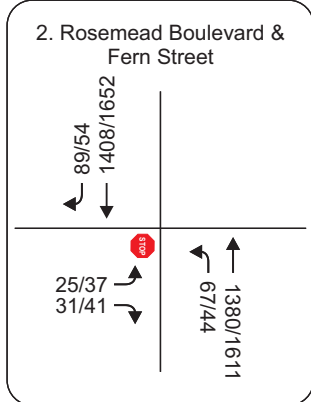
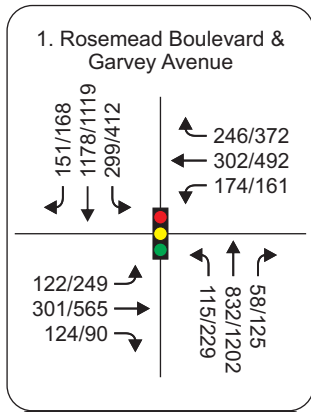
A level of service analysis was conducted to evaluate existing plus project intersection operations during the AM and PM peak hours at the study intersections. Existing plus project levels of service at the study intersections are summarized without changes to Rosemead Boulevard in **Table 7**. Level of service calculation worksheets are included in **Appendix B**.

Table 7: Existing Plus Project Intersection Peak Hour Level of Service

Intersection		Existing Conditions (w/COVID-19 factor)						Existing Plus Project Conditions						Change in V/C or Delay		Exceeds Threshold Due to Project?
		AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour			AM Peak Hour	PM Peak Hour	
		V/C	Delay (sec)	LOS	V/C	Delay (sec)	LOS	V/C	Delay (sec)	LOS	V/C	Delay (sec)	LOS			
1	Rosemead Blvd / Garvey Ave	0.73	-	C	1.10	-	F	0.78	-	C	1.10	-	F	0.05	0.0	No
2	Rosemead Blvd / Fern St	-	92.0	F	-	341.1	F	-	125.0	F	-	374.2	F	33.0	33.1	No
3	Rosemead Blvd / Project Dwy	-	0.0	A	-	0.0	A	-	19.5	C	-	22.4	C	19.5	22.4	No
4	Chico Ave / Garvey Ave	0.48	-	A	0.71	-	C	0.50	-	A	0.74	-	C	0.02	0.03	No
5	Chico Ave / Fern St	-	11.3	B	-	12.2	B	-	11.7	B	-	13.1	C	0.4	0.9	No
6	Chico / Project Dwy	-	0.0	A	-	0.0	A	-	10.4	B	-	10.2	B	10.4	10.2	No
7	Chico Ave / Rush St	0.63	-	B	0.70	-	B	0.63	-	B	0.70	-	B	0.0	0.0	No
8	Potrero Ave / Fern St	-	8.1	A	-	9.5	A	-	8.1	A	-	9.6	A	0.0	0.1	No

Notes: V/C = Volume to Capacity Ratio, LOS = Level of Service.

As shown in **Table 7**, project trips forecast to be added to the unsignalized intersection at Rosemead Boulevard and Fern Street will increase delay at this intersection due to some volume of project traffic assumed to exit the project site onto Rosemead Boulevard making a U-turn at the Rosemead Boulevard at Fern Street intersection to proceed southbound. With LOS F, this intersection currently already exceeds the City’s target threshold for acceptable levels of service, however since the intersection does not degrade in level of service from the baseline scenario and the project does not contribute 2 percent or more traffic to the location it is not considered to exceed the threshold due to the project. While the signalized intersection of Rosemead Boulevard/Garvey Avenue also currently exceeds the city’s threshold with LOS F in the PM peak hour, there is no additional delay incurred at this intersection due to forecast project trips in the PM peak hour.



7 OPENING YEAR 2023 WITHOUT PROJECT CONDITIONS

The project opening year is 2023. Therefore, this section analyzes opening year 2023 traffic conditions without the proposed project. Opening year 2023 without project traffic volumes were developed by considering traffic increases due to ambient growth and specific, planned, or approved development projects in the study area, without consideration of the proposed project.

7.1 Ambient Growth

Ambient traffic growth is the traffic growth that will occur in the study area due to general employment growth, housing growth and growth in regional through trips in Southern California. An ambient growth rate of one-quarter of one percent (.24%) per year in the study area was assumed based on model volume comparisons between 2018 and 2040 using the SCAG model network.

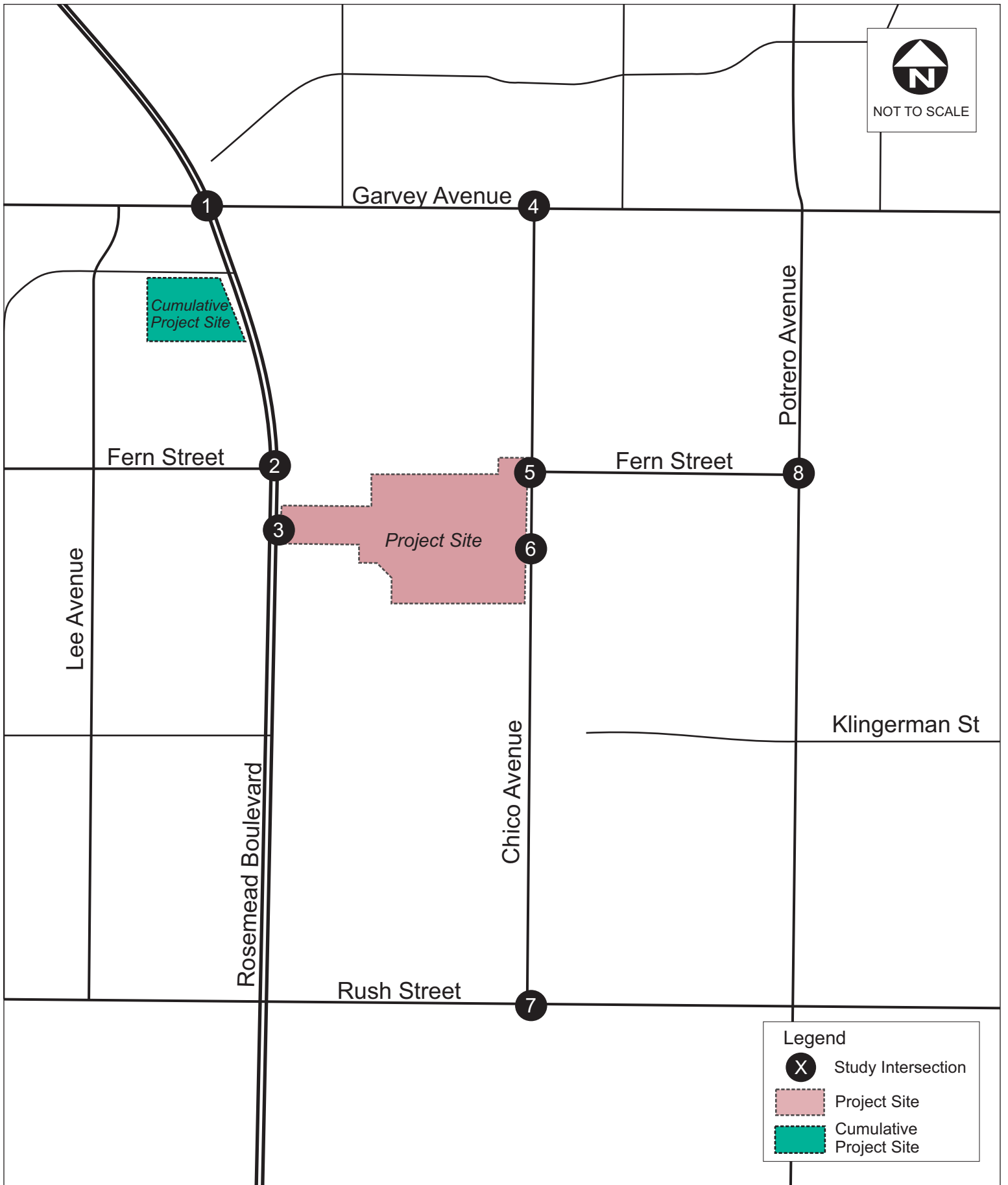
7.2 Cumulative Project Growth

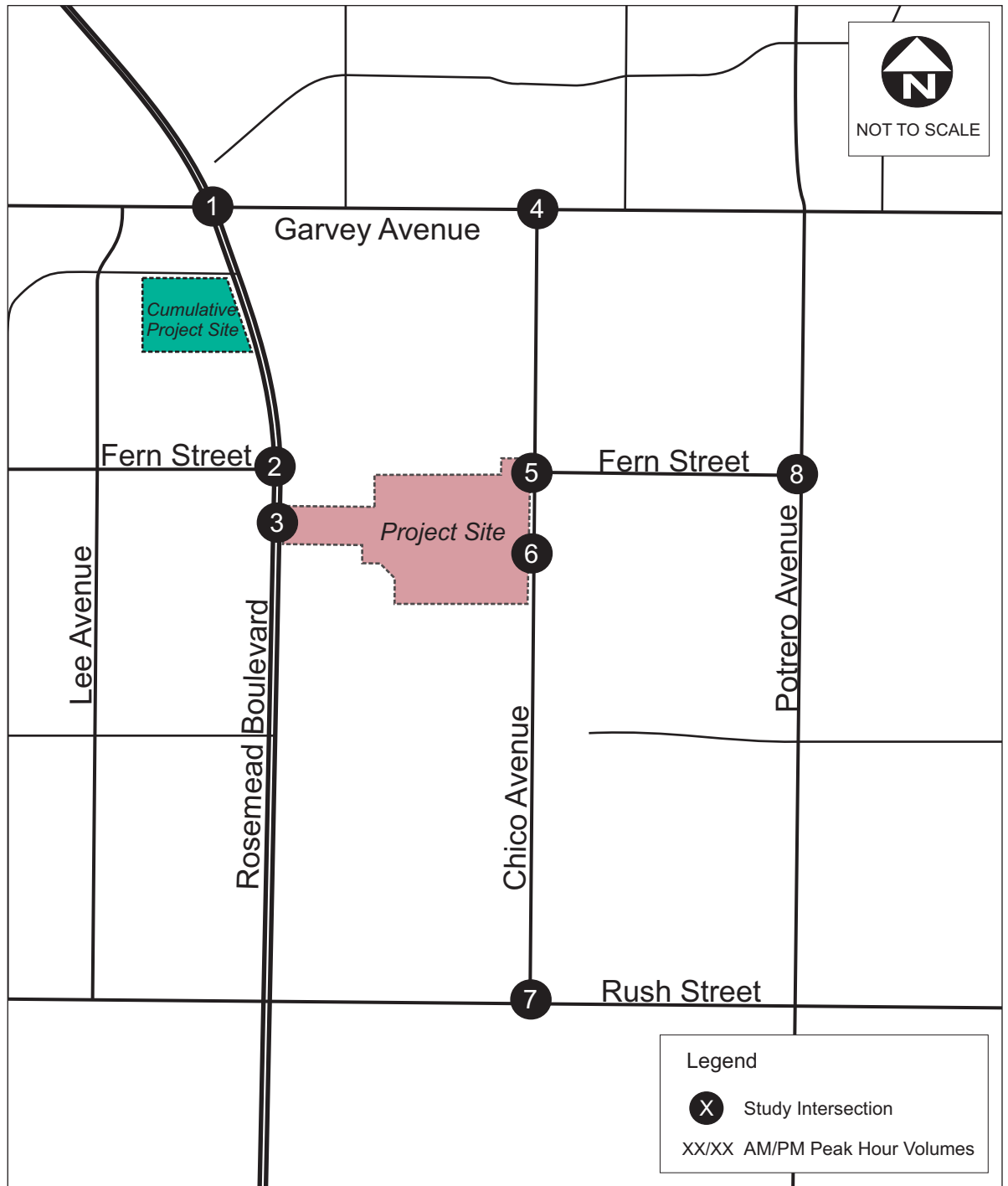
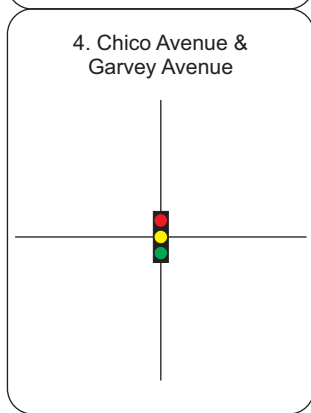
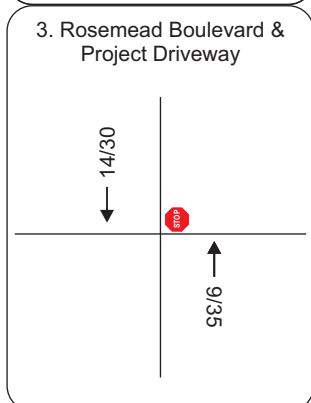
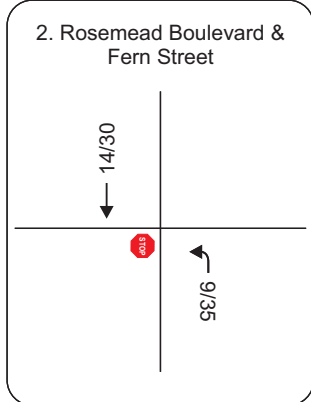
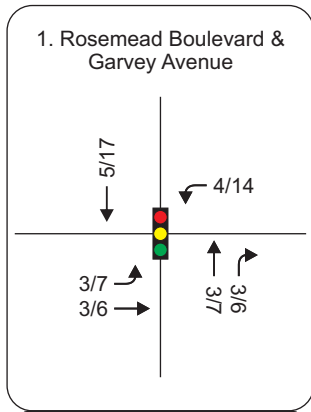
Cumulative project traffic growth is growth due to specific, known development projects in the area surrounding the study locations that may affect traffic circulation. Details regarding the sole cumulative, approved project within the region were provided by the City of South El Monte and shown in **Table 8**. The general location of this cumulative project is shown in **Figure 10**. The peak hour vehicle trips expected to be generated by this development are shown in **Figure 11**. Trip distribution for the cumulative project was assigned based on the development's concurrent uses and its location with respect to nearby freeways and major arterials.

Table 8: Cumulative Project

Location		Land Use	Size/Description
1	Mye Plaza Development (Rosemead Blvd & Mabel Ave – SW corner)	Mixed-Use	73 du 3.180 tsf restaurant 13.620 tsf retail

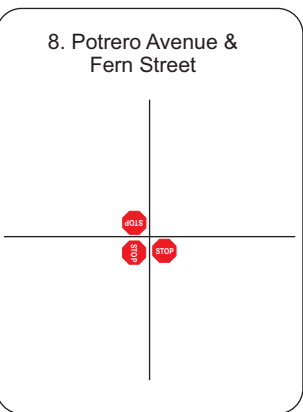
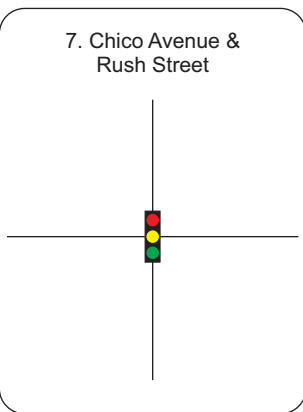
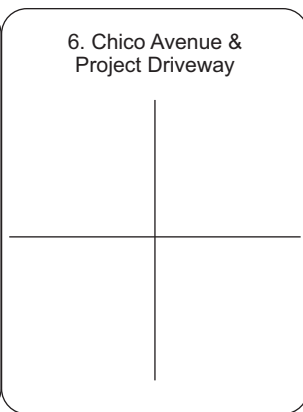
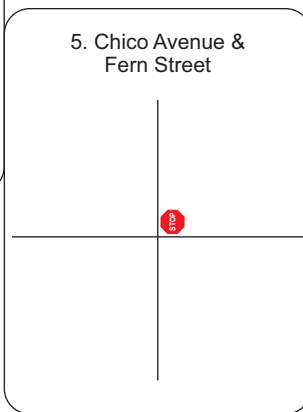
Note: du = dwelling unit, tsf = thousand square feet





Legend

- X Study Intersection
- XX/XX AM/PM Peak Hour Volumes



7.3 Opening Year 2023 Without Project Intersection Levels of Service

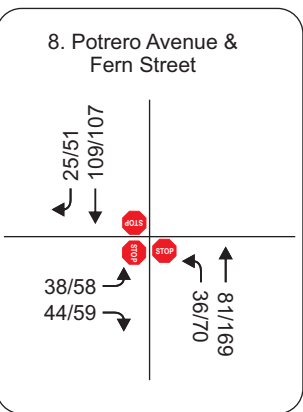
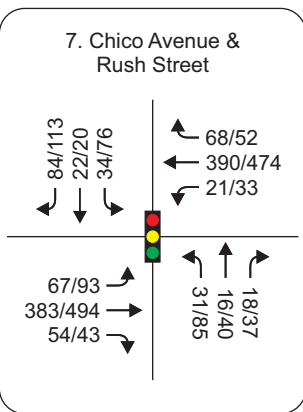
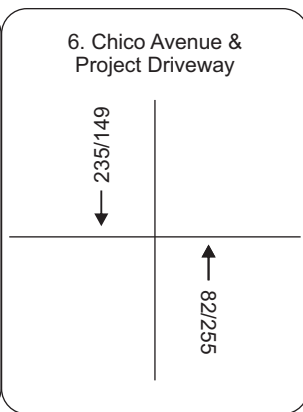
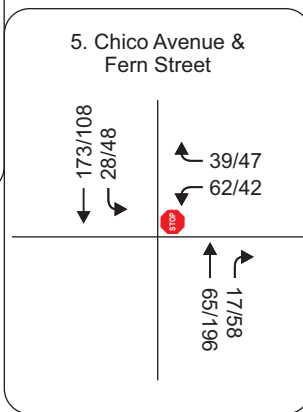
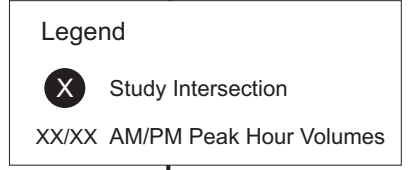
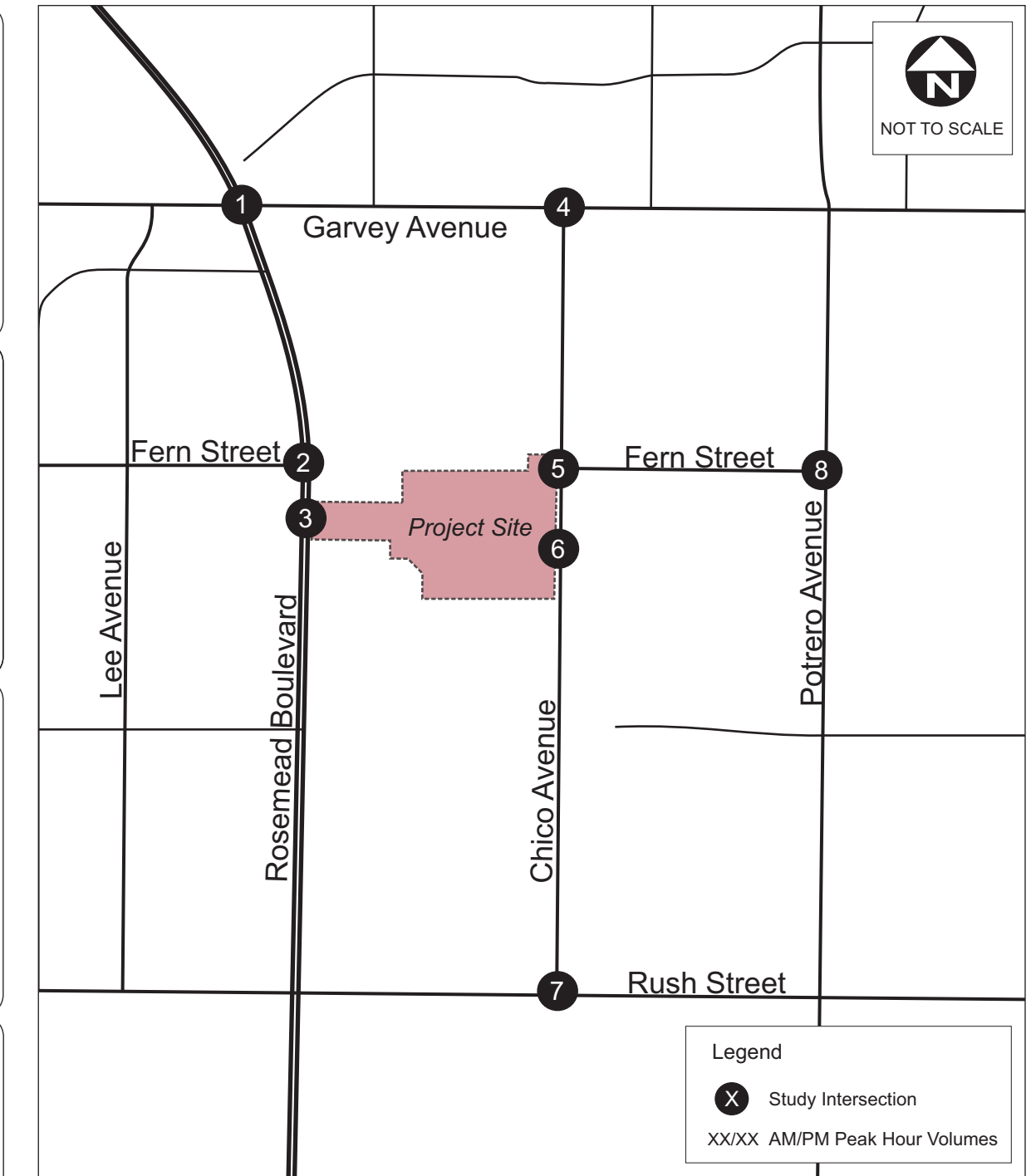
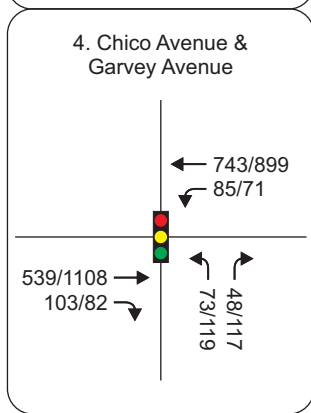
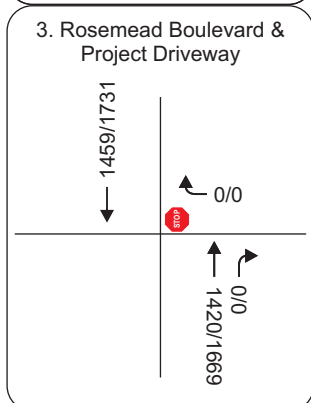
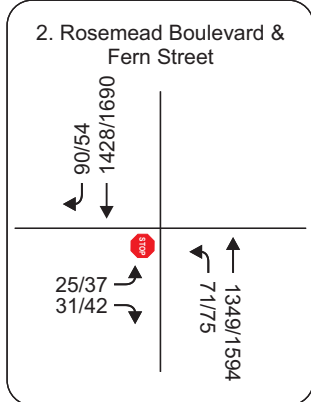
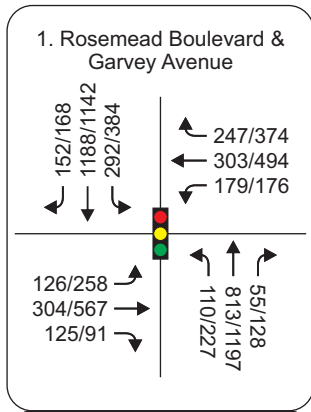
A level of service analysis was conducted to evaluate opening year 2023 without project intersection operations during the AM and PM peak hours. **Figure 12** shows the opening year 2023 without project peak hour volumes at the study intersections. **Table 9** summarizes the opening year 2023 without project levels of service at the study intersections. Level of service calculation worksheets are included in **Appendix B**.

Table 9: Opening Year 2023 Without Project Intersection Peak Hour Level of Service

	Intersection	Control Type	AM Peak Hour			PM Peak Hour		
			V/C	Delay (sec)	LOS	V/C	Delay (sec)	LOS
1	Rosemead Blvd / Garvey Ave	Signalized	0.77	-	C	1.14	-	F
2	Rosemead Blvd / Fern St	TWSC	-	116.4	F	-	882.0	F
3	Rosemead Blvd / Project Dwy	TWSC	-	0.0	A	-	0.0	A
4	Chico Ave / Garvey Ave	Signalized	0.48	-	A	0.71	-	C
5	Chico Ave / Fern St	TWSC	-	11.3	B	-	12.3	B
6	Chico / Project Dwy	Uncontrolled	-	0.0	A	-	0.0	A
7	Chico Ave / Rush St	Signalized	0.61	-	B	0.62	-	B
8	Potrero Ave / Fern St	AWSC	-	8.1	A	-	9.6	A

Notes: V/C = Volume to Capacity Ratio, LOS = Level of Service; TWSC = two-way stop-controlled; AWSC = all-way stop-controlled

As shown in **Table 9**, the unsignalized Rosemead Boulevard/Fern Street intersection is forecast to operate at LOS F during the AM and PM peak hours in opening year 2023 without project, with significant delay incurred from trips forecasted to accompany the Mye Development cumulative project. Additionally, the signalized Rosemead Boulevard/Garvey Avenue intersection is forecast to continue to operate at LOS F during the PM peak hour.



8 OPENING YEAR 2023 WITH PROJECT CONDITIONS

Opening year 2023 with project conditions were developed by adding trips forecast to be generated by the proposed project, as described in **Section 5**, to opening year 2023 without project volumes, as described in **Section 7**. **Figure 13** illustrates the opening year 2023 with project traffic volumes at the study intersections.

8.1 Opening Year 2023 With Project Intersection Levels of Service

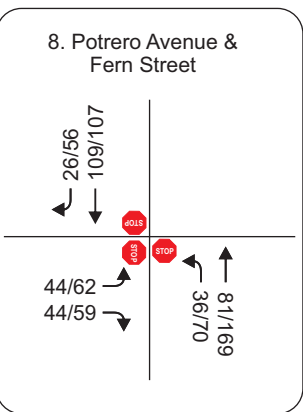
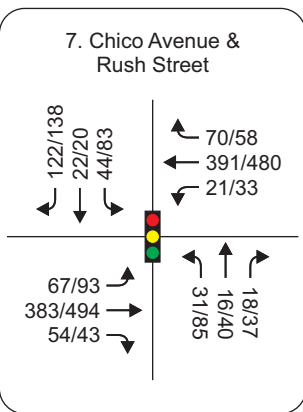
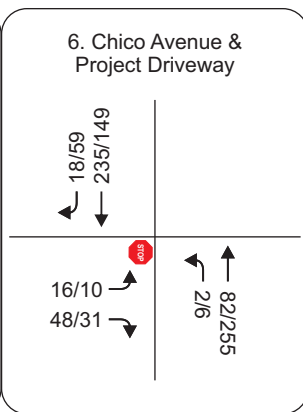
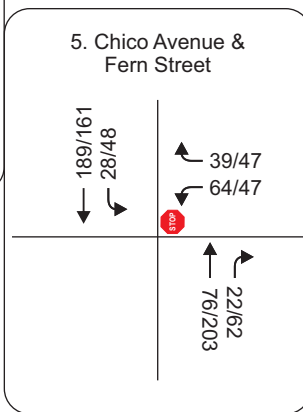
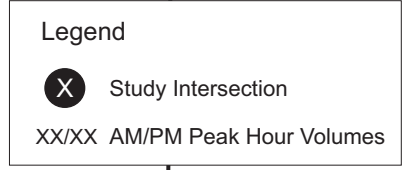
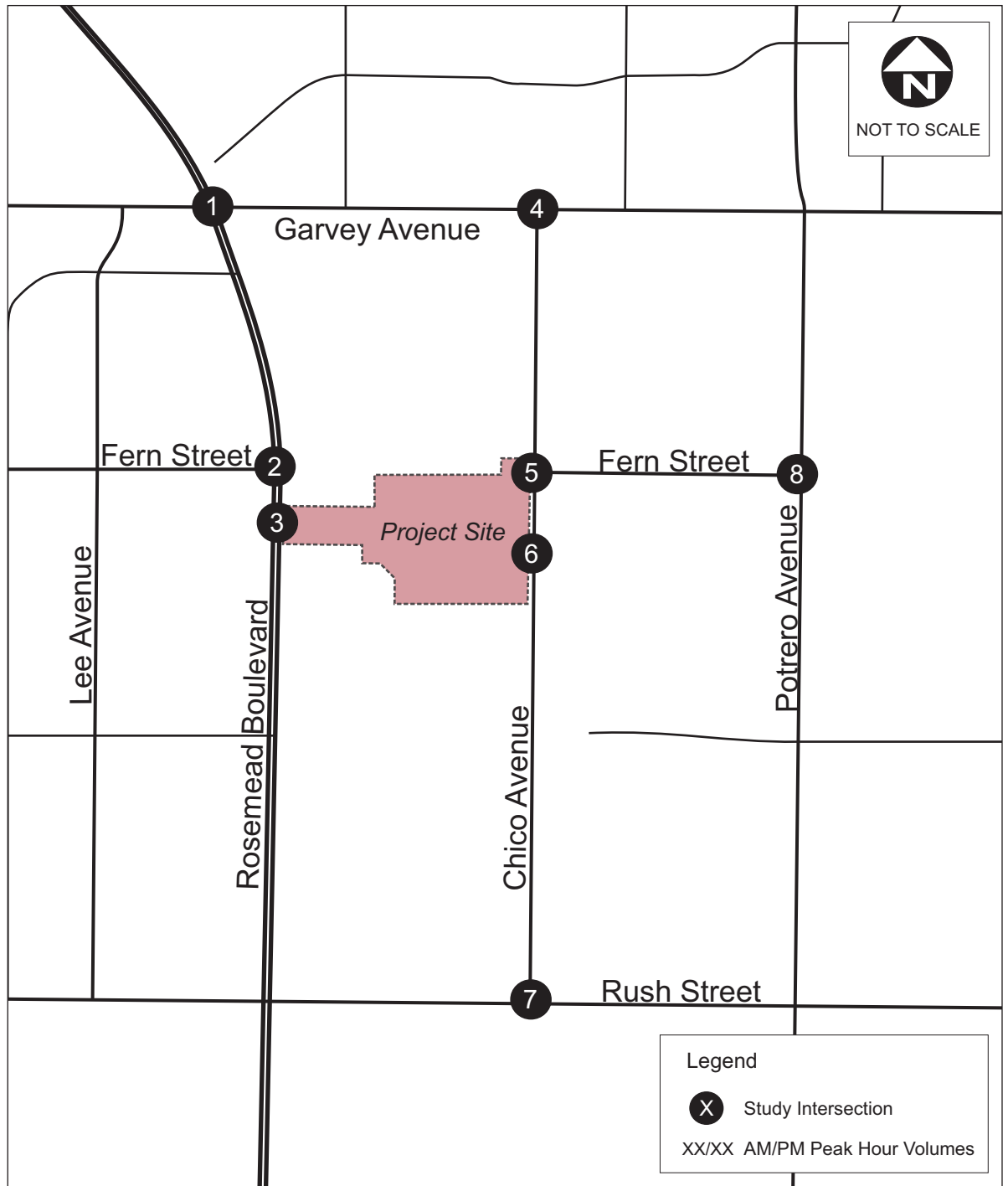
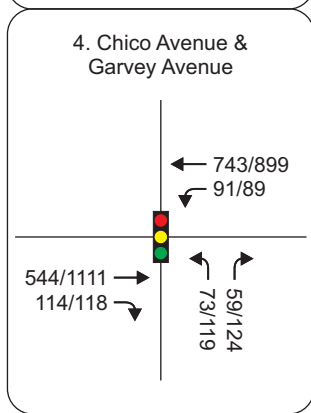
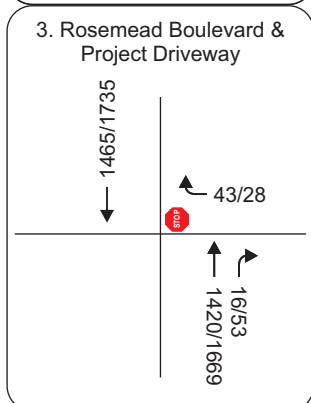
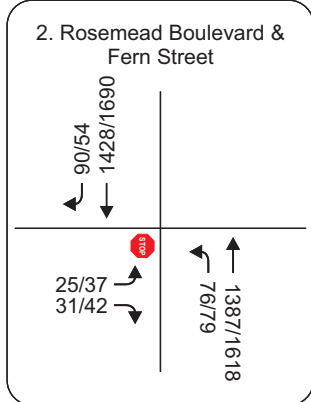
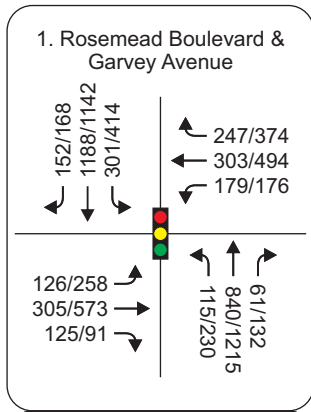
A level of service analysis was conducted to evaluate opening year 2023 with project intersection operations during the AM and PM peak hours. Opening year 2023 with project levels of service at the study intersections are summarized in **Table 10**. Level of service calculation worksheets are included in **Appendix B**.

Table 10: Opening Year 2023 With Project Intersection Peak Hour Level of Service

Intersection		Opening Year 2023 Without Project						Opening Year 2023 With Project						Change in V/C or Delay		Exceeds Threshold Due to the Project?
		AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour			AM Peak Hour	PM Peak Hour	
		V/C	Delay (sec)	LOS	V/C	Delay (sec)	LOS	V/C	Delay (sec)	LOS	V/C	Delay (sec)	LOS			
1	Rosemead Blvd / Garvey Ave	0.77	-	C	1.14	-	F	0.78	-	C	1.14	-	F	0.01	0.0	No
2	Rosemead Blvd / Fern St	-	116.4	F	-	882.0	F	-	131.4	F	-	919.0	F	15.0	37.0	No
3	Rosemead Blvd / Project Dwy	-	0.0	A	-	0.0	A	-	19.8	C	-	23.1	C	19.8	23.1	No
4	Chico Ave / Garvey Ave	0.48	-	A	0.71	-	C	0.48	-	A	0.75	-	C	0.0	0.04	No
5	Chico Ave / Fern St	-	11.3	B	-	12.3	B	-	11.7	B	-	13.2	B	0.4	0.9	No
6	Chico / Project Dwy	-	0.0	A	-	0.0	A	-	10.4	B	-	10.2	B	10.4	10.2	No
7	Chico Ave / Rush St	0.61	-	B	0.62	-	B	0.64	-	B	0.70	-	B	0.01	0.02	No
8	Potrero Ave / Fern St	-	8.1	A	-	9.6	A	-	8.1	A	-	9.6	A	0.0	0.0	No

Notes: V/C = Volume to Capacity Ratio, LOS = Level of Service.

As shown in **Table 10**, project trips forecast to be added to the unsignalized intersection Rosemead Boulevard/Fern Street will increase delay at this intersection due to some volume of project traffic assumed to exit the project site onto Rosemead Boulevard making a U-turn at the Rosemead Boulevard at Fern Street intersection to proceed southbound. With LOS F, this intersection currently already exceeds the City's target threshold for acceptable levels of service, however since the intersection does not degrade in level of service from the baseline scenario and the project does not contribute 2 percent or more traffic to the location it is not considered to exceed the threshold due to the project. While the signalized intersection of Rosemead Boulevard/Garvey Avenue also currently exceeds the city's threshold with LOS F in the PM peak hour, there is no additional delay incurred at this intersection due to forecast project trips.



8.2 Deficient Intersections

The City's Transportation Study Guidelines state that any intersection operating at LOS E or F is considered to be deficient. If a project contributes two percent (2%) or more of the total traffic at an intersection that is expected to be deficient, improvements should be considered. Signalized intersections will typically require improvements if the addition of project traffic results in the degradation of intersection operations from LOS D or better to LOS E or F and will increase the V/C ratio by .01 or more. Furthermore, unsignalized intersections will require improvements if the addition of project traffic to an intersection results in the degradation of any individual movement at the intersection from LOS D or better to LOS E or F and the intersection meets peak hour signal warrants per the latest California Manual on Uniform Traffic Control Devices (CA MUTCD).

The only signalized intersection considered deficient is the Rosemead Boulevard/Garvey Avenue intersection, which operates at LOS E or F during the PM peak hour in every scenario examined. However, as mentioned, in both the Existing Plus Project and Opening Year 2023 With Project scenarios, the addition of project traffic to the intersection led to no increase in delay experienced at this intersection.

The unsignalized intersection of Rosemead Boulevard/Fern Street also operates at LOS E or F during both the AM and PM peak hours of each scenario examined and is thus considered deficient. This is due to delay from the eastbound and northbound left turn movements crossing the free-flow Rosemead Boulevard. A comparison of LOS for the eastbound and northbound left turn movements between with and without project scenarios is shown in **Table 11**. Level of service worksheets are available in **Appendix B**.

Table 11: Rosemead Blvd/Fern Street Peak Hour Level of Service Comparison

#	Intersection Location	Control	Existing w/Covid Factor				Existing Plus Project				Change in Delay	
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour	PM Peak Hour
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS		
2	Rosemead Blvd / Fern St (EB)	TWSC	92.0	F	341.1	F	125.0	F	374.2	F	33.00	33.10
2	Rosemead Blvd / Fern St (NBL)	TWSC	29.7	D	36.8	E	32.6	D	38.0	E	2.9	1.2
#	Intersection Location	Control	Opening Year Without Project (2023)				Opening Year (2023) With Project				Change in Delay	
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour	PM Peak Hour
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS		
2	Rosemead Blvd / Fern St (EB)	TWSC	116.4	F	882.0	F	131.4	F	919.0	F	15.00	37.00
2	Rosemead Blvd / Fern St (NBL)	TWSC	32.6	D	54.7	F	33.6	D	57.3	F	1.00	2.6

As shown in **Table 11**, the eastbound movement at the Rosemead Boulevard/Fern Street intersection operates at LOS F during both the AM and PM peak hours for each scenario examined. While the addition of project traffic to this intersection does increase delay for this leg, no project trips were added to this movement. Meanwhile, the northbound left turn movement operates at LOS D during the AM peak hour for all scenarios and at LOS E during the PM peak hour for the Existing and Existing Plus Project scenarios and at LOS F during the PM peak hour for the Opening Year 2023 scenarios. While the addition of project trips to this movement did increase delay, in no scenario did intersection operations degrade from LOS D or better to LOS E or F. Furthermore, the volume of project trips added to this intersection, 43 during the AM peak hour and 27 during the PM peak hour, does not exceed two percent (2%) of total intersection traffic in either of the With Project scenarios examined. Therefore, due to the above factors, this intersection does not require improvements due to project traffic according to the City’s Guidelines.

9 PROJECT SITE CONSIDERATIONS

In addition to traffic operations in the surrounding roadway network and project intersections, other particular considerations related to the project site concerning issues such as potential vehicle stacking, queuing, line of sight, truck access, parking, and pedestrian safety were analyzed as part of this traffic study and described in this section.

9.1 Project Parking vs Code Requirements

According to the site plan provided by the developer, the Starlite development will offer 414 private parking spaces, with each unit having its own two-car garage, in addition to 104 onsite guest parking stalls distributed along interior project driveways, and 10 overflow parking stalls over a Los Angeles County flood control easement.

According to Chapter 17.60 of the City of South El Monte Municipal Code, the off-street parking requirement for single-family dwellings is two standard spaces within a garage, while for multiple dwellings, it is two standard spaces per dwelling unit with a garage, plus one guest parking space for every four units. Thus, available parking spaces for the project far exceed the minimum code requirements, with over 100 more parking spaces than required.

9.2 Rosemead Boulevard/Project Driveway

As shown in the level of service analysis, the current right-in, right-out configuration would adequately accommodate project site traffic. However, it is worth considering that this configuration will likely result in some project trips making U-turns at the Rosemead Boulevard/Fern Street intersection, which would add trips to the critical northbound left turn movement that already exceeds the City's operational threshold in the PM peak hour. However, as mentioned in **Section 8** the project would not contribute more than two percent (2%) to total traffic at the intersection and therefore would not be considered to significantly contribute to the threshold exceedance.

A break in the median along Rosemead Boulevard at the intersection with the Project Driveway would add southbound and westbound left-turn access to and from the project site, increasing overall access to the site from the west and ameliorating any added project trips to the northbound left turn movement at the already deficient Rosemead Boulevard/Fern Street intersection. To investigate the impacts this would have on traffic operations, additional analysis was performed adding a dedicated southbound left turn lane with a storage capacity of 80 feet as well as a westbound left turn movement at this intersection, considering both an unsignalized and a signalized intersection. The proposed trip distribution for these scenarios with changes to the Rosemead Boulevard/Project Driveway intersection, reflecting greater access to the project site, is shown in **Figure 14**.

Levels of service with changes made to the Rosemead Boulevard/Project Driveway intersection, both unsignalized and signalized, are summarized in **Table 12** for both Existing Plus Project and Opening Year 2023 with project conditions. Level of service calculation worksheets for these alternatives are included in **Appendix C**.

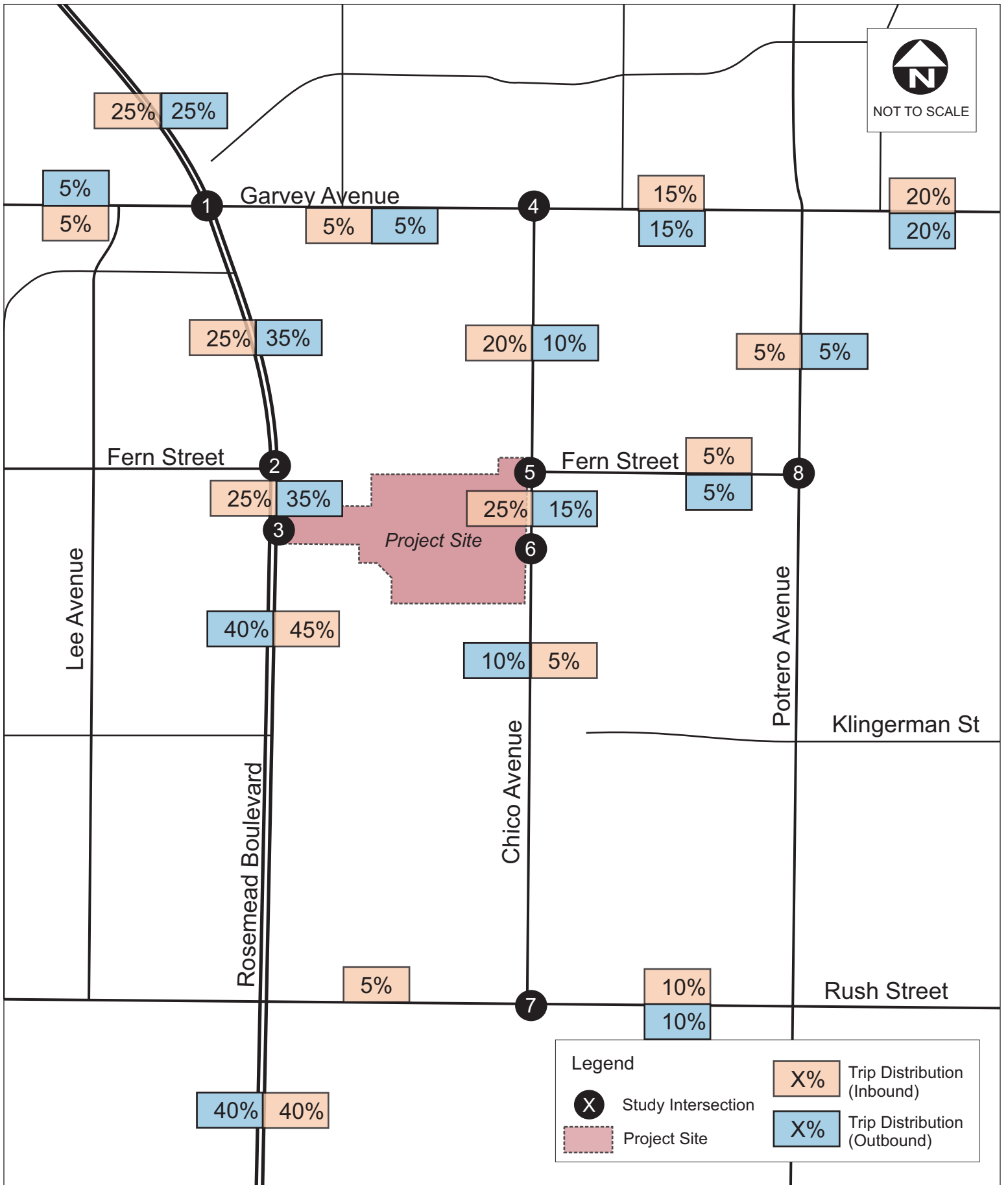


Table 12 – Opening Year 2023 With Project With Changes to Rosemead Blvd/Project Dwy Peak Hour Level of Service

#	Intersection Location	Control	Existing Plus Project						Opening Year 2023 With Project					
			AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour		
			V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS
3	Rosemead Blvd / Project Dwy	TWSC	-	110.3	F	-	242.3	F	-	117.3	F	-	269.0	F
3	Rosemead Blvd / Project Dwy	Signalized	0.41	-	A	0.46	-	A	0.41	-	A	0.47	-	A

Note: TWSC: Two-Way Stop-Controlled.

As shown in **Table 12**, if left unsignalized, the Rosemead Boulevard/Project Driveway intersection would exceed the operations threshold laid out in the City’s Guidelines due to delay incurred by the westbound left turn movement, rendering the intersection deficient. Therefore, the signalization of the project driveway would provide the best area operational benefits with the proposed project condition. Additionally, this scenario could provide for bicycle and pedestrian crossings on Rosemead Boulevard. Currently, the closest signalized crossings for bicycles and pedestrians are approximately 2,400 feet to the south at Rush Street and 1,500 feet to the north at Garvey Avenue.

Rosemead Boulevard is California State Highway 164 and is owned by Caltrans. Caltrans partners with the City to enact modifications to the roadway and full relinquishment to the City is under consideration. Any physical or operational changes to Rosemead Boulevard would need to proceed through the Caltrans process.

9.3 Chico Avenue/Project Driveway

A queue analysis of the northbound left turn movement at the Chico Avenue/Project Driveway intersection. However, due to the low peak hour project traffic volumes forecast for this movement at this intersection – two (2) vehicles in the AM peak hour and six (6) vehicles in the PM peak hour, delay related to northbound left-turning vehicles is not anticipated to be an issue at this intersection. Furthermore, given the absence of a dedicated northbound left-turn lane, delay and intersection LOS are more valuable metrics for this intersection when measuring project impacts.

If northbound left-turning vehicles remain a concern, Chico Avenue has a width of approximately 40 feet, more than wide enough to accommodate northbound through vehicles maneuvering around northbound left-turning vehicles. However, this would require parking restrictions near the project driveway on the northbound side of Chico Avenue. To accommodate vehicles passing two stacked northbound left-turning vehicles with an average length of 20 to 25 feet each, parking should be restricted on the northbound side of Chico Avenue for at least one car length on either side of these vehicles, or 100 feet total.

9.4 Vehicle Stacking at Project Driveways

An investigation into vehicle stacking accommodation at project driveways was requested to ensure that there is adequate room for more than one vehicle entering or exiting the project site at the same time from each driveway.

The Rosemead Boulevard project driveway is approximately 240 feet in length between the intersection with Rosemead Boulevard and the site access gate, including a turnaround that provides 32 feet of width for fire trucks entering the project site. Considering an average vehicle length of 20 to 25 feet, this driveway provides more than enough room for multiple vehicles to stack while entering or exiting the project site at the same time.

The Chico Avenue project driveway is approximately 120 feet in length between the intersection with Chico Avenue and the site access gate, including a turnaround that provides 26 feet of width in either direction. Again considering the average vehicle length of 20 to 25 feet, there is adequate room for vehicles to stack while entering and exiting the project site at the same time.

9.5 Line of Sight at Project Driveways

Adequate line of sight must be provided at uncontrolled intersections both for vehicles to safely exit the project site and for through vehicles traveling on the roadway intersecting the site to have adequate distance to stop in the event a vehicle suddenly pulls out in front of them. Adequate stopping sight distance is calculated using sum of two distances, which together factor in roadway design speed, break reaction time, and an assumed deceleration rate:

1. The distance traversed by the vehicle from the instant the driver sights an object necessitating a stop to the instant the brakes are applied (brake reaction distance), and;
2. The distance needed to stop the vehicle from the instant brake application begins (braking distance).

The American Association of State Highway and Transportation Officials (AASHTO) has created a table using this formula to simplify the determination of stopping sight distance, seen below in **Table 13**.

Table 13 – AASHTO Guidelines Stopping Sight Distance (15 MPH to 45 MPH)

Design Speed (mph)	Brake Reaction Distance (ft)	Braking Distance on Level (ft)	Stopping Sight Distance	
			Calculated (ft)	Distance (ft)
15	55.1	21.6	76.7	80
20	73.5	38.4	111.9	115
25	91.9	60.0	151.9	155
30	110.3	86.4	196.7	200
35	128.6	117.6	246.2	250
40	147.0	153.6	300.6	305
45	165.4	194.4	359.8	360

Considering Rosemead Boulevard’s speed limit of 45 mph and Chico Avenue’s speed limit of 30 mph, using the stopping sight distance specified in **Table 13**, a stopping sight distance of 360 feet would be required at Rosemead Boulevard south of the project driveway and a stopping sight distance of 200 feet would be required at the Chico Avenue driveway. Current parking restrictions on Rosemead Boulevard extend at least 400 feet south of the project driveway, providing ample stopping sight distance for the intersection. However, existing parking on the west side of Chico Avenue north and south of the proposed project driveway would need to be restricted to ensure adequate stopping sight distance is provided.

9.6 Pedestrian Safety

Currently, the Chico Avenue/Fern Street intersection provides a marked pedestrian crosswalk on the north leg of the intersection crossing Chico Avenue and an unmarked crossing, denoted by curb ramps, on the east leg of the intersection crossing Fern Street. While pedestrian counts did not indicate any pedestrians crossing the intersection during the AM and PM peak hours, it is reasonable to assume that families with children will be occupying units in the proposed project and that these children would likely cross Chico Avenue at this crosswalk to access Potrero Elementary School. Currently, there is no advance warning signage alerting drivers to the presence of this crosswalk (California MUTCD Pedestrian W11-2), despite traffic along Chico Avenue being uncontrolled. The curb ramps on Chico Avenue are not aligned with the crosswalk and require pedestrians using the curb ramp to enter the intersection outside the crosswalk.



Current misaligned curb ramp configurations for crosswalk at Chico Avenue/Fern Street intersection.

9.7 Truck Access

To determine adequate truck access to the project site for garbage collection, SU-40 truck turning templates were analyzed over the proposed project site conditions using Autoturn software to ensure that adequate turning radii was available entering, within, and exiting the project site at each driveway. Images of these analysis are available for right turns into and out of the project site and alleys in **Figure 15** and **Figure 16**, respectively, and for left turns into and out of the project site and alleys in **Figure 17** and **Figure 18**, respectively.

While there were no issues encountered with any of the left turn-movements, most right-turn movements require the trucks to encroach into the opposing lane in order to properly make the turns due to small curb radii leading into and out of the alleys, roadway widths, and presence of on-street parking.

At the Chico Avenue/Project Driveway intersection, issues were detected with right-turn movements into and out of the project site. Entering the project site, driveway dimensions require the truck to swing slightly beyond the raised median before realigning within the lane, while exiting the project site, the truck will have to turn into the opposing northbound lane before maneuvering back into the southbound lane. These findings were shared with the applicants civil engineer and the site plan was altered to adjust the Chico Avenue driveway to:

- Widen the driveway from 26 feet to 30 feet west of the entrance island
- Moved the island nose two feet to the west
- Widen the driveway at Chico Avenue from 54 feet to 58 feet

These adjustments satisfy the results to the truck access analysis as shown

Figure 15 – Truck Turning Movements – Right Turns In

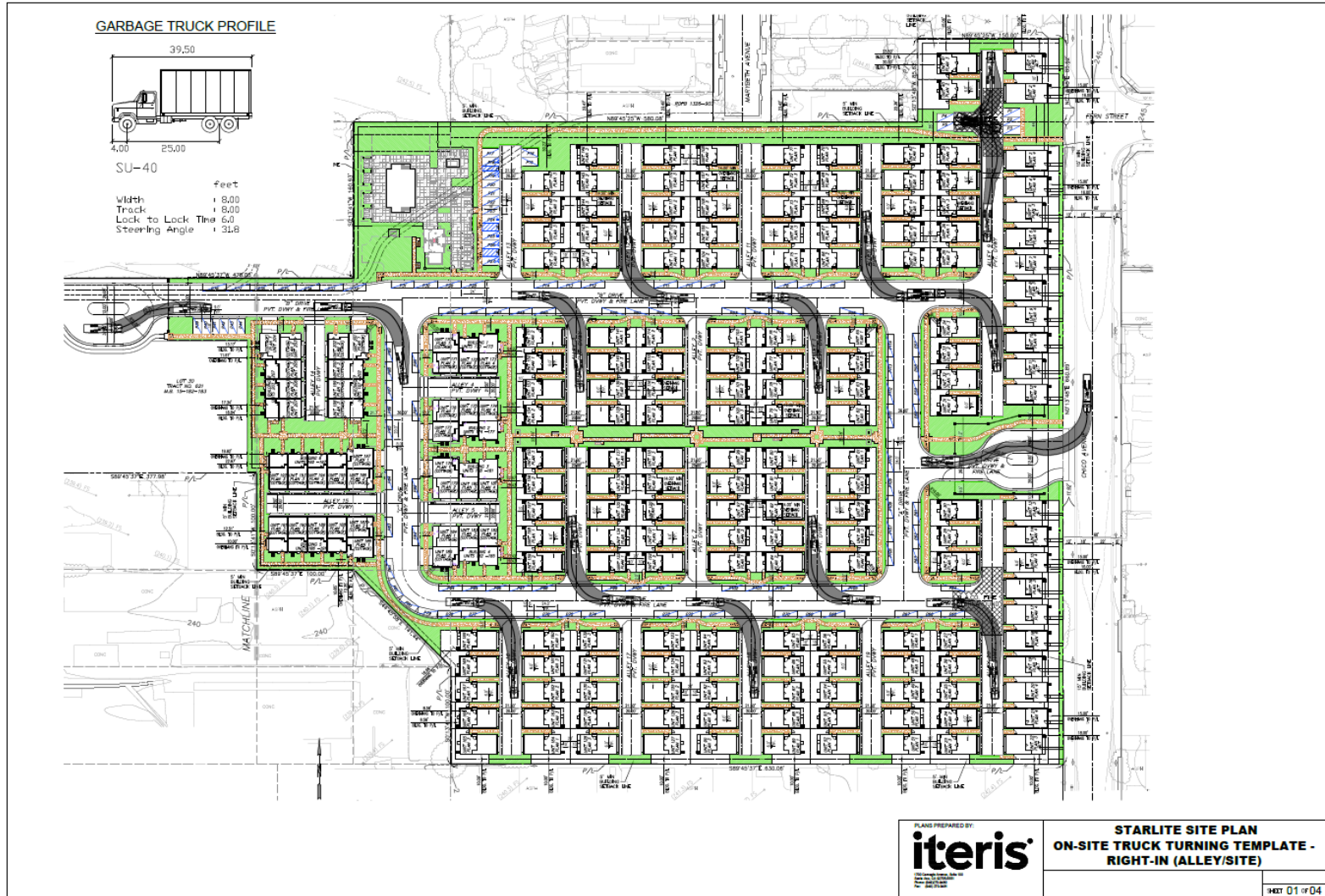


Figure 16 – Truck Turning Movements – Right Turns Out



Figure 17 – Truck Turning Movements – Left Turns In



Figure 18 – Truck Turning Movements – Left Turns Out

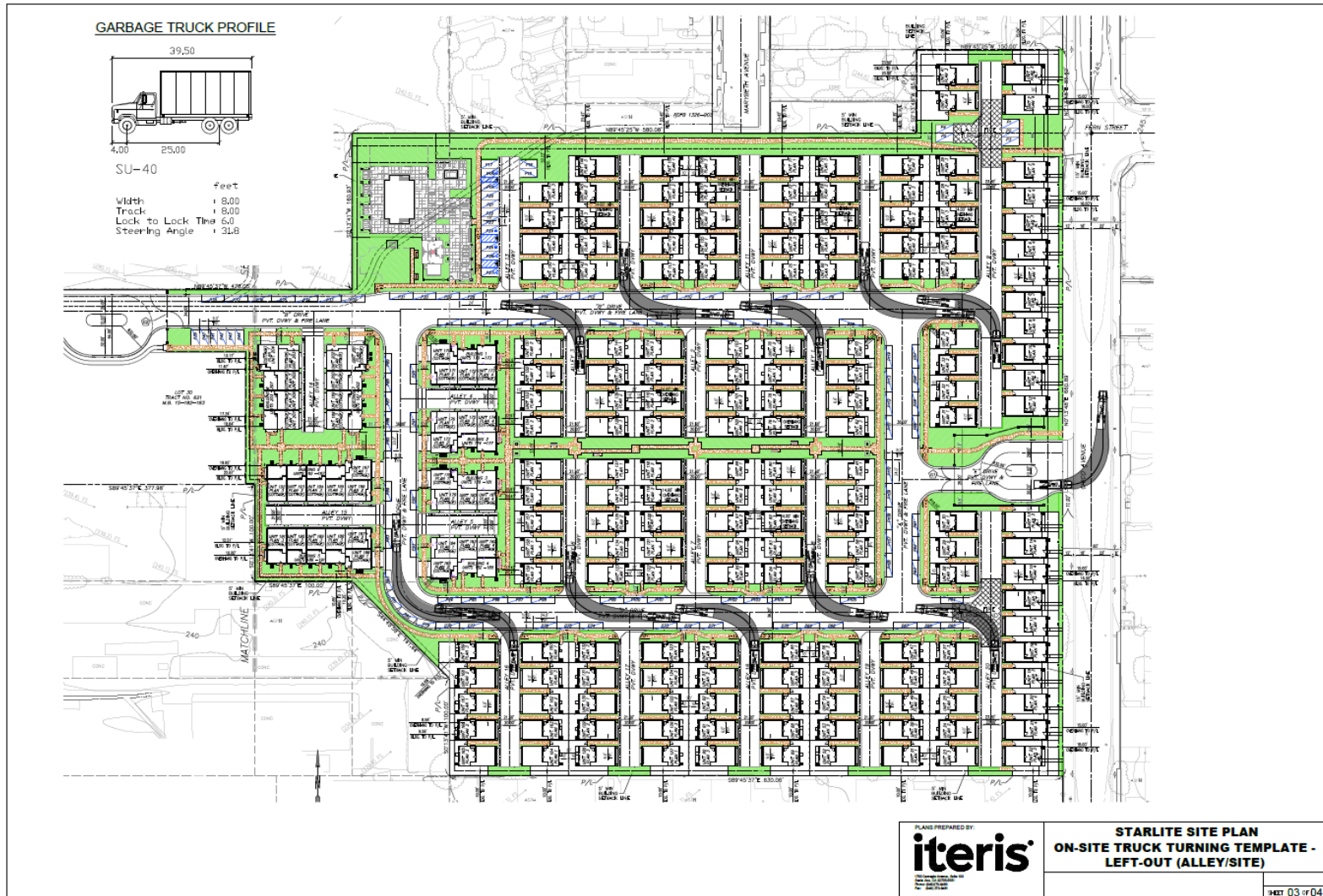
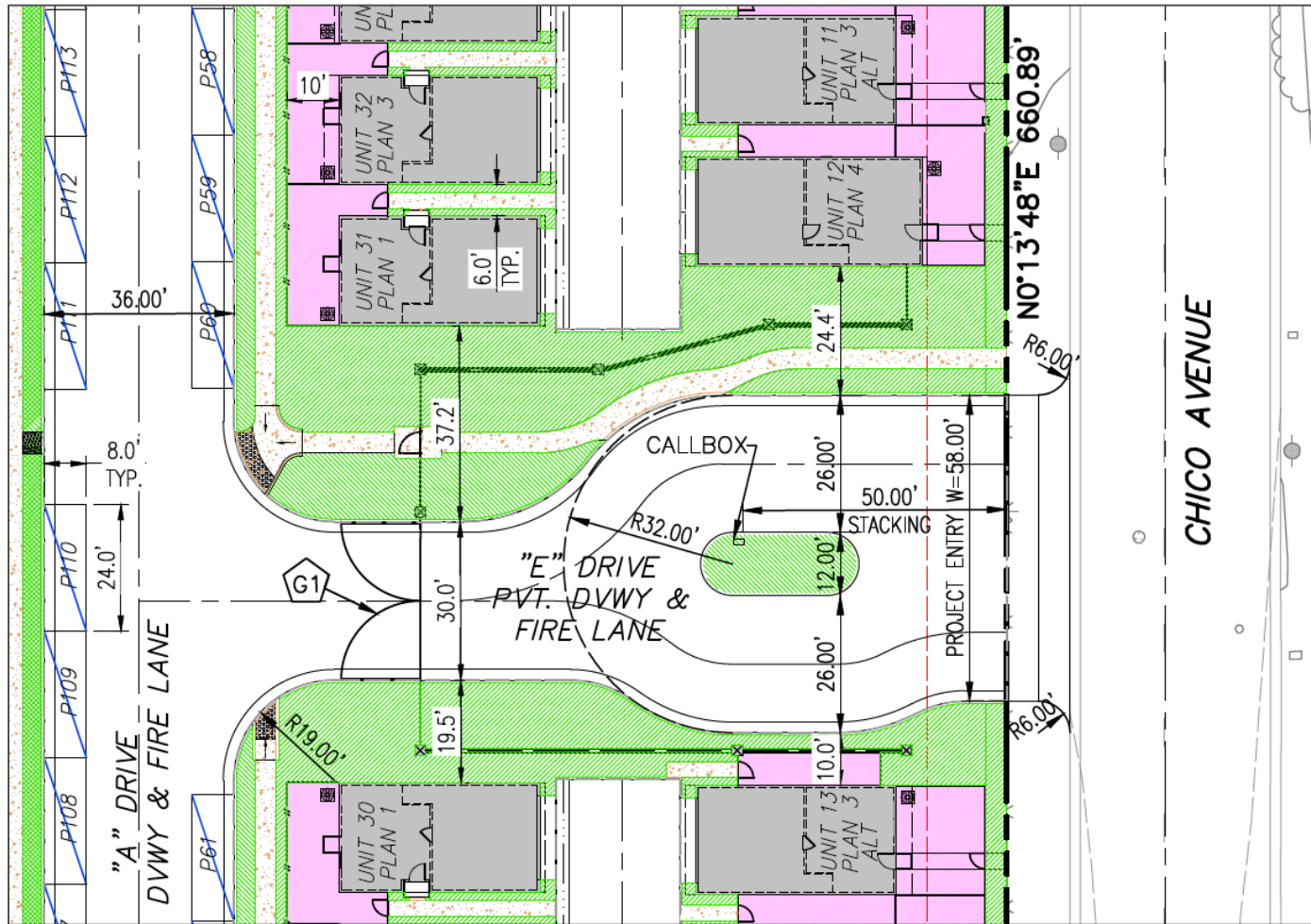


Figure 19 – Chico Avenue Driveway Revisions Based on Truck Access Analysis



10 CONSTRUCTION PERIOD

The contractor will prepare a construction traffic management plan that specifies the conditions under which the construction activities shall take place. The construction traffic management plan will specify details of any detours, coordination with emergency services and transit providers, coordination with adjacent property owners and tenants, advanced notification of temporary bus stop loss and/or bus line relocation, identification of temporary alternative bus routes, advanced notice of parking loss and replacement parking within a reasonable walking distance, use of designated haul routes and truck staging areas, observance of hours of operation restrictions, and appropriate signage for construction activities.

11 VMT ANALYSIS SCREENING ELIGIBILITY

CEQA analysis for determining potential significant transportation impacts from vehicle traffic transitioned from an automobile delay or capacity measure to a Vehicle Miles Traveled (VMT) of automobiles and light trucks metric in July 2020, as required by Senate Bill (SB) 743. VMT is an area-wide performance measure which helps compare the overall performance of a project or project alternatives and is also used as a metric to ultimately assess the transportation environmental impacts of a project. VMT analysis shifts the focus towards impacts caused by the distance traveled by vehicles rather than the localized congestion created by vehicles (i.e., intersection-level delay). VMT is generally calculated using a travel demand model that captures the movement of all trips over a highway network. Analysis is limited to automobile travel (automobiles and light-trucks) and excludes heavy trucks.

The City of South El Monte prepared City of South El Monte Transportation Study Guidelines for Vehicle Miles Traveled and Level of Service Assessment (October 2020) that provide technical guidance regarding assessment of VMT, thresholds of significance, and mitigation measures for land development and transportation projects in the unincorporated area.

The Project would add housing in a predominately commercial and industrial area that is well-served by public transportation, thereby diversifying the land use types and contributing to a reduction in vehicle miles traveled per capita.

The Project was analyzed using the San Gabriel Valley Council of Governments Vehicle Miles Traveled Evaluation Tool for the three Project parcels (APNs: 8102-037-020, 8102-037-022, 8102-037-024) in traffic analysis zone (TAZ) 22195100. The Project is not located in a Transit Priority Area and would have a project generated VMT rate of 12.67 home-based VMT per capita. When compared to the City VMT baseline value of 15.75 home-based VMT per capita and the 15 percent below baseline significance value of 13.39, the proposed Project is presumed to have a less than significant impact as shown in **Figures 20** and **21**.

Figure 20 – San Gabriel Valley Council of Governments VMT Evaluation Tool Report (Part 1)

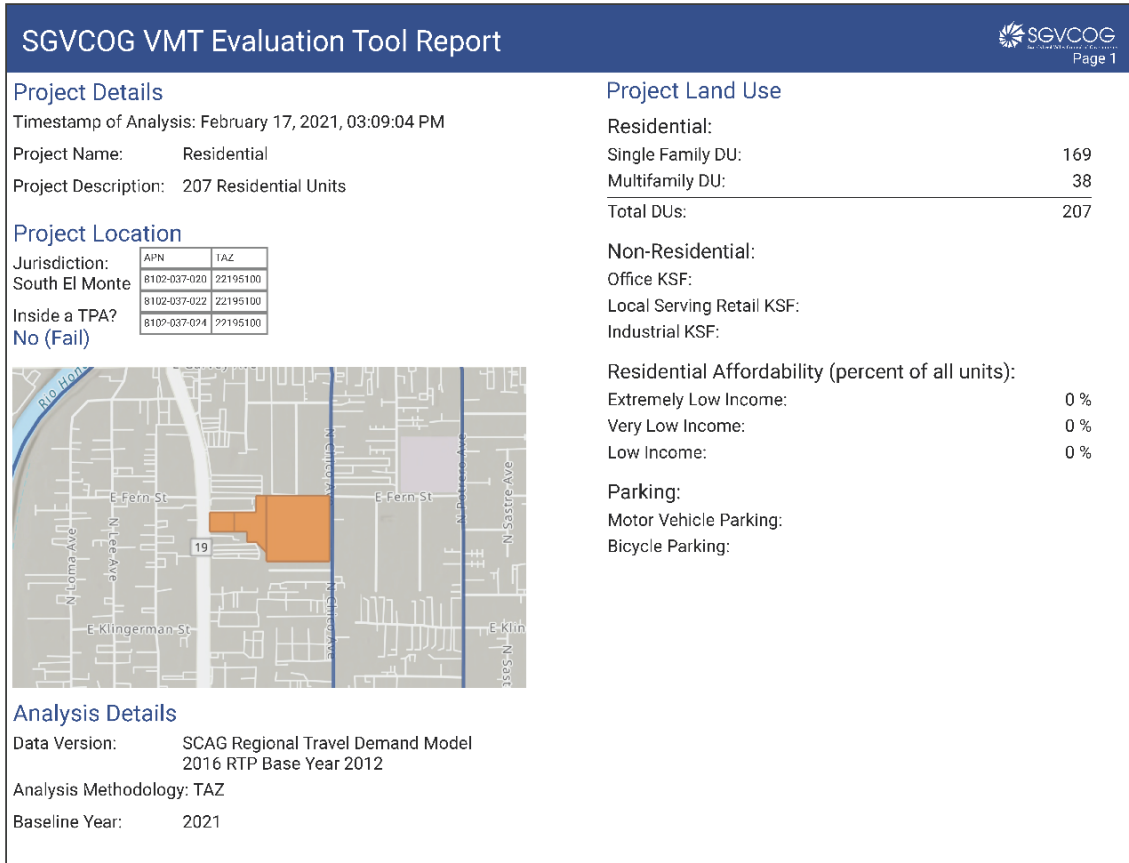
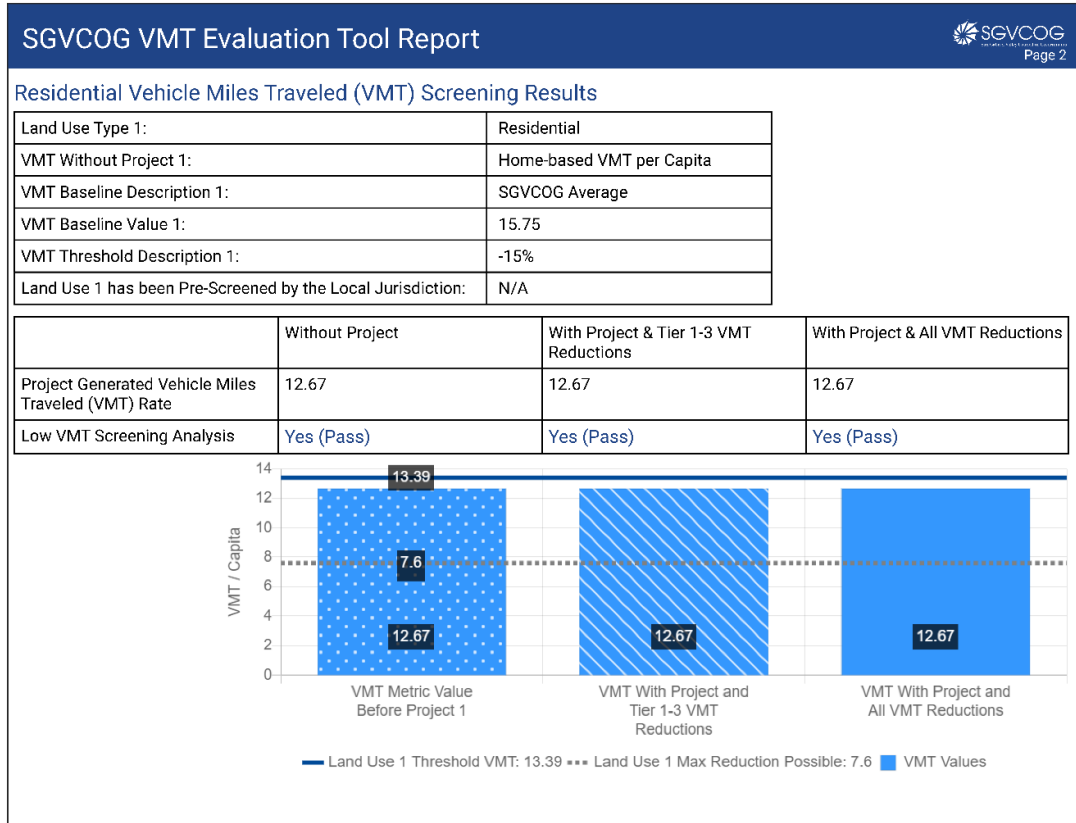


Figure 21 – San Gabriel Valley Council of Governments VMT Evaluation Tool Report (Part 2)



12 CONCLUSIONS

The proposed Starlite Development project, located at 2540 Rosemead Boulevard, consists of 207 residential units, with 38 multi-family housing units and 169 detached single-family housing units. The proposed project is forecast to generate 143 new AM peak hour trips, 189 new PM peak hour trips, and 937 new daily trips.

The signalized Rosemead Boulevard/Garvey Avenue intersection is forecast to operate at LOS F during the PM peak hour with project conditions, though is not forecast to incur additional delay from project trips. Therefore, this intersection will not require improvements due to project impacts per the City's Guidelines.

The unsignalized Rosemead Boulevard/Fern Street intersection currently operates at LOS F conditions and is projected to incur additional delay due to project trips. Delay at this intersection affects predominantly the eastbound left and northbound left turn movements. However, this added delay will not result in the degradation of any movement from LOS D or better to LOS E or F. Therefore, this intersection will not require improvements due to project impacts per the City's Guidelines.

Additional analysis of the project site and project site access resulted in the following conclusions:

- Parking provided by the project more than satisfies minimum off-street parking requirements in the City's Municipal Code.
- Consider improving project site access and avoiding additional project trips at the already deficient northbound left-turn movement at the Rosemead Boulevard/Fern Street intersection, consider signaling the Rosemead Boulevard/Driveway intersection and adding southbound and westbound left-turn access. This will also allow for improved pedestrian/bicycle crossing opportunities.
- The peak hour volumes for the northbound left turn movement at Chico Avenue/Project Driveway are not forecast to cause delays, though parking restrictions should be enacted on a 100-foot stretch of Chico Avenue to ensure adequate room for northbound through traffic to pass two stacked left-turning vehicles.
- Both the Rosemead Boulevard and Chico Avenue project driveways contain enough space for stacking vehicles entering and exiting the project site.
- To ensure adequate line of sight for vehicles traveling along Chico Avenue and exiting the project site at Chico Avenue/Project Driveway intersection, it is recommended that restrictions be placed for on-street parking on the west side of Chico Avenue north and south of the project driveway.
- Additional signage warning vehicles approaching the Chico Avenue/Fern Street intersection about pedestrians crossing and repainting of the crosswalk along the north leg of the intersection are recommended to improve pedestrian safety. If possible, curb ramps on either side of Chico Avenue should be better aligned with the crosswalk.
- Garbage trucks will have adequate space to accommodate their turning radii for all left turns in and out of project driveways and alleys and right turns entering and exiting the project site at the Chico Avenue driveway had turning conflicts removed after altering the site plan to add to the driveway width and adjustment to the island median.

As discussed in **Section 10**, a construction traffic management plan will be provided by the contractor that will specify staging and hours.

As discussed in **Section 11**, this project is eligible for screening from a full VMT analysis.

APPENDIX A – EXISTING TRAFFIC VOLUMES

City of South El Monte
 N/S: Rosemead Boulevard
 E/W: Garvey Avenue
 Weather: Clear

File Name : 01_SEM_Rosemead_Garvey AM
 Site Code : 10821002
 Start Date : 1/12/2021
 Page No : 1

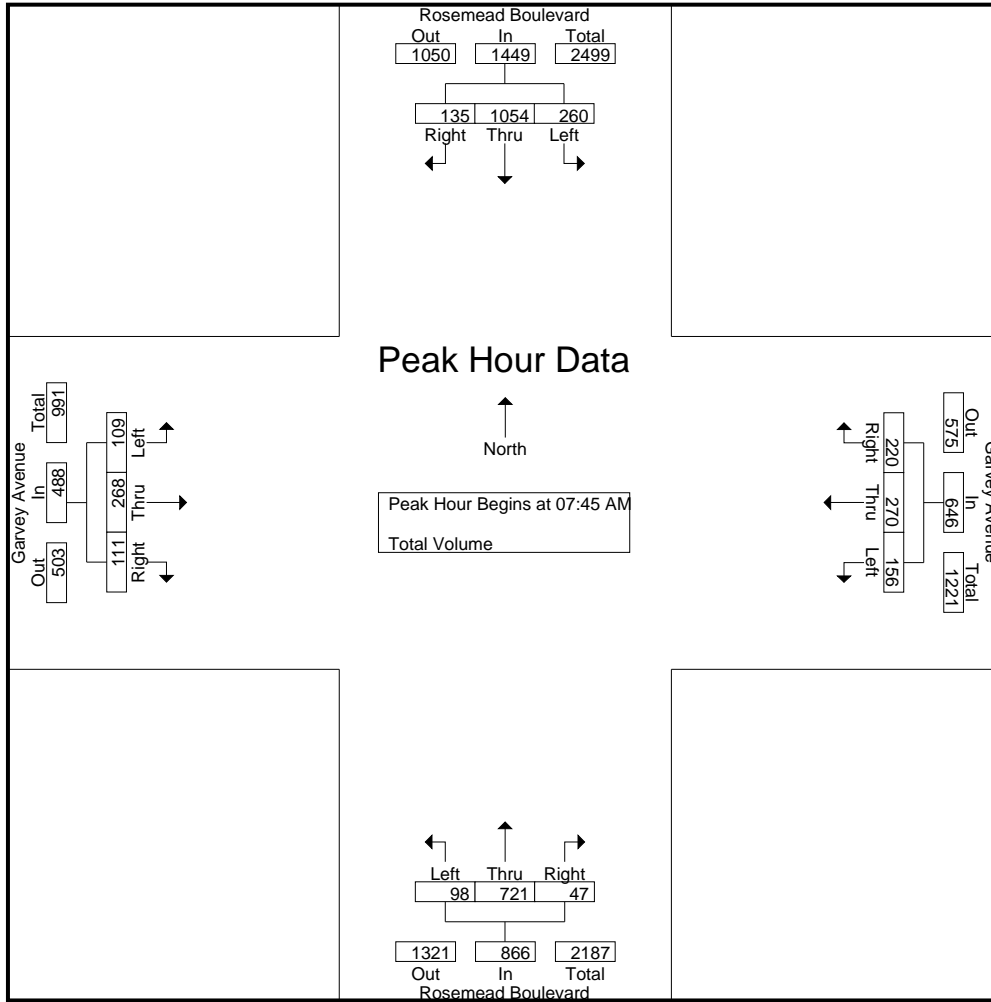
Groups Printed- Total Volume

Start Time	Rosemead Boulevard Southbound				Garvey Avenue Westbound				Rosemead Boulevard Northbound				Garvey Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	35	166	11	212	23	44	42	109	9	130	4	143	17	40	14	71	535
07:15 AM	40	188	23	251	20	43	50	113	16	157	4	177	19	46	14	79	620
07:30 AM	65	223	21	309	34	76	64	174	23	169	6	198	33	61	19	113	794
07:45 AM	68	287	30	385	37	48	67	152	20	212	16	248	25	71	28	124	909
Total	208	864	85	1157	114	211	223	548	68	668	30	766	94	218	75	387	2858
08:00 AM	58	260	28	346	44	71	50	165	25	152	7	184	25	50	25	100	795
08:15 AM	53	251	33	337	40	71	47	158	25	177	12	214	27	62	24	113	822
08:30 AM	81	256	44	381	35	80	56	171	28	180	12	220	32	85	34	151	923
08:45 AM	66	227	37	330	44	82	61	187	30	188	16	234	26	56	26	108	859
Total	258	994	142	1394	163	304	214	681	108	697	47	852	110	253	109	472	3399
Grand Total	466	1858	227	2551	277	515	437	1229	176	1365	77	1618	204	471	184	859	6257
Apprch %	18.3	72.8	8.9		22.5	41.9	35.6		10.9	84.4	4.8		23.7	54.8	21.4		
Total %	7.4	29.7	3.6	40.8	4.4	8.2	7	19.6	2.8	21.8	1.2	25.9	3.3	7.5	2.9	13.7	

Start Time	Rosemead Boulevard Southbound				Garvey Avenue Westbound				Rosemead Boulevard Northbound				Garvey Avenue 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 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	68	287	30	385	37	48	67	152	20	212	16	248	25	71	28	124	909
08:00 AM	58	260	28	346	44	71	50	165	25	152	7	184	25	50	25	100	795
08:15 AM	53	251	33	337	40	71	47	158	25	177	12	214	27	62	24	113	822
08:30 AM	81	256	44	381	35	80	56	171	28	180	12	220	32	85	34	151	923
Total Volume	260	1054	135	1449	156	270	220	646	98	721	47	866	109	268	111	488	3449
% App. Total	17.9	72.7	9.3		24.1	41.8	34.1		11.3	83.3	5.4		22.3	54.9	22.7		
PHF	.802	.918	.767	.941	.886	.844	.821	.944	.875	.850	.734	.873	.852	.788	.816	.808	.934

City of South El Monte
 N/S: Rosemead Boulevard
 E/W: Garvey Avenue
 Weather: Clear

File Name : 01_SEM_Rosemead_Garvey AM
 Site Code : 10821002
 Start Date : 1/12/2021
 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:

	07:45 AM				08:00 AM				07:45 AM				07:45 AM			
+0 mins.	68	287	30	385	44	71	50	165	20	212	16	248	25	71	28	124
+15 mins.	58	260	28	346	40	71	47	158	25	152	7	184	25	50	25	100
+30 mins.	53	251	33	337	35	80	56	171	25	177	12	214	27	62	24	113
+45 mins.	81	256	44	381	44	82	61	187	28	180	12	220	32	85	34	151
Total Volume	260	1054	135	1449	163	304	214	681	98	721	47	866	109	268	111	488
% App. Total	17.9	72.7	9.3		23.9	44.6	31.4		11.3	83.3	5.4		22.3	54.9	22.7	
PHF	.802	.918	.767	.941	.926	.927	.877	.910	.875	.850	.734	.873	.852	.788	.816	.808

City of South El Monte
 N/S: Rosemead Boulevard
 E/W: Garvey Avenue
 Weather: Clear

File Name : 01_SEM_Rosemead_Garvey PM
 Site Code : 10821002
 Start Date : 1/12/2021
 Page No : 1

Groups Printed- Total Volume

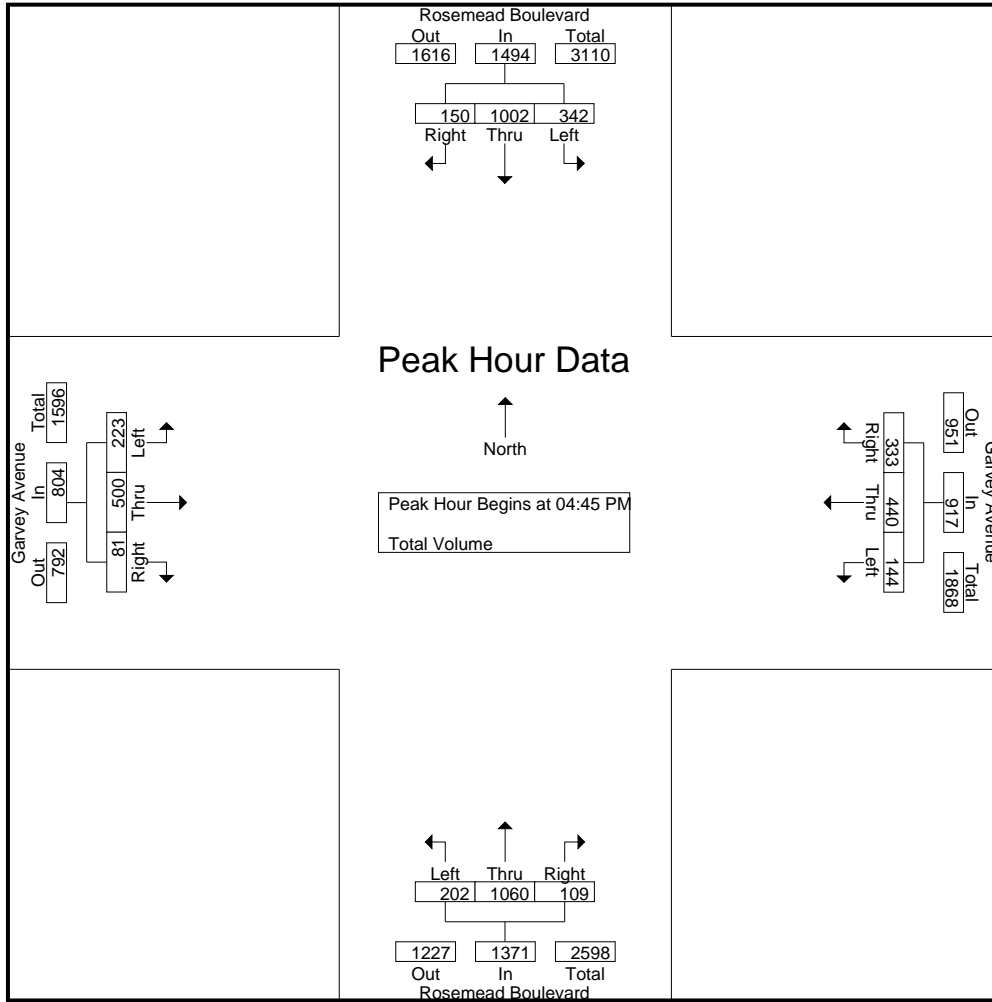
Start Time	Rosemead Boulevard Southbound				Garvey Avenue Westbound				Rosemead Boulevard Northbound				Garvey Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	113	263	48	424	42	103	81	226	49	208	27	284	69	122	27	218	1152
04:15 PM	146	238	39	423	34	91	85	210	54	235	32	321	41	117	27	185	1139
04:30 PM	119	255	49	423	35	94	76	205	61	221	21	303	42	119	30	191	1122
04:45 PM	51	226	41	318	29	96	90	215	40	258	36	334	50	125	21	196	1063
Total	429	982	177	1588	140	384	332	856	204	922	116	1242	202	483	105	790	4476
05:00 PM	102	291	37	430	36	121	86	243	55	261	14	330	61	131	20	212	1215
05:15 PM	107	244	30	381	43	120	72	235	54	275	34	363	62	119	19	200	1179
05:30 PM	82	241	42	365	36	103	85	224	53	266	25	344	50	125	21	196	1129
05:45 PM	94	194	37	325	27	92	66	185	49	247	22	318	50	102	10	162	990
Total	385	970	146	1501	142	436	309	887	211	1049	95	1355	223	477	70	770	4513
Grand Total	814	1952	323	3089	282	820	641	1743	415	1971	211	2597	425	960	175	1560	8989
Apprch %	26.4	63.2	10.5		16.2	47	36.8		16	75.9	8.1		27.2	61.5	11.2		
Total %	9.1	21.7	3.6	34.4	3.1	9.1	7.1	19.4	4.6	21.9	2.3	28.9	4.7	10.7	1.9	17.4	

Start Time	Rosemead Boulevard Southbound				Garvey Avenue Westbound				Rosemead Boulevard Northbound				Garvey Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:45 PM	51	226	41	318	29	96	90	215	40	258	36	334	50	125	21	196	1063
05:00 PM	102	291	37	430	36	121	86	243	55	261	14	330	61	131	20	212	1215
05:15 PM	107	244	30	381	43	120	72	235	54	275	34	363	62	119	19	200	1179
05:30 PM	82	241	42	365	36	103	85	224	53	266	25	344	50	125	21	196	1129
Total Volume	342	1002	150	1494	144	440	333	917	202	1060	109	1371	223	500	81	804	4586
% App. Total	22.9	67.1	10		15.7	48	36.3		14.7	77.3	8		27.7	62.2	10.1		
PHF	.799	.861	.893	.869	.837	.909	.925	.943	.918	.964	.757	.944	.899	.954	.964	.948	.944

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:45 PM

City of South El Monte
 N/S: Rosemead Boulevard
 E/W: Garvey Avenue
 Weather: Clear

File Name : 01_SEM_Rosemead_Garvey PM
 Site Code : 10821002
 Start Date : 1/12/2021
 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:

	04:15 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	146	238	39	423	29	96	90	215	40	258	36	334	50	125	21	196
+15 mins.	119	255	49	423	36	121	86	243	55	261	14	330	61	131	20	212
+30 mins.	51	226	41	318	43	120	72	235	54	275	34	363	62	119	19	200
+45 mins.	102	291	37	430	36	103	85	224	53	266	25	344	50	125	21	196
Total Volume	418	1010	166	1594	144	440	333	917	202	1060	109	1371	223	500	81	804
% App. Total	26.2	63.4	10.4		15.7	48	36.3		14.7	77.3	8		27.7	62.2	10.1	
PHF	.716	.868	.847	.927	.837	.909	.925	.943	.918	.964	.757	.944	.899	.954	.964	.948

City of South El Monte
 N/S: Rosemead Boulevard
 E/W: Fern Street
 Weather: Clear

File Name : 05_SEM_Rosemead_Fern AM
 Site Code : 04221083
 Start Date : 3/4/2021
 Page No : 1

Groups Printed- Total Volume

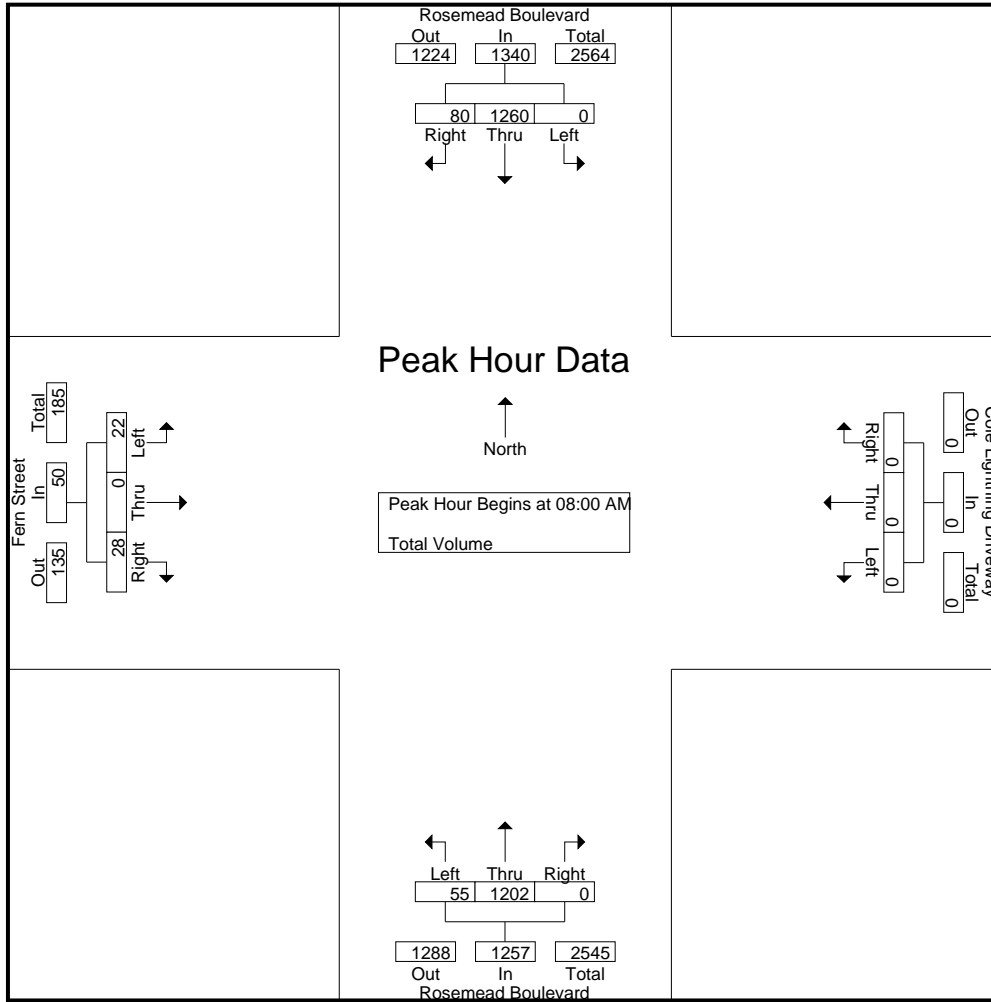
Start Time	Rosemead Boulevard Southbound				Cole Lightning Driveway Westbound				Rosemead Boulevard Northbound				Fern Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	208	10	218	0	0	0	0	10	213	0	223	5	0	2	7	448
07:15 AM	0	218	14	232	0	0	0	0	9	206	0	215	2	0	0	2	449
07:30 AM	0	289	5	294	0	0	0	0	11	276	0	287	3	0	7	10	591
07:45 AM	0	323	17	340	0	0	0	0	10	331	0	341	1	0	3	4	685
Total	0	1038	46	1084	0	0	0	0	40	1026	0	1066	11	0	12	23	2173
08:00 AM	0	331	25	356	0	0	0	0	16	269	0	285	7	0	8	15	656
08:15 AM	0	313	15	328	0	0	0	0	13	319	0	332	5	0	6	11	671
08:30 AM	0	298	18	316	0	0	0	0	15	286	0	301	6	0	9	15	632
08:45 AM	0	318	22	340	0	0	0	0	11	328	0	339	4	0	5	9	688
Total	0	1260	80	1340	0	0	0	0	55	1202	0	1257	22	0	28	50	2647
Grand Total	0	2298	126	2424	0	0	0	0	95	2228	0	2323	33	0	40	73	4820
Apprch %	0	94.8	5.2		0	0	0		4.1	95.9	0		45.2	0	54.8		
Total %	0	47.7	2.6	50.3	0	0	0		2	46.2	0	48.2	0.7	0	0.8	1.5	

Start Time	Rosemead Boulevard Southbound				Cole Lightning Driveway Westbound				Rosemead Boulevard Northbound				Fern Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
08:00 AM	0	331	25	356	0	0	0	0	16	269	0	285	7	0	8	15	656
08:15 AM	0	313	15	328	0	0	0	0	13	319	0	332	5	0	6	11	671
08:30 AM	0	298	18	316	0	0	0	0	15	286	0	301	6	0	9	15	632
08:45 AM	0	318	22	340	0	0	0	0	11	328	0	339	4	0	5	9	688
Total Volume	0	1260	80	1340	0	0	0	0	55	1202	0	1257	22	0	28	50	2647
% App. Total	0	94	6		0	0	0		4.4	95.6	0		44	0	56		
PHF	.000	.952	.800	.941	.000	.000	.000	.000	.859	.916	.000	.927	.786	.000	.778	.833	.962

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 08:00 AM

City of South El Monte
 N/S: Rosemead Boulevard
 E/W: Fern Street
 Weather: Clear

File Name : 05_SEM_Rosemead_Fern AM
 Site Code : 04221083
 Start Date : 3/4/2021
 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:

	07:45 AM				07:00 AM				07:45 AM				08:00 AM			
+0 mins.	0	323	17	340	0	0	0	0	10	331	0	341	7	0	8	15
+15 mins.	0	331	25	356	0	0	0	0	16	269	0	285	5	0	6	11
+30 mins.	0	313	15	328	0	0	0	0	13	319	0	332	6	0	9	15
+45 mins.	0	298	18	316	0	0	0	0	15	286	0	301	4	0	5	9
Total Volume	0	1265	75	1340	0	0	0	0	54	1205	0	1259	22	0	28	50
% App. Total	0	94.4	5.6		0	0	0	0	4.3	95.7	0		44	0	56	
PHF	.000	.955	.750	.941	.000	.000	.000	.000	.844	.910	.000	.923	.786	.000	.778	.833

City of South El Monte
 N/S: Rosemead Boulevard
 E/W: Fern Street
 Weather: Clear

File Name : 05_SEM_Rosemead_Fern PM
 Site Code : 04221083
 Start Date : 3/4/2021
 Page No : 1

Groups Printed- Total Volume

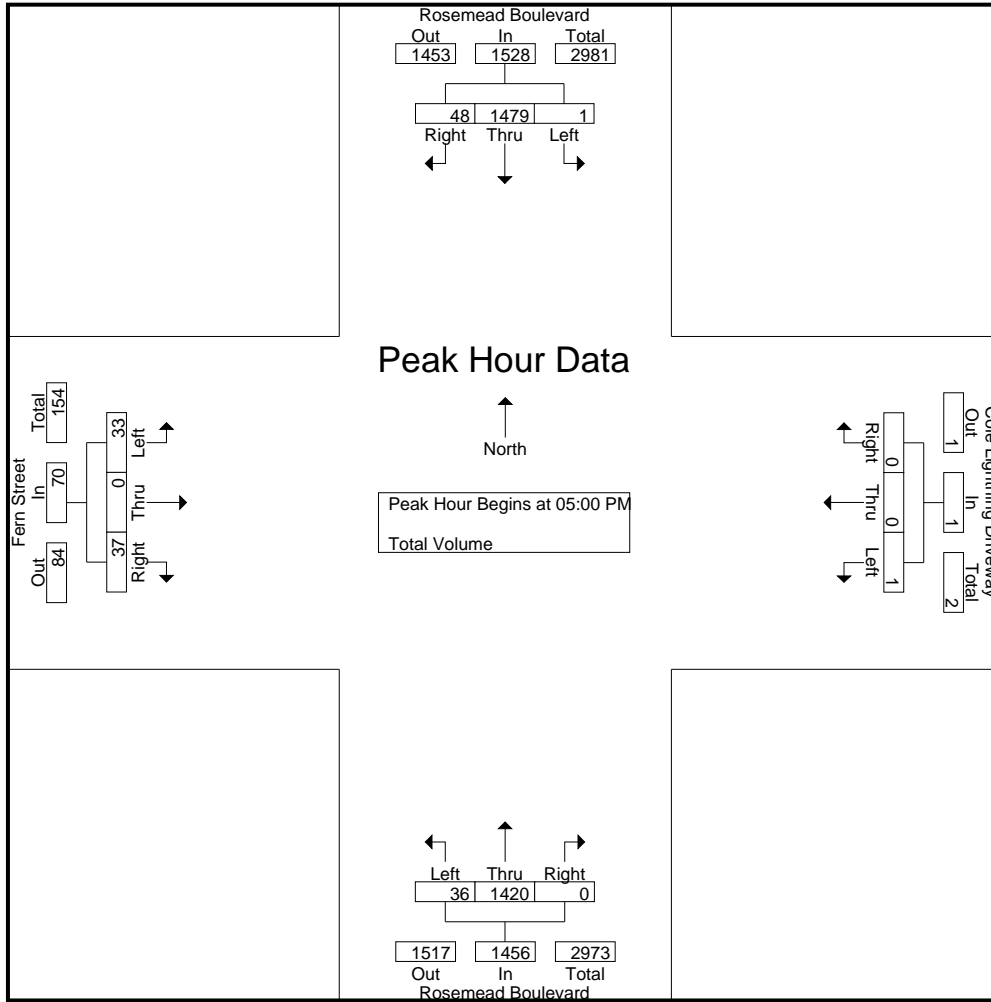
Start Time	Rosemead Boulevard Southbound				Cole Lightning Driveway Westbound				Rosemead Boulevard Northbound				Fern Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	357	7	364	0	0	0	0	10	330	0	340	10	0	14	24	728
04:15 PM	0	381	9	390	0	0	0	0	10	307	0	317	9	0	16	25	732
04:30 PM	0	406	10	416	0	0	0	0	18	334	0	352	14	0	9	23	791
04:45 PM	0	325	11	336	0	0	0	0	10	305	0	315	12	0	9	21	672
Total	0	1469	37	1506	0	0	0	0	48	1276	0	1324	45	0	48	93	2923
05:00 PM	0	365	11	376	1	0	0	1	11	369	0	380	11	0	12	23	780
05:15 PM	1	370	8	379	0	0	0	0	8	338	0	346	5	0	9	14	739
05:30 PM	0	406	18	424	0	0	0	0	9	365	0	374	11	0	8	19	817
05:45 PM	0	338	11	349	0	0	0	0	8	348	0	356	6	0	8	14	719
Total	1	1479	48	1528	1	0	0	1	36	1420	0	1456	33	0	37	70	3055
Grand Total	1	2948	85	3034	1	0	0	1	84	2696	0	2780	78	0	85	163	5978
Apprch %	0	97.2	2.8		100	0	0		3	97	0		47.9	0	52.1		
Total %	0	49.3	1.4	50.8	0	0	0	0	1.4	45.1	0	46.5	1.3	0	1.4	2.7	

Start Time	Rosemead Boulevard Southbound				Cole Lightning Driveway Westbound				Rosemead Boulevard Northbound				Fern Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
05:00 PM	0	365	11	376	1	0	0	1	11	369	0	380	11	0	12	23	780
05:15 PM	1	370	8	379	0	0	0	0	8	338	0	346	5	0	9	14	739
05:30 PM	0	406	18	424	0	0	0	0	9	365	0	374	11	0	8	19	817
05:45 PM	0	338	11	349	0	0	0	0	8	348	0	356	6	0	8	14	719
Total Volume	1	1479	48	1528	1	0	0	1	36	1420	0	1456	33	0	37	70	3055
% App. Total	0.1	96.8	3.1		100	0	0		2.5	97.5	0		47.1	0	52.9		
PHF	.250	.911	.667	.901	.250	.000	.000	.250	.818	.962	.000	.958	.750	.000	.771	.761	.935

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

City of South El Monte
 N/S: Rosemead Boulevard
 E/W: Fern Street
 Weather: Clear

File Name : 05_SEM_Rosemead_Fern PM
 Site Code : 04221083
 Start Date : 3/4/2021
 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				04:15 PM				05:00 PM				04:00 PM			
+0 mins.	0	365	11	376	0	0	0	0	11	369	0	380	10	0	14	24
+15 mins.	1	370	8	379	0	0	0	0	8	338	0	346	9	0	16	25
+30 mins.	0	406	18	424	0	0	0	0	9	365	0	374	14	0	9	23
+45 mins.	0	338	11	349	1	0	0	1	8	348	0	356	12	0	9	21
Total Volume	1	1479	48	1528	1	0	0	1	36	1420	0	1456	45	0	48	93
% App. Total	0.1	96.8	3.1		100	0	0		2.5	97.5	0		48.4	0	51.6	
PHF	.250	.911	.667	.901	.250	.000	.000	.250	.818	.962	.000	.958	.804	.000	.750	.930

City of South El Monte
 N/S: Chico Avenue
 E/W: Garvey Avenue
 Weather: Clear

File Name : 03_SEM_Chico_Garvey AM
 Site Code : 04221083
 Start Date : 3/4/2021
 Page No : 1

Groups Printed- Total Volume

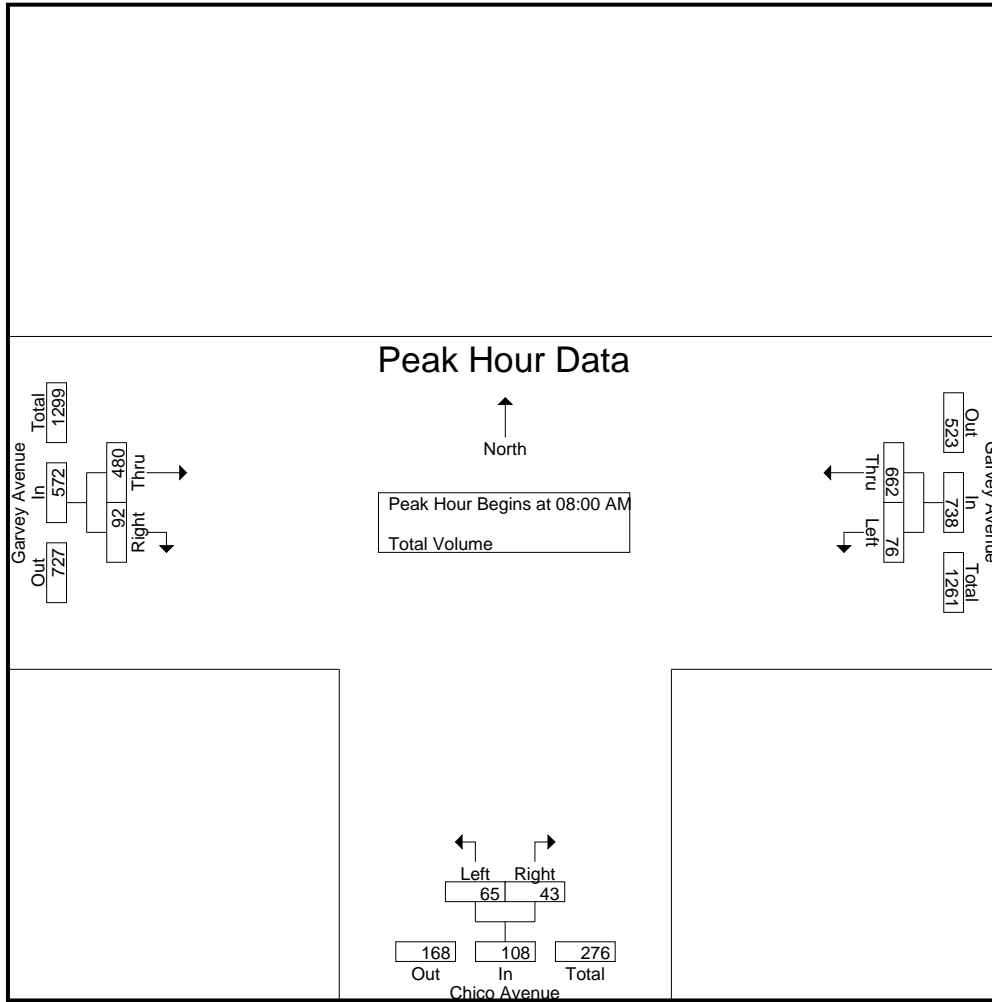
Start Time	Garvey Avenue Westbound			Chico Avenue Northbound			Garvey Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	11	106	117	13	12	25	60	14	74	216
07:15 AM	20	135	155	14	6	20	90	21	111	286
07:30 AM	16	132	148	10	4	14	99	21	120	282
07:45 AM	26	177	203	13	13	26	124	24	148	377
Total	73	550	623	50	35	85	373	80	453	1161
08:00 AM	20	160	180	15	14	29	119	24	143	352
08:15 AM	23	166	189	20	10	30	111	22	133	352
08:30 AM	10	160	170	10	5	15	117	28	145	330
08:45 AM	23	176	199	20	14	34	133	18	151	384
Total	76	662	738	65	43	108	480	92	572	1418
Grand Total	149	1212	1361	115	78	193	853	172	1025	2579
Apprch %	10.9	89.1		59.6	40.4		83.2	16.8		
Total %	5.8	47	52.8	4.5	3	7.5	33.1	6.7	39.7	

Start Time	Garvey Avenue Westbound			Chico Avenue Northbound			Garvey Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
08:00 AM	20	160	180	15	14	29	119	24	143	352
08:15 AM	23	166	189	20	10	30	111	22	133	352
08:30 AM	10	160	170	10	5	15	117	28	145	330
08:45 AM	23	176	199	20	14	34	133	18	151	384
Total Volume	76	662	738	65	43	108	480	92	572	1418
% App. Total	10.3	89.7		60.2	39.8		83.9	16.1		
PHF	.826	.940	.927	.813	.768	.794	.902	.821	.947	.923

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 08:00 AM

City of South El Monte
 N/S: Chico Avenue
 E/W: Garvey Avenue
 Weather: Clear

File Name : 03_SEM_Chico_Garvey AM
 Site Code : 04221083
 Start Date : 3/4/2021
 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:

	07:45 AM			08:00 AM			08:00 AM		
+0 mins.	26	177	203	15	14	29	119	24	143
+15 mins.	20	160	180	20	10	30	111	22	133
+30 mins.	23	166	189	10	5	15	117	28	145
+45 mins.	10	160	170	20	14	34	133	18	151
Total Volume	79	663	742	65	43	108	480	92	572
% App. Total	10.6	89.4		60.2	39.8		83.9	16.1	
PHF	.760	.936	.914	.813	.768	.794	.902	.821	.947

City of South El Monte
 N/S: Chico Avenue
 E/W: Garvey Avenue
 Weather: Clear

File Name : 03_SEM_Chico_Garvey PM
 Site Code : 04221083
 Start Date : 3/4/2021
 Page No : 1

Groups Printed- Total Volume

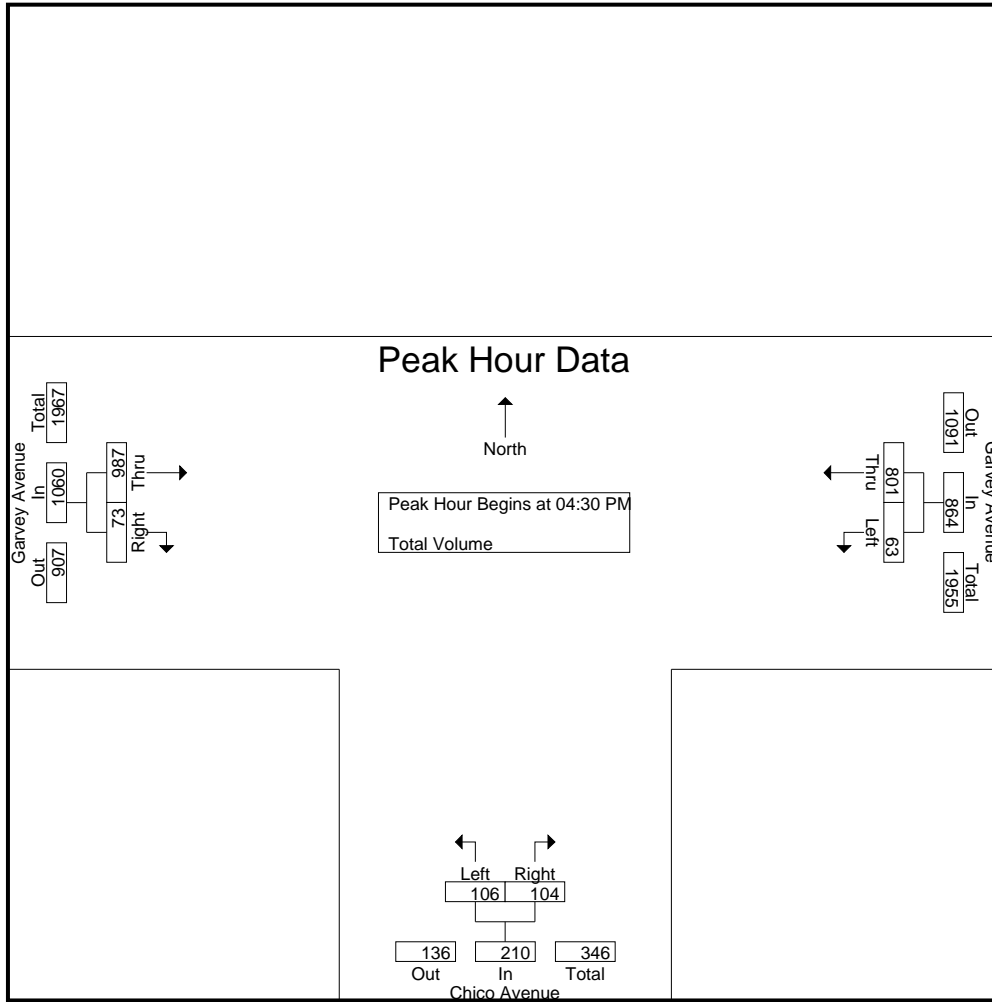
Start Time	Garvey Avenue Westbound			Chico Avenue Northbound			Garvey Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	10	197	207	30	18	48	192	23	215	470
04:15 PM	13	155	168	22	13	35	250	13	263	466
04:30 PM	15	187	202	34	36	70	266	18	284	556
04:45 PM	23	196	219	21	30	51	232	21	253	523
Total	61	735	796	107	97	204	940	75	1015	2015
05:00 PM	14	209	223	30	15	45	246	16	262	530
05:15 PM	11	209	220	21	23	44	243	18	261	525
05:30 PM	14	179	193	27	25	52	229	15	244	489
05:45 PM	10	196	206	41	26	67	252	18	270	543
Total	49	793	842	119	89	208	970	67	1037	2087
Grand Total	110	1528	1638	226	186	412	1910	142	2052	4102
Apprch %	6.7	93.3		54.9	45.1		93.1	6.9		
Total %	2.7	37.3	39.9	5.5	4.5	10	46.6	3.5	50	

Start Time	Garvey Avenue Westbound			Chico Avenue Northbound			Garvey Avenue Eastbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:30 PM	15	187	202	34	36	70	266	18	284	556
04:45 PM	23	196	219	21	30	51	232	21	253	523
05:00 PM	14	209	223	30	15	45	246	16	262	530
05:15 PM	11	209	220	21	23	44	243	18	261	525
Total Volume	63	801	864	106	104	210	987	73	1060	2134
% App. Total	7.3	92.7		50.5	49.5		93.1	6.9		
PHF	.685	.958	.969	.779	.722	.750	.928	.869	.933	.960

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

City of South El Monte
 N/S: Chico Avenue
 E/W: Garvey Avenue
 Weather: Clear

File Name : 03_SEM_Chico_Garvey PM
 Site Code : 04221083
 Start Date : 3/4/2021
 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			04:30 PM			04:15 PM		
+0 mins.	15	187	202	34	36	70	250	13	263
+15 mins.	23	196	219	21	30	51	266	18	284
+30 mins.	14	209	223	30	15	45	232	21	253
+45 mins.	11	209	220	21	23	44	246	16	262
Total Volume	63	801	864	106	104	210	994	68	1062
% App. Total	7.3	92.7		50.5	49.5		93.6	6.4	
PHF	.685	.958	.969	.779	.722	.750	.934	.810	.935

City of South El Monte
 N/S: Chico Avenue
 E/W: Fern Street
 Weather: Clear

File Name : 01_SEM_Chico_Fern AM
 Site Code : 04221083
 Start Date : 3/4/2021
 Page No : 1

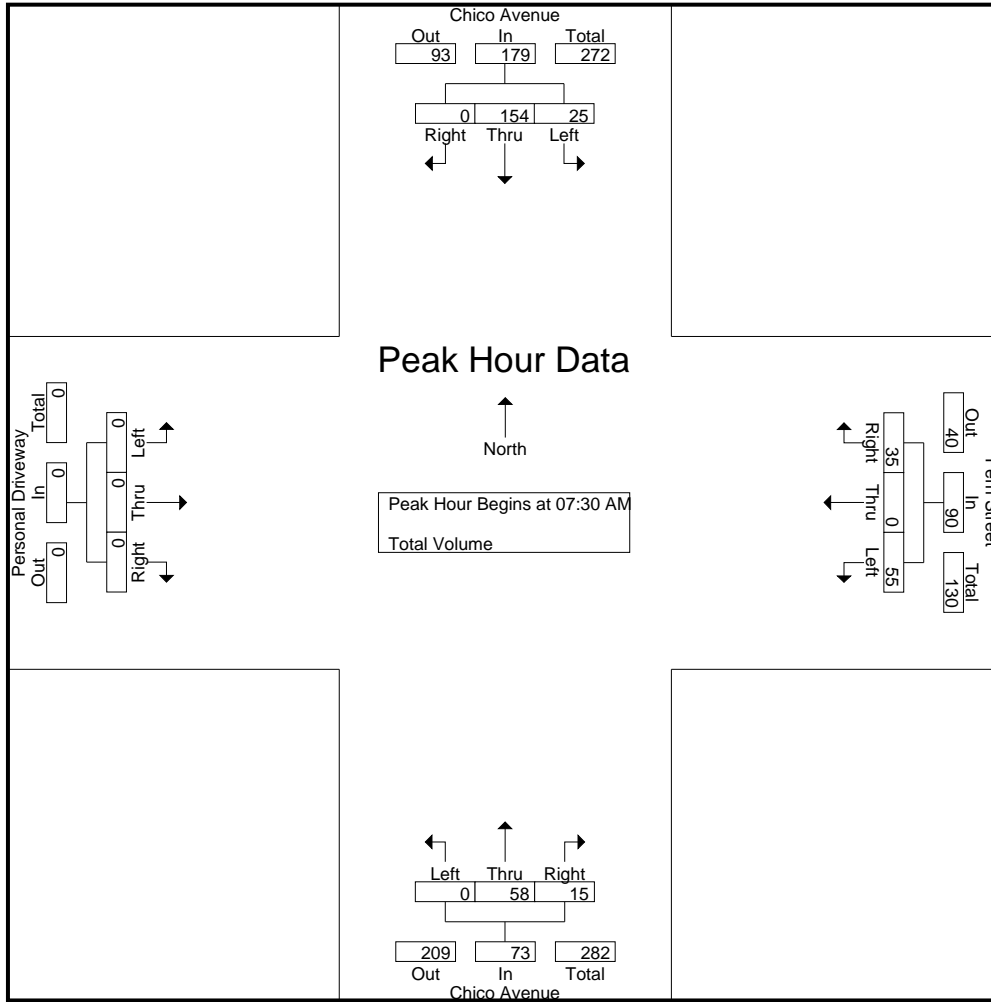
Groups Printed- Total Volume

Start Time	Chico Avenue Southbound				Fern Street Westbound				Chico Avenue Northbound				Personal Driveway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	3	20	0	23	19	0	7	26	0	17	2	19	0	0	0	0	68
07:15 AM	6	35	0	41	10	0	9	19	0	8	1	9	0	0	0	0	69
07:30 AM	7	37	0	44	18	0	5	23	0	9	3	12	0	0	0	0	79
07:45 AM	10	49	0	59	19	0	14	33	0	15	2	17	0	0	0	0	109
Total	26	141	0	167	66	0	35	101	0	49	8	57	0	0	0	0	325
08:00 AM	7	32	0	39	11	0	8	19	0	15	4	19	0	0	0	0	77
08:15 AM	1	36	0	37	7	0	8	15	0	19	6	25	0	0	0	0	77
08:30 AM	9	32	0	41	9	0	11	20	0	8	3	11	0	0	0	0	72
08:45 AM	10	32	0	42	9	0	17	26	0	19	3	22	0	0	0	0	90
Total	27	132	0	159	36	0	44	80	0	61	16	77	0	0	0	0	316
Grand Total	53	273	0	326	102	0	79	181	0	110	24	134	0	0	0	0	641
Apprch %	16.3	83.7	0		56.4	0	43.6		0	82.1	17.9		0	0	0		
Total %	8.3	42.6	0	50.9	15.9	0	12.3	28.2	0	17.2	3.7	20.9	0	0	0	0	

Start Time	Chico Avenue Southbound				Fern Street Westbound				Chico Avenue Northbound				Personal Driveway 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 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	7	37	0	44	18	0	5	23	0	9	3	12	0	0	0	0	79
07:45 AM	10	49	0	59	19	0	14	33	0	15	2	17	0	0	0	0	109
08:00 AM	7	32	0	39	11	0	8	19	0	15	4	19	0	0	0	0	77
08:15 AM	1	36	0	37	7	0	8	15	0	19	6	25	0	0	0	0	77
Total Volume	25	154	0	179	55	0	35	90	0	58	15	73	0	0	0	0	342
% App. Total	14	86	0		61.1	0	38.9		0	79.5	20.5		0	0	0		
PHF	.625	.786	.000	.758	.724	.000	.625	.682	.000	.763	.625	.730	.000	.000	.000	.000	.784

City of South El Monte
 N/S: Chico Avenue
 E/W: Fern Street
 Weather: Clear

File Name : 01_SEM_Chico_Fern AM
 Site Code : 04221083
 Start Date : 3/4/2021
 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				07:00 AM				08:00 AM				07:00 AM			
+0 mins.	6	35	0	41	19	0	7	26	0	15	4	19	0	0	0	0
+15 mins.	7	37	0	44	10	0	9	19	0	19	6	25	0	0	0	0
+30 mins.	10	49	0	59	18	0	5	23	0	8	3	11	0	0	0	0
+45 mins.	7	32	0	39	19	0	14	33	0	19	3	22	0	0	0	0
Total Volume	30	153	0	183	66	0	35	101	0	61	16	77	0	0	0	0
% App. Total	16.4	83.6	0		65.3	0	34.7		0	79.2	20.8		0	0	0	
PHF	.750	.781	.000	.775	.868	.000	.625	.765	.000	.803	.667	.770	.000	.000	.000	.000

City of South El Monte
 N/S: Chico Avenue
 E/W: Fern Street
 Weather: Clear

File Name : 01_SEM_Chico_Fern PM
 Site Code : 04221083
 Start Date : 3/4/2021
 Page No : 1

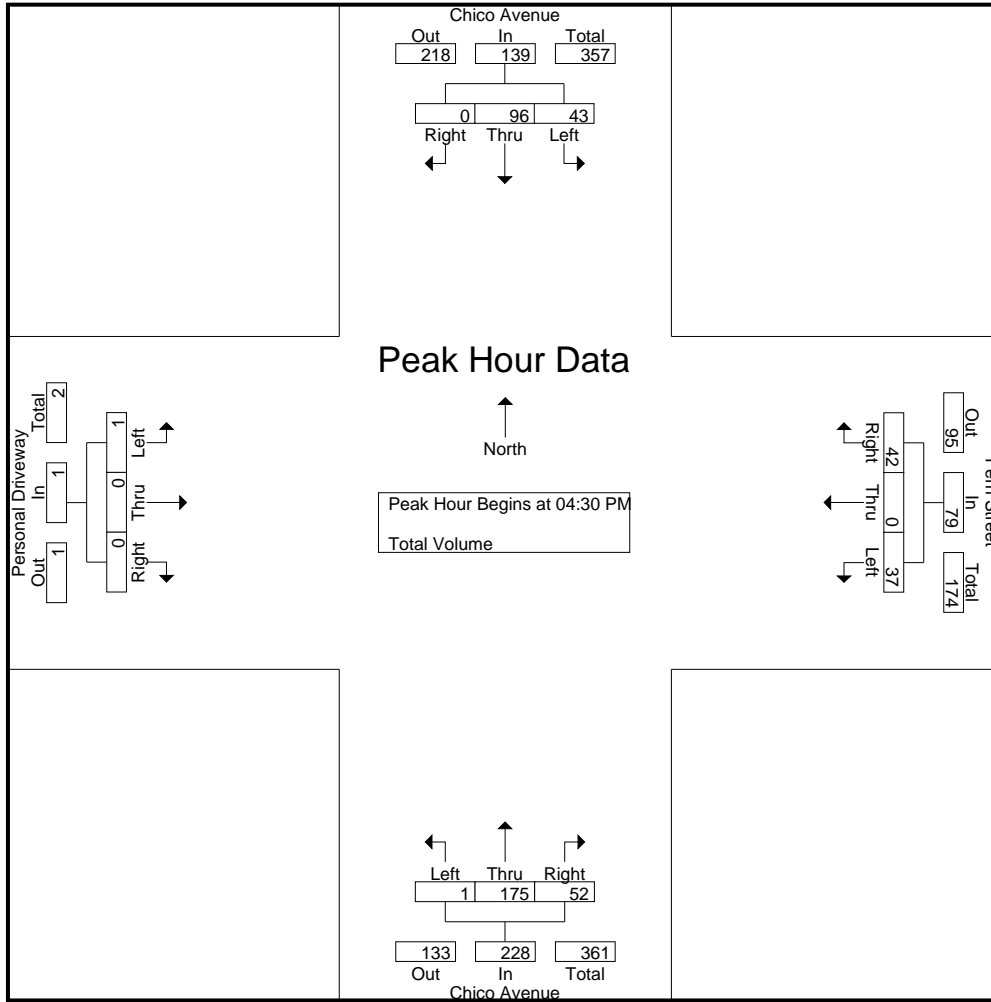
Groups Printed- Total Volume

Start Time	Chico Avenue Southbound				Fern Street Westbound				Chico Avenue Northbound				Personal Driveway 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	5	24	0	29	7	0	16	23	0	32	14	46	0	0	0	0	98
04:15 PM	9	23	0	32	7	0	12	19	0	34	15	49	0	0	0	0	100
04:30 PM	9	26	0	35	9	0	12	21	0	65	16	81	0	0	0	0	137
04:45 PM	8	28	0	36	4	0	10	14	1	37	10	48	0	0	0	0	98
Total	31	101	0	132	27	0	50	77	1	168	55	224	0	0	0	0	433
05:00 PM	12	25	0	37	9	0	4	13	0	40	10	50	0	0	0	0	100
05:15 PM	14	17	0	31	15	0	16	31	0	33	16	49	1	0	0	1	112
05:30 PM	10	18	0	28	8	0	19	27	0	41	9	50	0	0	0	0	105
05:45 PM	9	22	0	31	5	0	9	14	0	36	11	47	0	0	0	0	92
Total	45	82	0	127	37	0	48	85	0	150	46	196	1	0	0	1	409
Grand Total	76	183	0	259	64	0	98	162	1	318	101	420	1	0	0	1	842
Apprch %	29.3	70.7	0		39.5	0	60.5		0.2	75.7	24		100	0	0		
Total %	9	21.7	0	30.8	7.6	0	11.6	19.2	0.1	37.8	12	49.9	0.1	0	0	0.1	

Start Time	Chico Avenue Southbound				Fern Street Westbound				Chico Avenue Northbound				Personal Driveway 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	9	26	0	35	9	0	12	21	0	65	16	81	0	0	0	0	137
04:45 PM	8	28	0	36	4	0	10	14	1	37	10	48	0	0	0	0	98
05:00 PM	12	25	0	37	9	0	4	13	0	40	10	50	0	0	0	0	100
05:15 PM	14	17	0	31	15	0	16	31	0	33	16	49	1	0	0	1	112
Total Volume	43	96	0	139	37	0	42	79	1	175	52	228	1	0	0	1	447
% App. Total	30.9	69.1	0		46.8	0	53.2		0.4	76.8	22.8		100	0	0		
PHF	.768	.857	.000	.939	.617	.000	.656	.637	.250	.673	.813	.704	.250	.000	.000	.250	.816

City of South El Monte
 N/S: Chico Avenue
 E/W: Fern Street
 Weather: Clear

File Name : 01_SEM_Chico_Fern PM
 Site Code : 04221083
 Start Date : 3/4/2021
 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:

	04:15 PM				04:45 PM				04:15 PM				04:30 PM			
+0 mins.	9	23	0	32	4	0	10	14	0	34	15	49	0	0	0	0
+15 mins.	9	26	0	35	9	0	4	13	0	65	16	81	0	0	0	0
+30 mins.	8	28	0	36	15	0	16	31	1	37	10	48	0	0	0	0
+45 mins.	12	25	0	37	8	0	19	27	0	40	10	50	1	0	0	1
Total Volume	38	102	0	140	36	0	49	85	1	176	51	228	1	0	0	1
% App. Total	27.1	72.9	0		42.4	0	57.6		0.4	77.2	22.4		100	0	0	
PHF	.792	.911	.000	.946	.600	.000	.645	.685	.250	.677	.797	.704	.250	.000	.000	.250

City of South El Monte
 N/S: Chico Avenue
 E/W: Rush Street
 Weather: Clear

File Name : 02_SEM_Chico_Rush AM
 Site Code : 04221083
 Start Date : 3/4/2021
 Page No : 1

Groups Printed- Total Volume

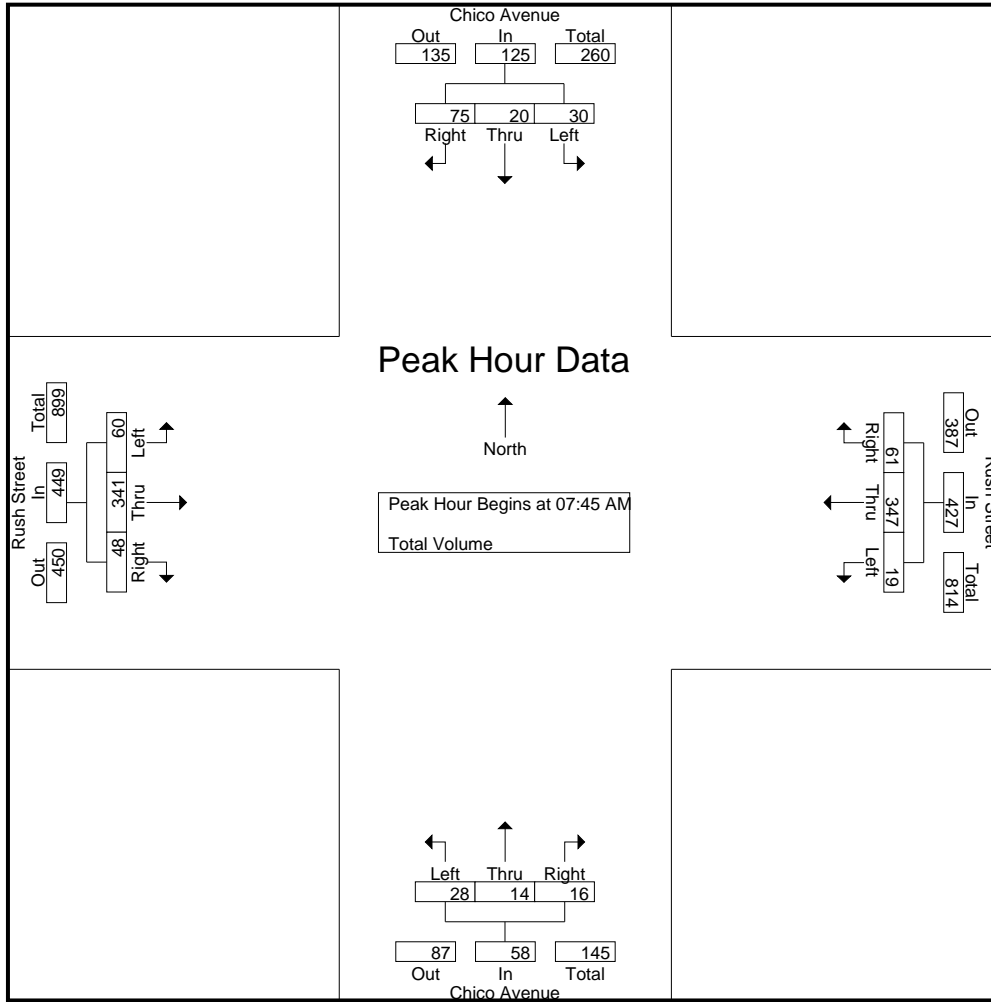
Start Time	Chico Avenue Southbound				Rush Street Westbound				Chico Avenue Northbound				Rush Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	6	4	19	29	3	57	12	72	5	2	1	8	16	46	13	75	184
07:15 AM	6	1	19	26	1	66	10	77	2	2	1	5	12	52	14	78	186
07:30 AM	9	6	27	42	8	80	13	101	7	0	1	8	15	82	13	110	261
07:45 AM	10	5	17	32	4	84	20	108	8	3	4	15	20	102	12	134	289
Total	31	16	82	129	16	287	55	358	22	7	7	36	63	282	52	397	920
08:00 AM	9	3	16	28	4	93	19	116	7	3	3	13	16	74	8	98	255
08:15 AM	3	6	20	29	8	78	12	98	5	5	2	12	18	78	16	112	251
08:30 AM	8	6	22	36	3	92	10	105	8	3	7	18	6	87	12	105	264
08:45 AM	6	3	20	29	5	82	20	107	8	2	2	12	13	107	18	138	286
Total	26	18	78	122	20	345	61	426	28	13	14	55	53	346	54	453	1056
Grand Total	57	34	160	251	36	632	116	784	50	20	21	91	116	628	106	850	1976
Apprch %	22.7	13.5	63.7		4.6	80.6	14.8		54.9	22	23.1		13.6	73.9	12.5		
Total %	2.9	1.7	8.1	12.7	1.8	32	5.9	39.7	2.5	1	1.1	4.6	5.9	31.8	5.4	43	

Start Time	Chico Avenue Southbound				Rush Street Westbound				Chico Avenue Northbound				Rush Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:45 AM	10	5	17	32	4	84	20	108	8	3	4	15	20	102	12	134	289
08:00 AM	9	3	16	28	4	93	19	116	7	3	3	13	16	74	8	98	255
08:15 AM	3	6	20	29	8	78	12	98	5	5	2	12	18	78	16	112	251
08:30 AM	8	6	22	36	3	92	10	105	8	3	7	18	6	87	12	105	264
Total Volume	30	20	75	125	19	347	61	427	28	14	16	58	60	341	48	449	1059
% App. Total	24	16	60		4.4	81.3	14.3		48.3	24.1	27.6		13.4	75.9	10.7		
PHF	.750	.833	.852	.868	.594	.933	.763	.920	.875	.700	.571	.806	.750	.836	.750	.838	.916

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

City of South El Monte
 N/S: Chico Avenue
 E/W: Rush Street
 Weather: Clear

File Name : 02_SEM_Chico_Rush AM
 Site Code : 04221083
 Start Date : 3/4/2021
 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				07:30 AM			
+0 mins.	9	6	27	42	4	84	20	108	8	3	4	15	15	82	13	110
+15 mins.	10	5	17	32	4	93	19	116	7	3	3	13	20	102	12	134
+30 mins.	9	3	16	28	8	78	12	98	5	5	2	12	16	74	8	98
+45 mins.	3	6	20	29	3	92	10	105	8	3	7	18	18	78	16	112
Total Volume	31	20	80	131	19	347	61	427	28	14	16	58	69	336	49	454
% App. Total	23.7	15.3	61.1		4.4	81.3	14.3		48.3	24.1	27.6		15.2	74	10.8	
PHF	.775	.833	.741	.780	.594	.933	.763	.920	.875	.700	.571	.806	.863	.824	.766	.847

City of South El Monte
 N/S: Chico Avenue
 E/W: Rush Street
 Weather: Clear

File Name : 02_SEM_Chico_Rush PM
 Site Code : 04221083
 Start Date : 3/4/2021
 Page No : 1

Groups Printed- Total Volume

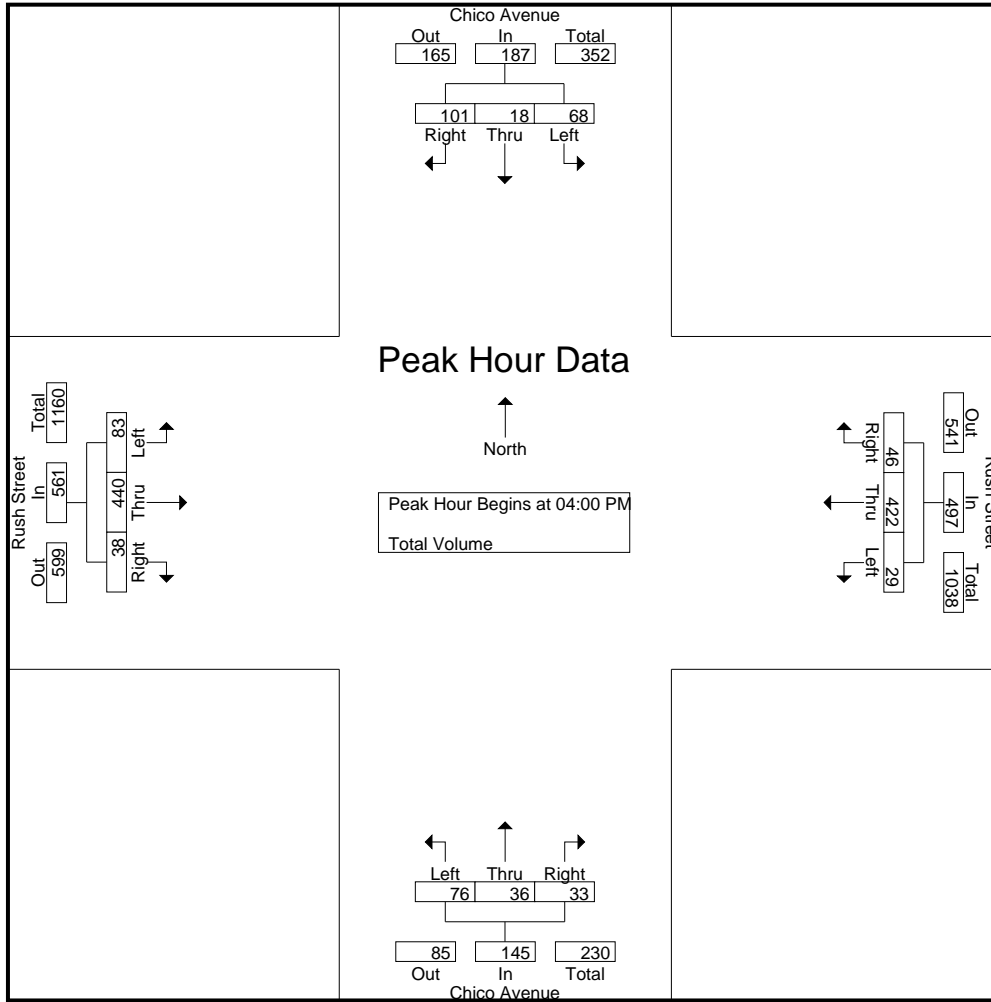
Start Time	Chico Avenue Southbound				Rush Street Westbound				Chico Avenue Northbound				Rush Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	20	5	29	54	6	105	10	121	17	9	9	35	22	119	12	153	363
04:15 PM	15	2	28	45	7	85	17	109	14	8	10	32	17	102	10	129	315
04:30 PM	20	7	24	51	5	126	12	143	21	10	8	39	25	112	9	146	379
04:45 PM	13	4	20	37	11	106	7	124	24	9	6	39	19	107	7	133	333
Total	68	18	101	187	29	422	46	497	76	36	33	145	83	440	38	561	1390
05:00 PM	11	2	32	45	5	109	14	128	27	6	8	41	19	104	8	131	345
05:15 PM	17	3	16	36	6	72	12	90	22	2	6	30	19	99	8	126	282
05:30 PM	13	2	24	39	1	94	6	101	22	5	10	37	13	98	5	116	293
05:45 PM	14	2	17	33	4	76	8	88	12	5	9	26	11	78	6	95	242
Total	55	9	89	153	16	351	40	407	83	18	33	134	62	379	27	468	1162
Grand Total	123	27	190	340	45	773	86	904	159	54	66	279	145	819	65	1029	2552
Apprch %	36.2	7.9	55.9		5	85.5	9.5		57	19.4	23.7		14.1	79.6	6.3		
Total %	4.8	1.1	7.4	13.3	1.8	30.3	3.4	35.4	6.2	2.1	2.6	10.9	5.7	32.1	2.5	40.3	

Start Time	Chico Avenue Southbound				Rush Street Westbound				Chico Avenue Northbound				Rush Street 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	20	5	29	54	6	105	10	121	17	9	9	35	22	119	12	153	363
04:15 PM	15	2	28	45	7	85	17	109	14	8	10	32	17	102	10	129	315
04:30 PM	20	7	24	51	5	126	12	143	21	10	8	39	25	112	9	146	379
04:45 PM	13	4	20	37	11	106	7	124	24	9	6	39	19	107	7	133	333
Total Volume	68	18	101	187	29	422	46	497	76	36	33	145	83	440	38	561	1390
% App. Total	36.4	9.6	54		5.8	84.9	9.3		52.4	24.8	22.8		14.8	78.4	6.8		
PHF	.850	.643	.871	.866	.659	.837	.676	.869	.792	.900	.825	.929	.830	.924	.792	.917	.917

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:00 PM

City of South El Monte
 N/S: Chico Avenue
 E/W: Rush Street
 Weather: Clear

File Name : 02_SEM_Chico_Rush PM
 Site Code : 04221083
 Start Date : 3/4/2021
 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				04:15 PM				04:15 PM				04:00 PM			
+0 mins.	20	5	29	54	7	85	17	109	14	8	10	32	22	119	12	153
+15 mins.	15	2	28	45	5	126	12	143	21	10	8	39	17	102	10	129
+30 mins.	20	7	24	51	11	106	7	124	24	9	6	39	25	112	9	146
+45 mins.	13	4	20	37	5	109	14	128	27	6	8	41	19	107	7	133
Total Volume	68	18	101	187	28	426	50	504	86	33	32	151	83	440	38	561
% App. Total	36.4	9.6	54		5.6	84.5	9.9		57	21.9	21.2		14.8	78.4	6.8	
PHF	.850	.643	.871	.866	.636	.845	.735	.881	.796	.825	.800	.921	.830	.924	.792	.917

City of South El Monte
 N/S: Potrero Avenue
 E/W: Fern Street
 Weather: Clear

File Name : 04_SEM_Potrero_Fern AM
 Site Code : 04221083
 Start Date : 3/4/2021
 Page No : 1

Groups Printed- Total Volume

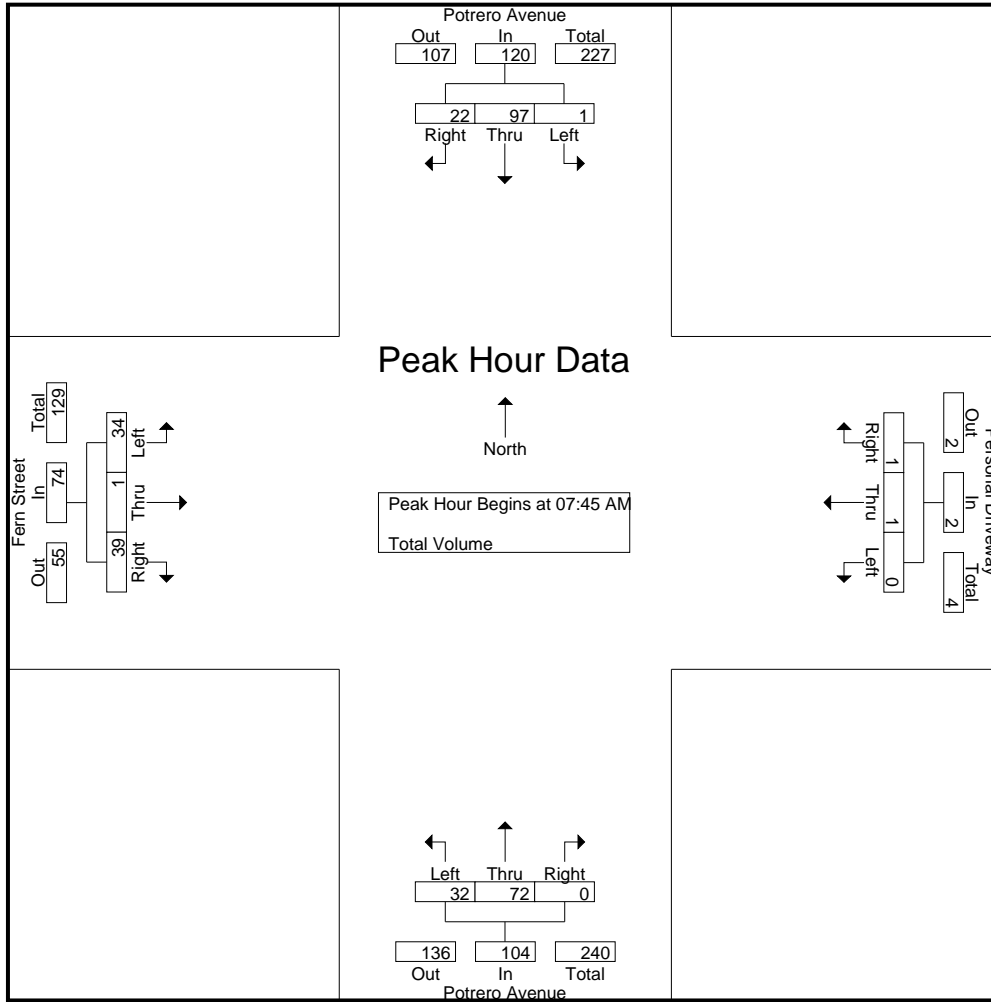
Start Time	Potrero Avenue Southbound				Personal Driveway Westbound				Potrero Avenue Northbound				Fern Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	22	3	25	0	0	0	0	8	19	0	27	5	0	4	9	61
07:15 AM	0	25	6	31	0	0	0	0	4	20	0	24	5	0	6	11	66
07:30 AM	0	25	2	27	0	0	0	0	1	14	0	15	8	0	7	15	57
07:45 AM	0	30	8	38	0	1	0	1	10	15	0	25	10	0	8	18	82
Total	0	102	19	121	0	1	0	1	23	68	0	91	28	0	25	53	266
08:00 AM	0	25	6	31	0	0	0	0	8	18	0	26	9	1	15	25	82
08:15 AM	0	19	5	24	0	0	1	1	7	21	0	28	6	0	7	13	66
08:30 AM	1	23	3	27	0	0	0	0	7	18	0	25	9	0	9	18	70
08:45 AM	0	15	3	18	0	0	1	1	10	18	0	28	3	0	12	15	62
Total	1	82	17	100	0	0	2	2	32	75	0	107	27	1	43	71	280
Grand Total	1	184	36	221	0	1	2	3	55	143	0	198	55	1	68	124	546
Apprch %	0.5	83.3	16.3		0	33.3	66.7		27.8	72.2	0		44.4	0.8	54.8		
Total %	0.2	33.7	6.6	40.5	0	0.2	0.4	0.5	10.1	26.2	0	36.3	10.1	0.2	12.5	22.7	

Start Time	Potrero Avenue Southbound				Personal Driveway Westbound				Potrero Avenue Northbound				Fern Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:45 AM	0	30	8	38	0	1	0	1	10	15	0	25	10	0	8	18	82
08:00 AM	0	25	6	31	0	0	0	0	8	18	0	26	9	1	15	25	82
08:15 AM	0	19	5	24	0	0	1	1	7	21	0	28	6	0	7	13	66
08:30 AM	1	23	3	27	0	0	0	0	7	18	0	25	9	0	9	18	70
Total Volume	1	97	22	120	0	1	1	2	32	72	0	104	34	1	39	74	300
% App. Total	0.8	80.8	18.3		0	50	50		30.8	69.2	0		45.9	1.4	52.7		
PHF	.250	.808	.688	.789	.000	.250	.250	.500	.800	.857	.000	.929	.850	.250	.650	.740	.915

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

City of South El Monte
 N/S: Potrero Avenue
 E/W: Fern Street
 Weather: Clear

File Name : 04_SEM_Potrero_Fern AM
 Site Code : 04221083
 Start Date : 3/4/2021
 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				08:00 AM				07:45 AM			
+0 mins.	0	25	6	31	0	0	0	0	8	18	0	26	10	0	8	18
+15 mins.	0	25	2	27	0	1	0	1	7	21	0	28	9	1	15	25
+30 mins.	0	30	8	38	0	0	0	0	7	18	0	25	6	0	7	13
+45 mins.	0	25	6	31	0	0	1	1	10	18	0	28	9	0	9	18
Total Volume	0	105	22	127	0	1	1	2	32	75	0	107	34	1	39	74
% App. Total	0	82.7	17.3		0	50	50		29.9	70.1	0		45.9	1.4	52.7	
PHF	.000	.875	.688	.836	.000	.250	.250	.500	.800	.893	.000	.955	.850	.250	.650	.740

City of South El Monte
 N/S: Potrero Avenue
 E/W: Fern Street
 Weather: Clear

File Name : 04_SEM_Potrero_Fern PM
 Site Code : 04221083
 Start Date : 3/4/2021
 Page No : 1

Groups Printed- Total Volume

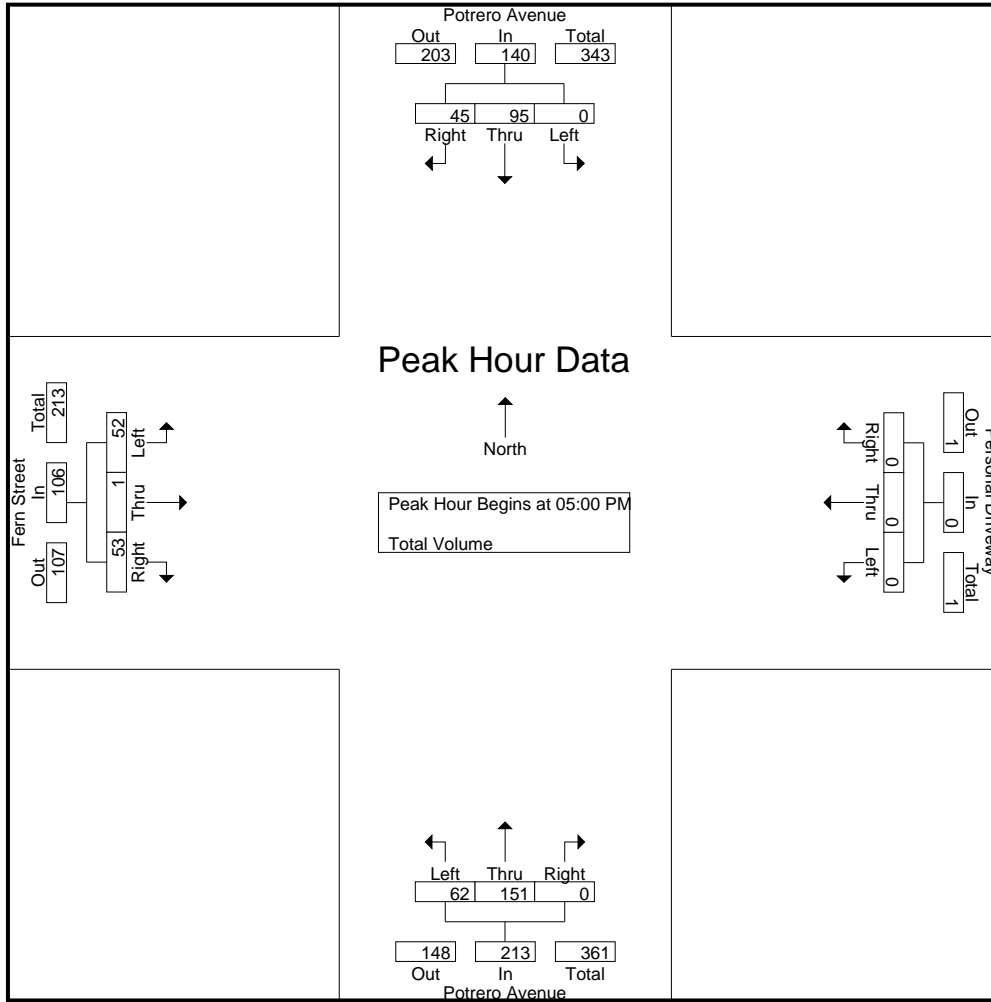
Start Time	Potrero Avenue Southbound				Personal Driveway Westbound				Potrero Avenue Northbound				Fern Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	17	4	21	0	0	0	0	12	44	0	56	10	0	13	23	100
04:15 PM	2	26	12	40	0	0	0	0	13	33	0	46	6	0	13	19	105
04:30 PM	0	28	3	31	0	0	0	0	13	42	0	55	8	1	16	25	111
04:45 PM	0	17	13	30	0	0	1	1	13	35	0	48	8	0	7	15	94
Total	2	88	32	122	0	0	1	1	51	154	0	205	32	1	49	82	410
05:00 PM	0	22	5	27	0	0	0	0	9	39	0	48	7	0	12	19	94
05:15 PM	0	23	14	37	0	0	0	0	21	48	0	69	21	0	12	33	139
05:30 PM	0	24	13	37	0	0	0	0	20	38	0	58	10	0	14	24	119
05:45 PM	0	26	13	39	0	0	0	0	12	26	0	38	14	1	15	30	107
Total	0	95	45	140	0	0	0	0	62	151	0	213	52	1	53	106	459
Grand Total	2	183	77	262	0	0	1	1	113	305	0	418	84	2	102	188	869
Apprch %	0.8	69.8	29.4		0	0	100		27	73	0		44.7	1.1	54.3		
Total %	0.2	21.1	8.9	30.1	0	0	0.1	0.1	13	35.1	0	48.1	9.7	0.2	11.7	21.6	

Start Time	Potrero Avenue Southbound				Personal Driveway Westbound				Potrero Avenue Northbound				Fern Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
05:00 PM	0	22	5	27	0	0	0	0	9	39	0	48	7	0	12	19	94
05:15 PM	0	23	14	37	0	0	0	0	21	48	0	69	21	0	12	33	139
05:30 PM	0	24	13	37	0	0	0	0	20	38	0	58	10	0	14	24	119
05:45 PM	0	26	13	39	0	0	0	0	12	26	0	38	14	1	15	30	107
Total Volume	0	95	45	140	0	0	0	0	62	151	0	213	52	1	53	106	459
% App. Total	0	67.9	32.1		0	0	0		29.1	70.9	0		49.1	0.9	50		
PHF	.000	.913	.804	.897	.000	.000	.000	.000	.738	.786	.000	.772	.619	.250	.883	.803	.826

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

City of South El Monte
 N/S: Potrero Avenue
 E/W: Fern Street
 Weather: Clear

File Name : 04_SEM_Potrero_Fern PM
 Site Code : 04221083
 Start Date : 3/4/2021
 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				04:00 PM				04:45 PM				05:00 PM			
+0 mins.	0	22	5	27	0	0	0	0	13	35	0	48	7	0	12	19
+15 mins.	0	23	14	37	0	0	0	0	9	39	0	48	21	0	12	33
+30 mins.	0	24	13	37	0	0	0	0	21	48	0	69	10	0	14	24
+45 mins.	0	26	13	39	0	0	1	1	20	38	0	58	14	1	15	30
Total Volume	0	95	45	140	0	0	1	1	63	160	0	223	52	1	53	106
% App. Total	0	67.9	32.1		0	0	100		28.3	71.7	0		49.1	0.9	50	
PHF	.000	.913	.804	.897	.000	.000	.250	.250	.750	.833	.000	.808	.619	.250	.883	.803

APPENDIX B – LOS CALCULATION SHEETS

Existing Conditions

Lanes, Volumes, Timings
1: Rosemead Blvd & Garvey Ave

04/11/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↷		↶	↶↷	↶	↶↷	↶↷↸		↶↷	↶↷↸	
Traffic Volume (vph)	109	268	111	156	270	220	98	721	47	260	1054	135
Future Volume (vph)	109	268	111	156	270	220	98	721	47	260	1054	135
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	240		0	215		180	210		0	275		0
Storage Lanes	1		0	1		1	2		0	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	0.97	0.91	0.91	0.97	0.91	0.91
Frt		0.956				0.850		0.991			0.983	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3383	0	1770	3539	1583	3433	5040	0	3433	4999	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3383	0	1770	3539	1583	3433	5040	0	3433	4999	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		61				132		10			23	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		424			1598			1364			420	
Travel Time (s)		9.6			36.3			31.0			9.5	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	117	288	119	168	290	237	105	775	51	280	1133	145
Shared Lane Traffic (%)												
Lane Group Flow (vph)	117	407	0	168	290	237	105	826	0	280	1278	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						

Lanes, Volumes, Timings
1: Rosemead Blvd & Garvey Ave

04/11/2021

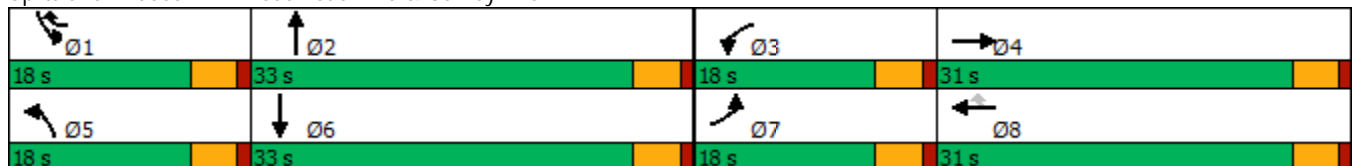


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5	9.5	9.5	22.5		9.5	22.5	
Total Split (s)	18.0	31.0		18.0	31.0	18.0	18.0	33.0		18.0	33.0	
Total Split (%)	18.0%	31.0%		18.0%	31.0%	18.0%	18.0%	33.0%		18.0%	33.0%	
Maximum Green (s)	13.5	26.5		13.5	26.5	13.5	13.5	28.5		13.5	28.5	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effect Green (s)	10.5	14.5		12.1	18.6	34.8	8.0	28.7		11.6	34.8	
Actuated g/C Ratio	0.12	0.17		0.14	0.22	0.41	0.09	0.34		0.14	0.41	
v/c Ratio	0.53	0.65		0.67	0.37	0.33	0.33	0.48		0.60	0.62	
Control Delay	45.4	33.3		50.0	31.7	9.8	40.2	24.2		41.0	23.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	45.4	33.3		50.0	31.7	9.8	40.2	24.2		41.0	23.1	
LOS	D	C		D	C	A	D	C		D	C	
Approach Delay		36.0			28.6			26.0			26.3	
Approach LOS		D			C			C			C	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	85
Natural Cycle:	70
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.67
Intersection Signal Delay:	28.1
Intersection LOS:	C
Intersection Capacity Utilization:	62.1%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 1: Rosemead Blvd & Garvey Ave



HCM 6th TWSC
2: Rosemead Blvd & Fern St

04/11/2021

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	22	28	55	1202	1260	80
Future Vol, veh/h	22	28	55	1202	1260	80
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	140	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	29	57	1252	1313	83

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1970	698	1396	0	-	0
Stage 1	1355	-	-	-	-	-
Stage 2	615	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	97	328	251	-	-	-
Stage 1	146	-	-	-	-	-
Stage 2	457	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	75	328	251	-	-	-
Mov Cap-2 Maneuver	75	-	-	-	-	-
Stage 1	113	-	-	-	-	-
Stage 2	457	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	49	1	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	251	-	132	-	-
HCM Lane V/C Ratio	0.228	-	0.395	-	-
HCM Control Delay (s)	23.5	-	49	-	-
HCM Lane LOS	C	-	E	-	-
HCM 95th %tile Q(veh)	0.9	-	1.7	-	-

HCM 6th TWSC
3: Rosemead Blvd & Project Dwy

04/11/2021

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗ ↑↑↑	↗ ↑↑↑			↗ ↑↑↑
Traffic Vol, veh/h	0	0	1257	0	0	1288
Future Vol, veh/h	0	0	1257	0	0	1288
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	1366	0	0	1400

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	683	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	7.14	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.92	-
Pot Cap-1 Maneuver	0	336	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	-	336	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	-	0
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	-

Lanes, Volumes, Timings
4: Chico Ave & Garvey Ave

04/11/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	
Traffic Volume (vph)	480	92	76	662	65	43
Future Volume (vph)	480	92	76	662	65	43
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	130		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.976				0.946	
Flt Protected			0.950		0.971	
Satd. Flow (prot)	3454	0	1770	3539	1711	0
Flt Permitted			0.416		0.971	
Satd. Flow (perm)	3454	0	775	3539	1711	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	29				43	
Link Speed (mph)	30			30	30	
Link Distance (ft)	1598			1320	1311	
Travel Time (s)	36.3			30.0	29.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	522	100	83	720	71	47
Shared Lane Traffic (%)						
Lane Group Flow (vph)	622	0	83	720	118	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	
Detector Template	Thru		Left	Thru	Left	
Leading Detector (ft)	100		20	100	20	
Trailing Detector (ft)	0		0	0	0	
Detector 1 Position(ft)	0		0	0	0	
Detector 1 Size(ft)	6		20	6	20	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			

Lanes, Volumes, Timings
4: Chico Ave & Garvey Ave

04/11/2021

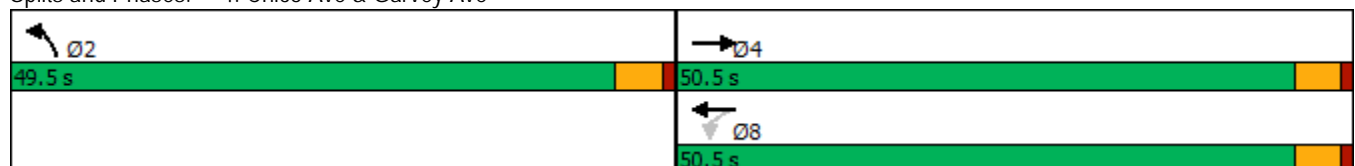


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	4		8	8	2	
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	
Minimum Split (s)	22.5		22.5	22.5	22.5	
Total Split (s)	50.5		50.5	50.5	49.5	
Total Split (%)	50.5%		50.5%	50.5%	49.5%	
Maximum Green (s)	46.0		46.0	46.0	45.0	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	4.5		4.5	4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	None		None	None	Min	
Walk Time (s)	7.0		7.0	7.0	7.0	
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0		0	0	0	
Act Effect Green (s)	13.5		13.5	13.5	7.3	
Actuated g/C Ratio	0.45		0.45	0.45	0.24	
v/c Ratio	0.40		0.24	0.45	0.26	
Control Delay	6.1		7.2	6.8	8.9	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	6.1		7.2	6.8	8.9	
LOS	A		A	A	A	
Approach Delay	6.1			6.8	8.9	
Approach LOS	A			A	A	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	30.1
Natural Cycle:	45
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.45
Intersection Signal Delay:	6.7
Intersection LOS:	A
Intersection Capacity Utilization:	37.9%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 4: Chico Ave & Garvey Ave



HCM 6th TWSC
5: Chico Ave & Fern St

04/11/2021

Intersection						
Int Delay, s/veh	3.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	55	35	58	15	25	154
Future Vol, veh/h	55	35	58	15	25	154
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	71	45	74	19	32	197

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	345	84	0	0	93
Stage 1	84	-	-	-	-
Stage 2	261	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	652	975	-	-	1501
Stage 1	939	-	-	-	-
Stage 2	783	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	636	975	-	-	1501
Mov Cap-2 Maneuver	636	-	-	-	-
Stage 1	939	-	-	-	-
Stage 2	764	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.8	0	1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	735	1501
HCM Lane V/C Ratio	-	-	0.157	0.021
HCM Control Delay (s)	-	-	10.8	7.5
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.6	0.1

HCM 6th TWSC
6: Chico Ave & Project Dwy

04/11/2021

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	0	0	0	73	209	0
Future Vol, veh/h	0	0	0	73	209	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	79	227	0



















Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	306	227	227	0	-	0
Stage 1	227	-	-	-	-	-
Stage 2	79	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	686	812	1341	-	-	-
Stage 1	811	-	-	-	-	-
Stage 2	944	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	686	812	1341	-	-	-
Mov Cap-2 Maneuver	686	-	-	-	-	-
Stage 1	811	-	-	-	-	-
Stage 2	944	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1341	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Lanes, Volumes, Timings
7: Chico Ave & Rush St

04/11/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	341	48	19	347	61	28	14	16	30	20	75
Future Volume (vph)	60	341	48	19	347	61	28	14	16	30	20	75
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		0	105		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.982			0.978			0.963			0.919	
Flt Protected	0.950			0.950				0.976			0.988	
Satd. Flow (prot)	1770	3476	0	1770	3461	0	0	1751	0	0	1691	0
Flt Permitted	0.370			0.392				0.877			0.942	
Satd. Flow (perm)	689	3476	0	730	3461	0	0	1573	0	0	1613	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			26			17			82	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1293			1297			518			2216	
Travel Time (s)		29.4			29.5			11.8			50.4	
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
Adj. Flow (vph)	65	371	52	21	377	66	30	15	17	33	22	82
Shared Lane Traffic (%)												
Lane Group Flow (vph)	65	423	0	21	443	0	0	62	0	0	137	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		

Lanes, Volumes, Timings
7: Chico Ave & Rush St

04/11/2021

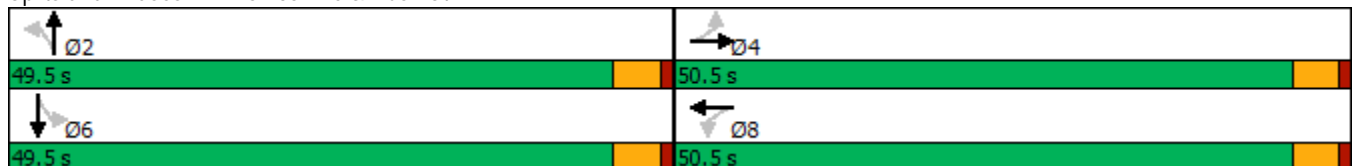


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	50.5	50.5		50.5	50.5		49.5	49.5		49.5	49.5	
Total Split (%)	50.5%	50.5%		50.5%	50.5%		49.5%	49.5%		49.5%	49.5%	
Maximum Green (s)	46.0	46.0		46.0	46.0		45.0	45.0		45.0	45.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)	14.0	14.0		14.0	14.0		45.1	45.1		45.1	45.1	
Actuated g/C Ratio	0.21	0.21		0.21	0.21		0.66	0.66		0.66	0.66	
v/c Ratio	0.46	0.58		0.14	0.61		0.06	0.06		0.12	0.12	
Control Delay	34.8	26.4		23.9	26.7		4.0	4.0		2.7	2.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	34.8	26.4		23.9	26.7		4.0	4.0		2.7	2.7	
LOS	C	C		C	C		A	A		A	A	
Approach Delay		27.6			26.5		4.0	4.0		2.7	2.7	
Approach LOS		C			C		A	A		A	A	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	68.1
Natural Cycle:	45
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.61
Intersection Signal Delay:	22.9
Intersection LOS:	C
Intersection Capacity Utilization:	34.8%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 7: Chico Ave & Rush St



Intersection	
Intersection Delay, s/veh	7.8
Intersection LOS	A


































Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑	↑	
Traffic Vol, veh/h	34	39	32	72	97	22
Future Vol, veh/h	34	39	32	72	97	22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	37	42	35	78	105	24
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.7	8	7.8
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	31%	47%	0%
Vol Thru, %	69%	0%	82%
Vol Right, %	0%	53%	18%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	104	73	119
LT Vol	32	34	0
Through Vol	72	0	97
RT Vol	0	39	22
Lane Flow Rate	113	79	129
Geometry Grp	1	1	1
Degree of Util (X)	0.133	0.093	0.145
Departure Headway (Hd)	4.235	4.236	4.049
Convergence, Y/N	Yes	Yes	Yes
Cap	838	851	876
Service Time	2.306	2.236	2.122
HCM Lane V/C Ratio	0.135	0.093	0.147
HCM Control Delay	8	7.7	7.8
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	0.3	0.5

Lanes, Volumes, Timings
1: Rosemead Blvd & Garvey Ave

04/11/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 		 	 	  	  	  	
Traffic Volume (vph)	223	500	81	144	440	333	202	1060	109	342	1002	150
Future Volume (vph)	223	500	81	144	440	333	202	1060	109	342	1002	150
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	240		0	215		180	210		0	275		0
Storage Lanes	1		0	1		1	2		0	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	0.97	0.91	0.91	0.97	0.91	0.91
Frt		0.979				0.850		0.986			0.980	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3465	0	1770	3539	1583	3433	5014	0	3433	4984	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3465	0	1770	3539	1583	3433	5014	0	3433	4984	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18				65		17			28	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		424			1598			1364			420	
Travel Time (s)		9.6			36.3			31.0			9.5	
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
Adj. Flow (vph)	242	543	88	157	478	362	220	1152	118	372	1089	163
Shared Lane Traffic (%)												
Lane Group Flow (vph)	242	631	0	157	478	362	220	1270	0	372	1252	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						

Lanes, Volumes, Timings
1: Rosemead Blvd & Garvey Ave

04/11/2021

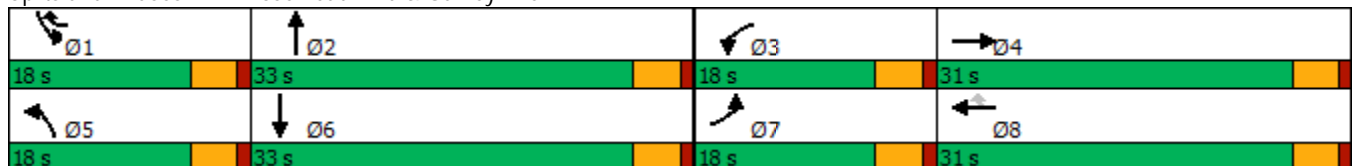


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5	9.5	9.5	22.5		9.5	22.5	
Total Split (s)	18.0	31.0		18.0	31.0	18.0	18.0	33.0		18.0	33.0	
Total Split (%)	18.0%	31.0%		18.0%	31.0%	18.0%	18.0%	33.0%		18.0%	33.0%	
Maximum Green (s)	13.5	26.5		13.5	26.5	13.5	13.5	28.5		13.5	28.5	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effect Green (s)	13.6	22.6		12.0	21.1	38.6	11.1	28.6		13.0	30.6	
Actuated g/C Ratio	0.14	0.24		0.13	0.22	0.41	0.12	0.30		0.14	0.32	
v/c Ratio	0.95	0.75		0.70	0.61	0.53	0.55	0.83		0.79	0.77	
Control Delay	89.1	38.6		57.4	36.1	19.7	45.3	36.7		53.1	33.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	89.1	38.6		57.4	36.1	19.7	45.3	36.7		53.1	33.0	
LOS	F	D		E	D	B	D	D		D	C	
Approach Delay		52.6			33.5			38.0			37.6	
Approach LOS		D			C			D			D	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	94.4
Natural Cycle:	90
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.95
Intersection Signal Delay:	39.5
Intersection LOS:	D
Intersection Capacity Utilization	72.2%
ICU Level of Service	C
Analysis Period (min)	15

Splits and Phases: 1: Rosemead Blvd & Garvey Ave



HCM 6th TWSC
2: Rosemead Blvd & Fern St

04/11/2021

Intersection						
Int Delay, s/veh	3.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	33	37	36	1420	1479	48
Future Vol, veh/h	33	37	36	1420	1479	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	140	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	35	39	38	1511	1573	51

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	2279	812	1624	0	-	0
Stage 1	1599	-	-	-	-	-
Stage 2	680	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	66	276	193	-	-	-
Stage 1	103	-	-	-	-	-
Stage 2	423	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	53	276	193	-	-	-
Mov Cap-2 Maneuver	53	-	-	-	-	-
Stage 1	83	-	-	-	-	-
Stage 2	423	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	125.2	0.7	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	193	-	93	-	-
HCM Lane V/C Ratio	0.198	-	0.801	-	-
HCM Control Delay (s)	28.2	-	125.2	-	-
HCM Lane LOS	D	-	F	-	-
HCM 95th %tile Q(veh)	0.7	-	4.3	-	-

HCM 6th TWSC
3: Rosemead Blvd & Project Dwy

04/11/2021

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↑ ↑ ↑	↑ ↑ ↑			↑ ↑ ↑
Traffic Vol, veh/h	0	0	1456	0	0	1516
Future Vol, veh/h	0	0	1456	0	0	1516
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	1583	0	0	1648

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	792	0	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-
Pot Cap-1 Maneuver	0	285	-	-	0
Stage 1	0	-	-	-	0
Stage 2	0	-	-	-	0
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	-	285	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	-	0
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	-

Lanes, Volumes, Timings
4: Chico Ave & Garvey Ave

04/11/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	
Traffic Volume (vph)	987	73	63	801	106	104
Future Volume (vph)	987	73	63	801	106	104
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	130		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.990				0.933	
Flt Protected			0.950		0.975	
Satd. Flow (prot)	3504	0	1770	3539	1694	0
Flt Permitted			0.173		0.975	
Satd. Flow (perm)	3504	0	322	3539	1694	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	10				33	
Link Speed (mph)	30			30	30	
Link Distance (ft)	1598			1320	1311	
Travel Time (s)	36.3			30.0	29.8	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	1189	88	76	965	128	125
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1277	0	76	965	253	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	
Detector Template	Thru		Left	Thru	Left	
Leading Detector (ft)	100		20	100	20	
Trailing Detector (ft)	0		0	0	0	
Detector 1 Position(ft)	0		0	0	0	
Detector 1 Size(ft)	6		20	6	20	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			

Lanes, Volumes, Timings
4: Chico Ave & Garvey Ave

04/11/2021

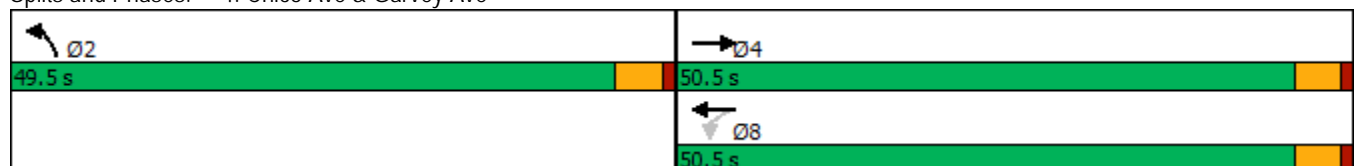


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	4		8	8	2	
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	
Minimum Split (s)	22.5		22.5	22.5	22.5	
Total Split (s)	50.5		50.5	50.5	49.5	
Total Split (%)	50.5%		50.5%	50.5%	49.5%	
Maximum Green (s)	46.0		46.0	46.0	45.0	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	4.5		4.5	4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	None		None	None	Min	
Walk Time (s)	7.0		7.0	7.0	7.0	
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0		0	0	0	
Act Effect Green (s)	46.2		46.2	46.2	14.3	
Actuated g/C Ratio	0.66		0.66	0.66	0.21	
v/c Ratio	0.55		0.36	0.41	0.68	
Control Delay	7.8		12.4	6.6	31.4	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	7.8		12.4	6.6	31.4	
LOS	A		B	A	C	
Approach Delay	7.8			7.0	31.4	
Approach LOS	A			A	C	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	69.5
Natural Cycle:	60
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.68
Intersection Signal Delay:	9.8
Intersection LOS:	A
Intersection Capacity Utilization:	57.3%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 4: Chico Ave & Garvey Ave



HCM 6th TWSC
5: Chico Ave & Fern St

04/11/2021

Intersection						
Int Delay, s/veh	2.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	37	42	175	52	43	96
Future Vol, veh/h	37	42	175	52	43	96
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	45	51	213	63	52	117

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	466	245	0	0	276
Stage 1	245	-	-	-	-
Stage 2	221	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	555	794	-	-	1287
Stage 1	796	-	-	-	-
Stage 2	816	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	531	794	-	-	1287
Mov Cap-2 Maneuver	531	-	-	-	-
Stage 1	796	-	-	-	-
Stage 2	781	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.6	0	2.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	644	1287
HCM Lane V/C Ratio	-	-	0.15	0.041
HCM Control Delay (s)	-	-	11.6	7.9
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.5	0.1

HCM 6th TWSC
6: Chico Ave & Project Dwy

04/11/2021

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	0	0	0	227	133	0
Future Vol, veh/h	0	0	0	227	133	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	247	145	0



















Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	392	145	145	0	-	0
Stage 1	145	-	-	-	-	-
Stage 2	247	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	612	902	1437	-	-	-
Stage 1	882	-	-	-	-	-
Stage 2	794	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	612	902	1437	-	-	-
Mov Cap-2 Maneuver	612	-	-	-	-	-
Stage 1	882	-	-	-	-	-
Stage 2	794	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1437	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Lanes, Volumes, Timings
7: Chico Ave & Rush St

04/11/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	83	440	38	29	422	46	76	36	33	68	18	101
Future Volume (vph)	83	440	38	29	422	46	76	36	33	68	18	101
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		0	105		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.988			0.985			0.970			0.927	
Flt Protected	0.950			0.950				0.975			0.982	
Satd. Flow (prot)	1770	3497	0	1770	3486	0	0	1762	0	0	1696	0
Flt Permitted	0.341			0.332				0.794			0.863	
Satd. Flow (perm)	635	3497	0	618	3486	0	0	1435	0	0	1490	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			15			19			76	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1293			1297			518			2216	
Travel Time (s)		29.4			29.5			11.8			50.4	
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
Adj. Flow (vph)	86	458	40	30	440	48	79	38	34	71	19	105
Shared Lane Traffic (%)												
Lane Group Flow (vph)	86	498	0	30	488	0	0	151	0	0	195	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		

Lanes, Volumes, Timings
7: Chico Ave & Rush St

04/11/2021

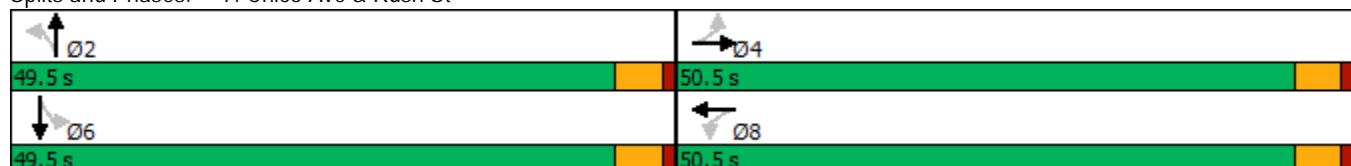


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	50.5	50.5		50.5	50.5		49.5	49.5		49.5	49.5	
Total Split (%)	50.5%	50.5%		50.5%	50.5%		49.5%	49.5%		49.5%	49.5%	
Maximum Green (s)	46.0	46.0		46.0	46.0		45.0	45.0		45.0	45.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)	16.1	16.1		16.1	16.1		45.1	45.1		45.1	45.1	
Actuated g/C Ratio	0.23	0.23		0.23	0.23		0.64	0.64		0.64	0.64	
v/c Ratio	0.59	0.62		0.21	0.60		0.16	0.16		0.20	0.20	
Control Delay	41.6	27.0		25.3	26.6		5.6	5.6		4.3	4.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	41.6	27.0		25.3	26.6		5.6	5.6		4.3	4.3	
LOS	D	C		C	C		A	A		A	A	
Approach Delay		29.1			26.5		5.6	5.6		4.3	4.3	
Approach LOS		C			C		A	A		A	A	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	70.2
Natural Cycle:	45
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.62
Intersection Signal Delay:	22.4
Intersection LOS:	C
Intersection Capacity Utilization:	41.4%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 7: Chico Ave & Rush St



Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑	↑	
Traffic Vol, veh/h	58	59	69	169	106	50
Future Vol, veh/h	58	59	69	169	106	50
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	62	63	73	180	113	53
Number of Lanes	1	0	0	1	1	0

































Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.6	9.5	8.4
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	29%	50%	0%
Vol Thru, %	71%	0%	68%
Vol Right, %	0%	50%	32%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	238	117	156
LT Vol	69	58	0
Through Vol	169	0	106
RT Vol	0	59	50
Lane Flow Rate	253	124	166
Geometry Grp	1	1	1
Degree of Util (X)	0.314	0.161	0.199
Departure Headway (Hd)	4.467	4.66	4.316
Convergence, Y/N	Yes	Yes	Yes
Cap	805	769	831
Service Time	2.489	2.688	2.341
HCM Lane V/C Ratio	0.314	0.161	0.2
HCM Control Delay	9.5	8.6	8.4
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1.3	0.6	0.7

Existing Conditions with Covid Factor

Lanes, Volumes, Timings
1: Rosemead Blvd & Garvey Ave

04/11/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 		 	 	  	  	  	
Traffic Volume (vph)	122	299	124	174	302	246	109	806	53	290	1178	151
Future Volume (vph)	122	299	124	174	302	246	109	806	53	290	1178	151
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	240		0	215		180	210		0	275		0
Storage Lanes	1		0	1		1	2		0	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	0.97	0.91	0.91	0.97	0.91	0.91
Frt		0.956				0.850		0.991			0.983	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3383	0	1770	3539	1583	3433	5040	0	3433	4999	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3383	0	1770	3539	1583	3433	5040	0	3433	4999	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		61				111		10			23	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		424			1598			1364			420	
Travel Time (s)		9.6			36.3			31.0			9.5	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	131	322	133	187	325	265	117	867	57	312	1267	162
Shared Lane Traffic (%)												
Lane Group Flow (vph)	131	455	0	187	325	265	117	924	0	312	1429	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane				Yes								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						

Lanes, Volumes, Timings
1: Rosemead Blvd & Garvey Ave

04/11/2021

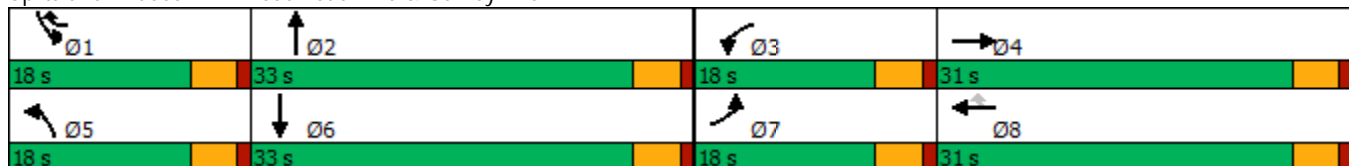


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5	9.5	9.5	22.5		9.5	22.5	
Total Split (s)	18.0	31.0		18.0	31.0	18.0	18.0	33.0		18.0	33.0	
Total Split (%)	18.0%	31.0%		18.0%	31.0%	18.0%	18.0%	33.0%		18.0%	33.0%	
Maximum Green (s)	13.5	26.5		13.5	26.5	13.5	13.5	28.5		13.5	28.5	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effect Green (s)	11.1	15.9		12.6	17.5	34.2	8.4	28.7		12.2	34.9	
Actuated g/C Ratio	0.13	0.18		0.14	0.20	0.39	0.10	0.33		0.14	0.40	
v/c Ratio	0.58	0.69		0.73	0.46	0.39	0.36	0.56		0.65	0.71	
Control Delay	48.1	34.6		55.1	33.6	12.6	41.3	26.4		43.5	26.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	48.1	34.6		55.1	33.6	12.6	41.3	26.4		43.5	26.3	
LOS	D	C		E	C	B	D	C		D	C	
Approach Delay		37.7			31.6			28.1			29.4	
Approach LOS		D			C			C			C	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	87.5
Natural Cycle:	75
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.73
Intersection Signal Delay:	30.6
Intersection LOS:	C
Intersection Capacity Utilization:	67.2%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 1: Rosemead Blvd & Garvey Ave



HCM 6th TWSC
2: Rosemead Blvd & Fern St

04/11/2021

Intersection						
Int Delay, s/veh	2.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	25	31	61	1343	1408	89
Future Vol, veh/h	25	31	61	1343	1408	89
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	140	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	32	64	1399	1467	93

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	2202	780	1560	0	-	0
Stage 1	1514	-	-	-	-	-
Stage 2	688	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	73	290	208	-	-	-
Stage 1	116	-	-	-	-	-
Stage 2	419	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	51	290	208	-	-	-
Mov Cap-2 Maneuver	51	-	-	-	-	-
Stage 1	80	-	-	-	-	-
Stage 2	419	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	92	1.3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	208	-	94	-	-
HCM Lane V/C Ratio	0.305	-	0.621	-	-
HCM Control Delay (s)	29.7	-	92	-	-
HCM Lane LOS	D	-	F	-	-
HCM 95th %tile Q(veh)	1.2	-	3	-	-

HCM 6th TWSC
 3: Rosemead Blvd & Project Dwy

04/11/2021

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑ ↑ ↑			↑ ↑ ↑
Traffic Vol, veh/h	0	0	1404	0	0	1439
Future Vol, veh/h	0	0	1404	0	0	1439
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	1526	0	0	1564

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	763	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	7.14	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.92	-
Pot Cap-1 Maneuver	0	298	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	-	298	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	-	0
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	-

Lanes, Volumes, Timings
4: Chico Ave & Garvey Ave

04/11/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	
Traffic Volume (vph)	536	103	85	740	73	48
Future Volume (vph)	536	103	85	740	73	48
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	130		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.976				0.946	
Flt Protected			0.950		0.971	
Satd. Flow (prot)	3454	0	1770	3539	1711	0
Flt Permitted			0.387		0.971	
Satd. Flow (perm)	3454	0	721	3539	1711	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	29				43	
Link Speed (mph)	30			30	30	
Link Distance (ft)	1598			1320	1311	
Travel Time (s)	36.3			30.0	29.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	583	112	92	804	79	52
Shared Lane Traffic (%)						
Lane Group Flow (vph)	695	0	92	804	131	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	
Detector Template	Thru		Left	Thru	Left	
Leading Detector (ft)	100		20	100	20	
Trailing Detector (ft)	0		0	0	0	
Detector 1 Position(ft)	0		0	0	0	
Detector 1 Size(ft)	6		20	6	20	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			

Lanes, Volumes, Timings
4: Chico Ave & Garvey Ave

04/11/2021

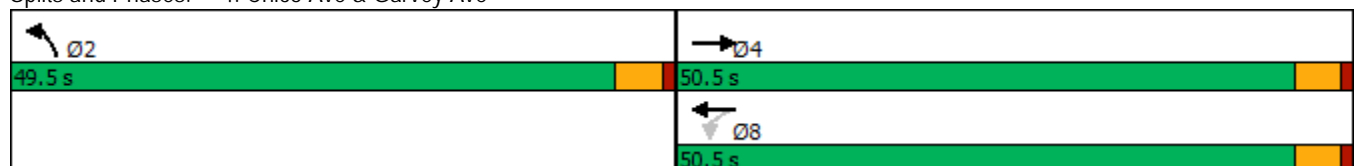


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	4		8	8	2	
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	
Minimum Split (s)	22.5		22.5	22.5	22.5	
Total Split (s)	50.5		50.5	50.5	49.5	
Total Split (%)	50.5%		50.5%	50.5%	49.5%	
Maximum Green (s)	46.0		46.0	46.0	45.0	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	4.5		4.5	4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	None		None	None	Min	
Walk Time (s)	7.0		7.0	7.0	7.0	
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0		0	0	0	
Act Effect Green (s)	15.4		15.4	15.4	7.8	
Actuated g/C Ratio	0.47		0.47	0.47	0.24	
v/c Ratio	0.42		0.27	0.48	0.30	
Control Delay	6.3		7.7	6.9	10.3	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	6.3		7.7	6.9	10.3	
LOS	A		A	A	B	
Approach Delay	6.3			7.0	10.3	
Approach LOS	A			A	B	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	32.5
Natural Cycle:	45
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.48
Intersection Signal Delay:	7.0
Intersection LOS:	A
Intersection Capacity Utilization:	41.0%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 4: Chico Ave & Garvey Ave



HCM 6th TWSC
5: Chico Ave & Fern St

04/11/2021

Intersection						
Int Delay, s/veh	3.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	61	39	65	17	28	172
Future Vol, veh/h	61	39	65	17	28	172
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	78	50	83	22	36	221

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	387	94	0	0	105
Stage 1	94	-	-	-	-
Stage 2	293	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	616	963	-	-	1486
Stage 1	930	-	-	-	-
Stage 2	757	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	599	963	-	-	1486
Mov Cap-2 Maneuver	599	-	-	-	-
Stage 1	930	-	-	-	-
Stage 2	736	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.3	0	1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	703	1486
HCM Lane V/C Ratio	-	-	0.182	0.024
HCM Control Delay (s)	-	-	11.3	7.5
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.7	0.1

HCM 6th TWSC
6: Chico Ave & Project Dwy

04/11/2021

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	0	0	0	82	233	0
Future Vol, veh/h	0	0	0	82	233	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	89	253	0



















Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	342	253	253	0	-	0
Stage 1	253	-	-	-	-	-
Stage 2	89	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	654	786	1312	-	-	-
Stage 1	789	-	-	-	-	-
Stage 2	934	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	654	786	1312	-	-	-
Mov Cap-2 Maneuver	654	-	-	-	-	-
Stage 1	789	-	-	-	-	-
Stage 2	934	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1312	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Lanes, Volumes, Timings
7: Chico Ave & Rush St

04/11/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	381	54	21	388	68	31	16	18	34	22	84
Future Volume (vph)	67	381	54	21	388	68	31	16	18	34	22	84
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		0	105		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.981			0.978			0.962			0.919	
Flt Protected	0.950			0.950				0.977			0.988	
Satd. Flow (prot)	1770	3472	0	1770	3461	0	0	1751	0	0	1691	0
Flt Permitted	0.327			0.350				0.867			0.937	
Satd. Flow (perm)	609	3472	0	652	3461	0	0	1554	0	0	1604	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			26			20			91	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1293			1297			518			2216	
Travel Time (s)		29.4			29.5			11.8			50.4	
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
Adj. Flow (vph)	73	414	59	23	422	74	34	17	20	37	24	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	73	473	0	23	496	0	0	71	0	0	152	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		

Lanes, Volumes, Timings
7: Chico Ave & Rush St

04/11/2021

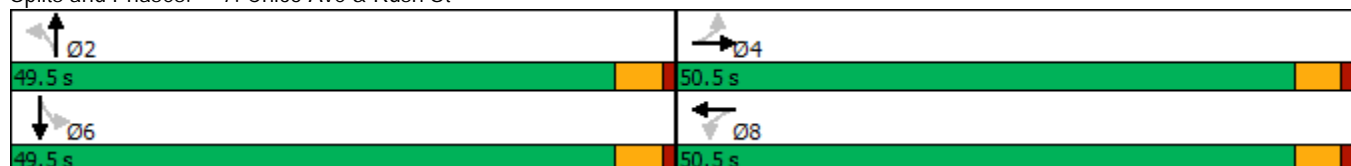


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	50.5	50.5		50.5	50.5		49.5	49.5		49.5	49.5	
Total Split (%)	50.5%	50.5%		50.5%	50.5%		49.5%	49.5%		49.5%	49.5%	
Maximum Green (s)	46.0	46.0		46.0	46.0		45.0	45.0		45.0	45.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)	15.3	15.3		15.3	15.3		45.1	45.1		45.1	45.1	
Actuated g/C Ratio	0.22	0.22		0.22	0.22		0.65	0.65		0.65	0.65	
v/c Ratio	0.54	0.60		0.16	0.63		0.07	0.07		0.14	0.14	
Control Delay	39.7	26.5		24.1	26.9		4.4	4.4		3.0	3.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	39.7	26.5		24.1	26.9		4.4	4.4		3.0	3.0	
LOS	D	C		C	C		A	A		A	A	
Approach Delay		28.3			26.8		4.4	4.4		3.0	3.0	
Approach LOS		C			C		A	A		A	A	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	69.5
Natural Cycle:	45
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.63
Intersection Signal Delay:	23.4
Intersection LOS:	C
Intersection Capacity Utilization:	37.1%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 7: Chico Ave & Rush St



Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A































Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑	↑	
Traffic Vol, veh/h	38	44	36	80	108	25
Future Vol, veh/h	38	44	36	80	108	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	41	48	39	87	117	27
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.8	8.1	8
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	31%	46%	0%
Vol Thru, %	69%	0%	81%
Vol Right, %	0%	54%	19%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	116	82	133
LT Vol	36	38	0
Through Vol	80	0	108
RT Vol	0	44	25
Lane Flow Rate	126	89	145
Geometry Grp	1	1	1
Degree of Util (X)	0.149	0.106	0.164
Departure Headway (Hd)	4.264	4.298	4.074
Convergence, Y/N	Yes	Yes	Yes
Cap	830	839	867
Service Time	2.349	2.298	2.161
HCM Lane V/C Ratio	0.152	0.106	0.167
HCM Control Delay	8.1	7.8	8
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	0.4	0.6

Lanes, Volumes, Timings
1: Rosemead Blvd & Garvey Ave

04/11/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 		 	 	 	  	 	
Traffic Volume (vph)	249	559	90	161	492	372	226	1184	122	382	1119	168
Future Volume (vph)	249	559	90	161	492	372	226	1184	122	382	1119	168
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	240		0	215		180	210		0	275		0
Storage Lanes	1		0	1		1	2		0	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	0.97	0.91	0.91	0.97	0.91	0.91
Frt		0.979				0.850		0.986			0.980	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3465	0	1770	3539	1583	3433	5014	0	3433	4984	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3465	0	1770	3539	1583	3433	5014	0	3433	4984	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18				65		17			28	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		424			1598			1364			420	
Travel Time (s)		9.6			36.3			31.0			9.5	
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
Adj. Flow (vph)	271	608	98	175	535	404	246	1287	133	415	1216	183
Shared Lane Traffic (%)												
Lane Group Flow (vph)	271	706	0	175	535	404	246	1420	0	415	1399	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						

Lanes, Volumes, Timings
1: Rosemead Blvd & Garvey Ave

04/11/2021

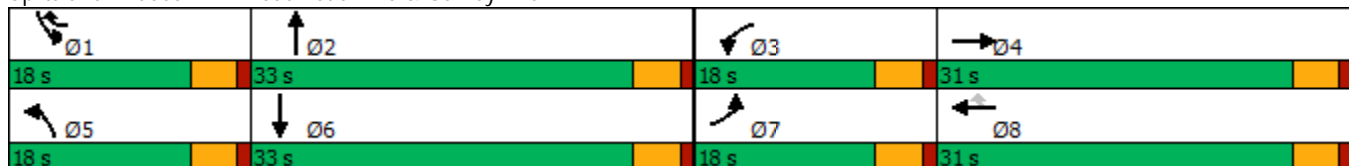


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5	9.5	9.5	22.5		9.5	22.5	
Total Split (s)	18.0	31.0		18.0	31.0	18.0	18.0	33.0		18.0	33.0	
Total Split (%)	18.0%	31.0%		18.0%	31.0%	18.0%	18.0%	33.0%		18.0%	33.0%	
Maximum Green (s)	13.5	26.5		13.5	26.5	13.5	13.5	28.5		13.5	28.5	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effect Green (s)	13.5	24.0		12.6	23.0	40.9	11.7	28.6		13.5	30.3	
Actuated g/C Ratio	0.14	0.25		0.13	0.24	0.42	0.12	0.30		0.14	0.31	
v/c Ratio	1.10	0.81		0.76	0.64	0.57	0.59	0.95		0.87	0.88	
Control Delay	126.4	41.5		63.3	36.6	20.9	46.8	48.2		61.3	40.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	126.4	41.5		63.3	36.6	20.9	46.8	48.2		61.3	40.0	
LOS	F	D		E	D	C	D	D		E	D	
Approach Delay		65.1			35.1			48.0			44.8	
Approach LOS		E			D			D			D	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	96.6
Natural Cycle:	90
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.10
Intersection Signal Delay:	47.4
Intersection LOS:	D
Intersection Capacity Utilization	78.9%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 1: Rosemead Blvd & Garvey Ave



HCM 6th TWSC
2: Rosemead Blvd & Fern St

04/11/2021

Intersection						
Int Delay, s/veh	8.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y		Y	↑↑↑	↑↑↑	
Traffic Vol, veh/h	37	41	40	1586	1652	54
Future Vol, veh/h	37	41	40	1586	1652	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	140	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	39	44	43	1687	1757	57

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	2547	907	1814	0	-	0
Stage 1	1786	-	-	-	-	-
Stage 2	761	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	47	239	155	-	-	-
Stage 1	78	-	-	-	-	-
Stage 2	383	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 34	239	155	-	-	-
Mov Cap-2 Maneuver	~ 34	-	-	-	-	-
Stage 1	56	-	-	-	-	-
Stage 2	383	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s\$	341.1	0.9	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	155	-	62	-	-
HCM Lane V/C Ratio	0.275	-	1.338	-	-
HCM Control Delay (s)	36.8	-	\$ 341.1	-	-
HCM Lane LOS	E	-	F	-	-
HCM 95th %tile Q(veh)	1.1	-	7	-	-

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

HCM 6th TWSC
3: Rosemead Blvd & Project Dwy

04/11/2021

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↑ ↑ ↑	↑ ↑ ↑			↑ ↑ ↑
Traffic Vol, veh/h	0	0	1627	0	0	1694
Future Vol, veh/h	0	0	1627	0	0	1694
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	1768	0	0	1841

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	884	0	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-
Pot Cap-1 Maneuver	0	248	-	-	0
Stage 1	0	-	-	-	0
Stage 2	0	-	-	-	0
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	-	248	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	-	0
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	-

Lanes, Volumes, Timings
4: Chico Ave & Garvey Ave

04/11/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	
Traffic Volume (vph)	1103	82	70	895	118	116
Future Volume (vph)	1103	82	70	895	118	116
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	130		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.990				0.933	
Flt Protected			0.950		0.975	
Satd. Flow (prot)	3504	0	1770	3539	1694	0
Flt Permitted			0.132		0.975	
Satd. Flow (perm)	3504	0	246	3539	1694	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	10				21	
Link Speed (mph)	30			30	30	
Link Distance (ft)	1598			1320	1311	
Travel Time (s)	36.3			30.0	29.8	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	1329	99	84	1078	142	140
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1428	0	84	1078	282	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	
Detector Template	Thru		Left	Thru	Left	
Leading Detector (ft)	100		20	100	20	
Trailing Detector (ft)	0		0	0	0	
Detector 1 Position(ft)	0		0	0	0	
Detector 1 Size(ft)	6		20	6	20	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			

Lanes, Volumes, Timings
4: Chico Ave & Garvey Ave

04/11/2021

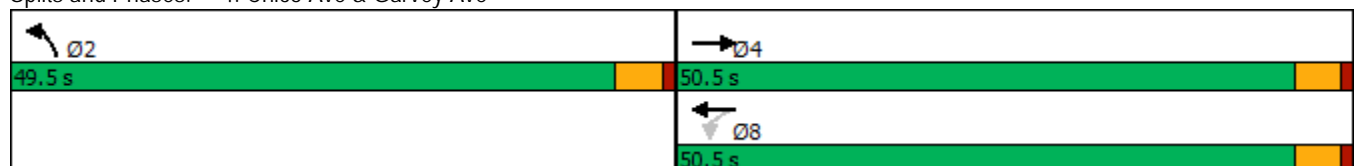


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	4		8	8	2	
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	
Minimum Split (s)	22.5		22.5	22.5	22.5	
Total Split (s)	50.5		50.5	50.5	49.5	
Total Split (%)	50.5%		50.5%	50.5%	49.5%	
Maximum Green (s)	46.0		46.0	46.0	45.0	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	4.5		4.5	4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	None		None	None	Min	
Walk Time (s)	7.0		7.0	7.0	7.0	
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0		0	0	0	
Act Effect Green (s)	46.1		46.1	46.1	16.1	
Actuated g/C Ratio	0.65		0.65	0.65	0.23	
v/c Ratio	0.63		0.53	0.47	0.71	
Control Delay	9.8		25.1	7.9	33.5	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	9.8		25.1	7.9	33.5	
LOS	A		C	A	C	
Approach Delay	9.8			9.1	33.5	
Approach LOS	A			A	C	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	71.3
Natural Cycle:	65
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.71
Intersection Signal Delay:	11.8
Intersection LOS:	B
Intersection Capacity Utilization:	62.2%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 4: Chico Ave & Garvey Ave



HCM 6th TWSC
5: Chico Ave & Fern St

04/11/2021

Intersection						
Int Delay, s/veh	2.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	41	47	196	58	48	107
Future Vol, veh/h	41	47	196	58	48	107
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	50	57	239	71	59	130

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	523	275	0	0	310
Stage 1	275	-	-	-	-
Stage 2	248	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	514	764	-	-	1250
Stage 1	771	-	-	-	-
Stage 2	793	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	488	764	-	-	1250
Mov Cap-2 Maneuver	488	-	-	-	-
Stage 1	771	-	-	-	-
Stage 2	753	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.2	0	2.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	605	1250
HCM Lane V/C Ratio	-	-	0.177	0.047
HCM Control Delay (s)	-	-	12.2	8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.6	0.1

HCM 6th TWSC
6: Chico Ave & Project Dwy

04/11/2021

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	0	0	0	254	149	0
Future Vol, veh/h	0	0	0	254	149	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	276	162	0

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	438	162	162	0	-	0
Stage 1	162	-	-	-	-	-
Stage 2	276	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	576	883	1417	-	-	-
Stage 1	867	-	-	-	-	-
Stage 2	771	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	576	883	1417	-	-	-
Mov Cap-2 Maneuver	576	-	-	-	-	-
Stage 1	867	-	-	-	-	-
Stage 2	771	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1417	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Lanes, Volumes, Timings
7: Chico Ave & Rush St

04/11/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	93	492	42	32	471	51	85	40	37	76	20	113
Future Volume (vph)	93	492	42	32	471	51	85	40	37	76	20	113
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		0	105		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.988			0.985			0.969			0.927	
Flt Protected	0.950			0.950				0.974			0.982	
Satd. Flow (prot)	1770	3497	0	1770	3486	0	0	1758	0	0	1696	0
Flt Permitted	0.306			0.295				0.776			0.851	
Satd. Flow (perm)	570	3497	0	550	3486	0	0	1401	0	0	1469	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			15			19			77	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1293			1297			518			2216	
Travel Time (s)		29.4			29.5			11.8			50.4	
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
Adj. Flow (vph)	97	513	44	33	491	53	89	42	39	79	21	118
Shared Lane Traffic (%)												
Lane Group Flow (vph)	97	557	0	33	544	0	0	170	0	0	218	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		

Lanes, Volumes, Timings
7: Chico Ave & Rush St

04/11/2021

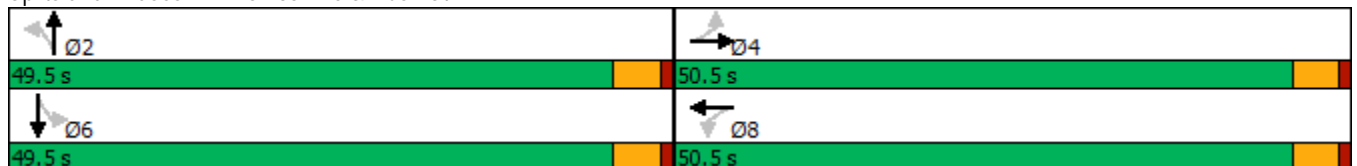


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	50.5	50.5		50.5	50.5		49.5	49.5		49.5	49.5	
Total Split (%)	50.5%	50.5%		50.5%	50.5%		49.5%	49.5%		49.5%	49.5%	
Maximum Green (s)	46.0	46.0		46.0	46.0		45.0	45.0		45.0	45.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)	18.1	18.1		18.1	18.1		45.2	45.2		45.2	45.2	
Actuated g/C Ratio	0.25	0.25		0.25	0.25		0.62	0.62		0.62	0.62	
v/c Ratio	0.68	0.63		0.24	0.62		0.19	0.19		0.23	0.23	
Control Delay	48.9	26.7		25.6	26.2		6.8	6.8		5.3	5.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	48.9	26.7		25.6	26.2		6.8	6.8		5.3	5.3	
LOS	D	C		C	C		A	A		A	A	
Approach Delay		30.0			26.2		6.8	6.8		5.3	5.3	
Approach LOS		C			C		A	A		A	A	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	72.4
Natural Cycle:	45
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.68
Intersection Signal Delay:	22.9
Intersection LOS:	C
Intersection Capacity Utilization:	45.0%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 7: Chico Ave & Rush St



Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑	↑	
Traffic Vol, veh/h	58	59	69	169	106	50
Future Vol, veh/h	58	59	69	169	106	50
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	62	63	73	180	113	53
Number of Lanes	1	0	0	1	1	0































Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.6	9.5	8.4
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	29%	50%	0%
Vol Thru, %	71%	0%	68%
Vol Right, %	0%	50%	32%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	238	117	156
LT Vol	69	58	0
Through Vol	169	0	106
RT Vol	0	59	50
Lane Flow Rate	253	124	166
Geometry Grp	1	1	1
Degree of Util (X)	0.314	0.161	0.199
Departure Headway (Hd)	4.467	4.66	4.316
Convergence, Y/N	Yes	Yes	Yes
Cap	805	769	831
Service Time	2.489	2.688	2.341
HCM Lane V/C Ratio	0.314	0.161	0.2
HCM Control Delay	9.5	8.6	8.4
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1.3	0.6	0.7

Existing Plus Project

Lanes, Volumes, Timings
1: Rosemead Blvd & Garvey Ave

04/11/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 		 	 	  	  		
Traffic Volume (vph)	122	301	124	174	302	246	115	832	58	299	1178	151
Future Volume (vph)	122	301	124	174	302	246	115	832	58	299	1178	151
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	240		0	215		180	210		0	275		0
Storage Lanes	1		0	1		1	2		0	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	0.97	0.91	0.91	0.97	0.91	0.91
Frt		0.956				0.850		0.990			0.983	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3383	0	1770	3539	1583	3433	5034	0	3433	4999	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3383	0	1770	3539	1583	3433	5034	0	3433	4999	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		61				107		11			23	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		424			1598			1364			420	
Travel Time (s)		9.6			36.3			31.0			9.5	
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
Adj. Flow (vph)	133	327	135	189	328	267	125	904	63	325	1280	164
Shared Lane Traffic (%)												
Lane Group Flow (vph)	133	462	0	189	328	267	125	967	0	325	1444	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						

Lanes, Volumes, Timings
1: Rosemead Blvd & Garvey Ave

04/11/2021

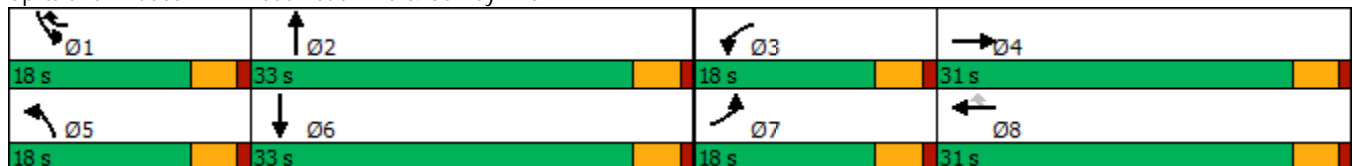


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5	9.5	9.5	22.5		9.5	22.5	
Total Split (s)	18.0	31.0		18.0	31.0	18.0	18.0	33.0		18.0	33.0	
Total Split (%)	18.0%	31.0%		18.0%	31.0%	18.0%	18.0%	33.0%		18.0%	33.0%	
Maximum Green (s)	13.5	26.5		13.5	26.5	13.5	13.5	28.5		13.5	28.5	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effect Green (s)	11.1	16.1		12.7	17.7	34.6	8.6	28.7		12.3	32.4	
Actuated g/C Ratio	0.13	0.18		0.14	0.20	0.39	0.10	0.33		0.14	0.37	
v/c Ratio	0.60	0.69		0.74	0.46	0.39	0.37	0.59		0.68	0.78	
Control Delay	48.8	34.9		55.9	33.6	13.0	41.6	27.1		44.4	28.9	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	48.8	34.9		55.9	33.6	13.0	41.6	27.1		44.4	28.9	
LOS	D	C		E	C	B	D	C		D	C	
Approach Delay		38.0			31.9			28.7			31.7	
Approach LOS		D			C			C			C	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	87.9
Natural Cycle:	75
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.78
Intersection Signal Delay:	31.9
Intersection LOS:	C
Intersection Capacity Utilization:	67.2%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 1: Rosemead Blvd & Garvey Ave



HCM 6th TWSC
2: Rosemead Blvd & Fern St

04/11/2021

Intersection						
Int Delay, s/veh	3.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		W	↑↑↑	↑↑↑	
Traffic Vol, veh/h	25	31	67	1380	1408	89
Future Vol, veh/h	25	31	67	1380	1408	89
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	140	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	33	71	1468	1498	95

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	2275	797	1593	0	-	0
Stage 1	1546	-	-	-	-	-
Stage 2	729	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	66	283	200	-	-	-
Stage 1	111	-	-	-	-	-
Stage 2	398	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	43	283	200	-	-	-
Mov Cap-2 Maneuver	43	-	-	-	-	-
Stage 1	72	-	-	-	-	-
Stage 2	398	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	125	1.5	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	200	-	81	-	-
HCM Lane V/C Ratio	0.356	-	0.735	-	-
HCM Control Delay (s)	32.6	-	125	-	-
HCM Lane LOS	D	-	F	-	-
HCM 95th %tile Q(veh)	1.5	-	3.6	-	-

HCM 6th TWSC
3: Rosemead Blvd & Project Dwy

04/11/2021

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↑ ↑↑	↑ ↑↑			↑ ↑↑
Traffic Vol, veh/h	0	43	1404	16	0	1444
Future Vol, veh/h	0	43	1404	16	0	1444
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	47	1526	17	0	1570

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	772	0	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-
Pot Cap-1 Maneuver	0	294	-	-	0
Stage 1	0	-	-	-	0
Stage 2	0	-	-	-	0
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	-	294	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.5	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	294
HCM Lane V/C Ratio	-	-	0.159
HCM Control Delay (s)	-	-	19.5
HCM Lane LOS	-	-	C
HCM 95th %tile Q(veh)	-	-	0.6

Lanes, Volumes, Timings
4: Chico Ave & Garvey Ave

04/11/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Traffic Volume (vph)	542	113	90	740	73	59
Future Volume (vph)	542	113	90	740	73	59
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	130		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.974				0.940	
Flt Protected			0.950		0.973	
Satd. Flow (prot)	3447	0	1770	3539	1704	0
Flt Permitted			0.338		0.973	
Satd. Flow (perm)	3447	0	630	3539	1704	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	32				53	
Link Speed (mph)	30			30	30	
Link Distance (ft)	1598			1320	1311	
Travel Time (s)	36.3			30.0	29.8	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	653	136	108	892	88	71
Shared Lane Traffic (%)						
Lane Group Flow (vph)	789	0	108	892	159	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	
Detector Template	Thru		Left	Thru	Left	
Leading Detector (ft)	100		20	100	20	
Trailing Detector (ft)	0		0	0	0	
Detector 1 Position(ft)	0		0	0	0	
Detector 1 Size(ft)	6		20	6	20	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			

Lanes, Volumes, Timings
4: Chico Ave & Garvey Ave

04/11/2021

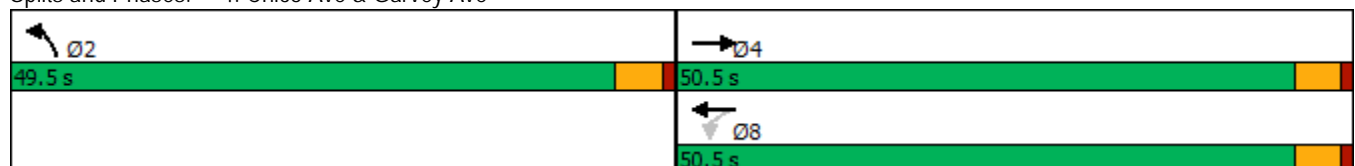


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	4		8	8	2	
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	
Minimum Split (s)	22.5		22.5	22.5	22.5	
Total Split (s)	50.5		50.5	50.5	49.5	
Total Split (%)	50.5%		50.5%	50.5%	49.5%	
Maximum Green (s)	46.0		46.0	46.0	45.0	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	4.5		4.5	4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	None		None	None	Min	
Walk Time (s)	7.0		7.0	7.0	7.0	
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0		0	0	0	
Act Effect Green (s)	18.3		18.3	18.3	8.7	
Actuated g/C Ratio	0.50		0.50	0.50	0.24	
v/c Ratio	0.45		0.34	0.50	0.36	
Control Delay	6.5		9.2	7.2	12.1	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	6.5		9.2	7.2	12.1	
LOS	A		A	A	B	
Approach Delay	6.5			7.4	12.1	
Approach LOS	A			A	B	

Intersection Summary



















Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	36.6
Natural Cycle:	50
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.50
Intersection Signal Delay:	7.4
Intersection LOS:	A
Intersection Capacity Utilization:	42.5%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 4: Chico Ave & Garvey Ave



Lanes, Volumes, Timings
7: Chico Ave & Rush St

04/11/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	381	54	21	389	70	31	16	18	44	22	121
Future Volume (vph)	67	381	54	21	389	70	31	16	18	44	22	121
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		0	105		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.981			0.977			0.962			0.913	
Flt Protected	0.950			0.950				0.977			0.988	
Satd. Flow (prot)	1770	3472	0	1770	3458	0	0	1751	0	0	1680	0
Flt Permitted	0.340			0.366				0.861			0.934	
Satd. Flow (perm)	633	3472	0	682	3458	0	0	1543	0	0	1588	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			27			19			120	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1293			1297			518			2216	
Travel Time (s)		29.4			29.5			11.8			50.4	
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
Adj. Flow (vph)	70	397	56	22	405	73	32	17	19	46	23	126
Shared Lane Traffic (%)												
Lane Group Flow (vph)	70	453	0	22	478	0	0	68	0	0	195	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		

HCM 6th TWSC
5: Chico Ave & Fern St

04/11/2021

Intersection						
Int Delay, s/veh	3.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	63	39	76	22	28	188
Future Vol, veh/h	63	39	76	22	28	188
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	77	48	93	27	34	229

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	404	107	0	0	120	0
Stage 1	107	-	-	-	-	-
Stage 2	297	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	603	947	-	-	1468	-
Stage 1	917	-	-	-	-	-
Stage 2	754	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	587	947	-	-	1468	-
Mov Cap-2 Maneuver	587	-	-	-	-	-
Stage 1	917	-	-	-	-	-
Stage 2	734	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.4	0	1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	687	1468
HCM Lane V/C Ratio	-	-	0.181	0.023
HCM Control Delay (s)	-	-	11.4	7.5
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.7	0.1

Intersection						
Int Delay, s/veh	1.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	16	48	2	82	233	18
Future Vol, veh/h	16	48	2	82	233	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	52	2	89	253	20

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	356	263	273	0	-	0
Stage 1	263	-	-	-	-	-
Stage 2	93	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	642	776	1290	-	-	-
Stage 1	781	-	-	-	-	-
Stage 2	931	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	641	776	1290	-	-	-
Mov Cap-2 Maneuver	641	-	-	-	-	-
Stage 1	779	-	-	-	-	-
Stage 2	931	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1290	-	737	-	-
HCM Lane V/C Ratio	0.002	-	0.094	-	-
HCM Control Delay (s)	7.8	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Lanes, Volumes, Timings
7: Chico Ave & Rush St

04/11/2021

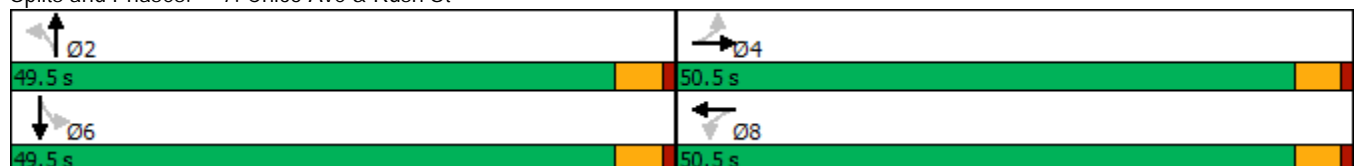


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	50.5	50.5		50.5	50.5		49.5	49.5		49.5	49.5	
Total Split (%)	50.5%	50.5%		50.5%	50.5%		49.5%	49.5%		49.5%	49.5%	
Maximum Green (s)	46.0	46.0		46.0	46.0		45.0	45.0		45.0	45.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)	14.8	14.8		14.8	14.8		45.1	45.1		45.1	45.1	
Actuated g/C Ratio	0.21	0.21		0.21	0.21		0.65	0.65		0.65	0.65	
v/c Ratio	0.52	0.60		0.15	0.63		0.07	0.07		0.18	0.18	
Control Delay	38.1	26.4		24.0	26.8		4.2	4.2		2.8	2.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	38.1	26.4		24.0	26.8		4.2	4.2		2.8	2.8	
LOS	D	C		C	C		A	A		A	A	
Approach Delay		28.0			26.7		4.2	4.2		2.8	2.8	
Approach LOS		C			C		A	A		A	A	




Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	68.9
Natural Cycle:	45
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.63
Intersection Signal Delay:	22.4
Intersection LOS:	C
Intersection Capacity Utilization:	40.2%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 7: Chico Ave & Rush St



Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	43	44	36	80	108	26
Future Vol, veh/h	43	44	36	80	108	26
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	46	47	38	85	115	28
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.8	8.1	8
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	31%	49%	0%
Vol Thru, %	69%	0%	81%
Vol Right, %	0%	51%	19%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	116	87	134
LT Vol	36	43	0
Through Vol	80	0	108
RT Vol	0	44	26
Lane Flow Rate	123	93	143
Geometry Grp	1	1	1
Degree of Util (X)	0.146	0.111	0.161
Departure Headway (Hd)	4.268	4.312	4.075
Convergence, Y/N	Yes	Yes	Yes
Cap	828	837	867
Service Time	2.357	2.312	2.165
HCM Lane V/C Ratio	0.149	0.111	0.165
HCM Control Delay	8.1	7.8	8
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	0.4	0.6

Lanes, Volumes, Timings
1: Rosemead Blvd & Garvey Ave

04/11/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	249	565	90	161	492	372	229	1202	125	412	1119	168
Future Volume (vph)	249	565	90	161	492	372	229	1202	125	412	1119	168
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	240		0	215		180	210		0	275		0
Storage Lanes	1		0	1		1	2		0	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	0.97	0.91	0.91	0.97	0.91	0.91
Frt		0.979				0.850		0.986			0.980	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3465	0	1770	3539	1583	3433	5014	0	3433	4984	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3465	0	1770	3539	1583	3433	5014	0	3433	4984	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17				65		17			28	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		424			1598			1364			420	
Travel Time (s)		9.6			36.3			31.0			9.5	
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
Adj. Flow (vph)	271	614	98	175	535	404	249	1307	136	448	1216	183
Shared Lane Traffic (%)												
Lane Group Flow (vph)	271	712	0	175	535	404	249	1443	0	448	1399	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						

Lanes, Volumes, Timings
1: Rosemead Blvd & Garvey Ave

04/11/2021

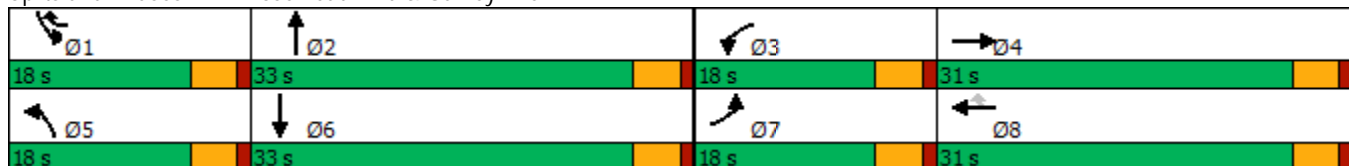


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5	9.5	9.5	22.5		9.5	22.5	
Total Split (s)	18.0	31.0		18.0	31.0	18.0	18.0	33.0		18.0	33.0	
Total Split (%)	18.0%	31.0%		18.0%	31.0%	18.0%	18.0%	33.0%		18.0%	33.0%	
Maximum Green (s)	13.5	26.5		13.5	26.5	13.5	13.5	28.5		13.5	28.5	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effect Green (s)	13.5	24.0		12.5	23.0	41.1	11.7	28.6		13.5	30.4	
Actuated g/C Ratio	0.14	0.25		0.13	0.24	0.43	0.12	0.30		0.14	0.31	
v/c Ratio	1.10	0.82		0.76	0.63	0.57	0.60	0.97		0.93	0.88	
Control Delay	127.3	41.9		63.5	36.5	20.8	47.0	51.1		70.5	40.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	127.3	41.9		63.5	36.5	20.8	47.0	51.1		70.5	40.0	
LOS	F	D		E	D	C	D	D		E	D	
Approach Delay		65.5			35.1			50.5			47.4	
Approach LOS		E			D			D			D	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	96.7
Natural Cycle:	90
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.10
Intersection Signal Delay:	49.0
Intersection LOS:	D
Intersection Capacity Utilization:	80.2%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 1: Rosemead Blvd & Garvey Ave



HCM 6th TWSC
2: Rosemead Blvd & Fern St

04/11/2021

Intersection						
Int Delay, s/veh	9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	37	41	44	1611	1652	54
Future Vol, veh/h	37	41	44	1611	1652	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	140	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	39	44	47	1714	1757	57

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	2566	907	1814	0	-	0
Stage 1	1786	-	-	-	-	-
Stage 2	780	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	46	239	155	-	-	-
Stage 1	78	-	-	-	-	-
Stage 2	374	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 32	239	155	-	-	-
Mov Cap-2 Maneuver	~ 32	-	-	-	-	-
Stage 1	54	-	-	-	-	-
Stage 2	374	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s\$	374.2	1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	155	-	59	-	-
HCM Lane V/C Ratio	0.302	-	1.406	-	-
HCM Control Delay (s)	38	-	\$ 374.2	-	-
HCM Lane LOS	E	-	F	-	-
HCM 95th %tile Q(veh)	1.2	-	7.3	-	-

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

HCM 6th TWSC
3: Rosemead Blvd & Project Dwy

04/11/2021

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↑ ↑↑	↑ ↑↑			↑ ↑↑
Traffic Vol, veh/h	0	28	1627	53	0	1697
Future Vol, veh/h	0	28	1627	53	0	1697
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	30	1768	58	0	1845

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	913	0	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-
Pot Cap-1 Maneuver	0	237	-	-	0
Stage 1	0	-	-	-	0
Stage 2	0	-	-	-	0
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	-	237	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.4	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	237
HCM Lane V/C Ratio	-	-	0.128
HCM Control Delay (s)	-	-	22.4
HCM Lane LOS	-	-	C
HCM 95th %tile Q(veh)	-	-	0.4

Lanes, Volumes, Timings
4: Chico Ave & Garvey Ave

04/11/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	
Traffic Volume (vph)	1106	117	88	895	118	123
Future Volume (vph)	1106	117	88	895	118	123
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	130		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.986				0.931	
Flt Protected			0.950		0.976	
Satd. Flow (prot)	3490	0	1770	3539	1693	0
Flt Permitted			0.121		0.976	
Satd. Flow (perm)	3490	0	225	3539	1693	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	15				21	
Link Speed (mph)	30			30	30	
Link Distance (ft)	1598			1320	1311	
Travel Time (s)	36.3			30.0	29.8	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	1333	141	106	1078	142	148
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1474	0	106	1078	290	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	
Detector Template	Thru		Left	Thru	Left	
Leading Detector (ft)	100		20	100	20	
Trailing Detector (ft)	0		0	0	0	
Detector 1 Position(ft)	0		0	0	0	
Detector 1 Size(ft)	6		20	6	20	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			

Lanes, Volumes, Timings
4: Chico Ave & Garvey Ave

04/11/2021

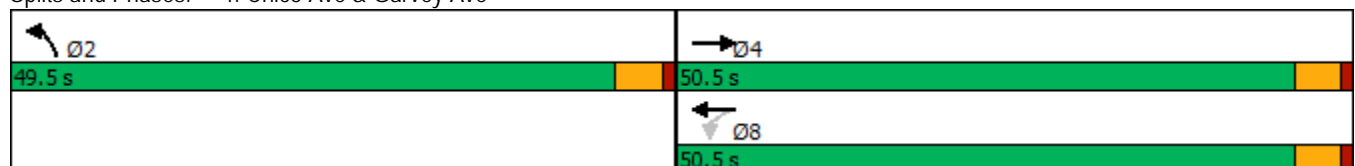


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	4		8	8	2	
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	
Minimum Split (s)	22.5		22.5	22.5	22.5	
Total Split (s)	50.5		50.5	50.5	49.5	
Total Split (%)	50.5%		50.5%	50.5%	49.5%	
Maximum Green (s)	46.0		46.0	46.0	45.0	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	4.5		4.5	4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	None		None	None	Min	
Walk Time (s)	7.0		7.0	7.0	7.0	
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0		0	0	0	
Act Effect Green (s)	46.1		46.1	46.1	16.5	
Actuated g/C Ratio	0.64		0.64	0.64	0.23	
v/c Ratio	0.65		0.74	0.47	0.71	
Control Delay	10.4		46.3	8.1	33.7	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	10.4		46.3	8.1	33.7	
LOS	B		D	A	C	
Approach Delay	10.4			11.5	33.7	
Approach LOS	B			B	C	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	71.7
Natural Cycle:	75
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.74
Intersection Signal Delay:	13.1
Intersection LOS:	B
Intersection Capacity Utilization:	64.5%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 4: Chico Ave & Garvey Ave



HCM 6th TWSC
5: Chico Ave & Fern St

04/11/2021

Intersection						
Int Delay, s/veh	2.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	47	47	202	62	48	161
Future Vol, veh/h	47	47	202	62	48	161
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	57	57	246	76	59	196

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	598	284	0	0	322
Stage 1	284	-	-	-	-
Stage 2	314	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	465	755	-	-	1238
Stage 1	764	-	-	-	-
Stage 2	741	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	440	755	-	-	1238
Mov Cap-2 Maneuver	440	-	-	-	-
Stage 1	764	-	-	-	-
Stage 2	702	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.1	0	1.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	556	1238
HCM Lane V/C Ratio	-	-	0.206	0.047
HCM Control Delay (s)	-	-	13.1	8.1
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.8	0.1

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	10	31	6	254	149	59
Future Vol, veh/h	10	31	6	254	149	59
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	34	7	276	162	64

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	484	194	226	0	-	0
Stage 1	194	-	-	-	-	-
Stage 2	290	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	542	847	1342	-	-	-
Stage 1	839	-	-	-	-	-
Stage 2	759	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	539	847	1342	-	-	-
Mov Cap-2 Maneuver	539	-	-	-	-	-
Stage 1	834	-	-	-	-	-
Stage 2	759	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1342	-	743	-	-
HCM Lane V/C Ratio	0.005	-	0.06	-	-
HCM Control Delay (s)	7.7	0	10.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Lanes, Volumes, Timings
7: Chico Ave & Rush St

04/11/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	93	492	42	32	477	57	85	40	37	83	20	137
Future Volume (vph)	93	492	42	32	477	57	85	40	37	83	20	137
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		0	105		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.988			0.984			0.969			0.923	
Flt Protected	0.950			0.950				0.974			0.983	
Satd. Flow (prot)	1770	3497	0	1770	3483	0	0	1758	0	0	1690	0
Flt Permitted	0.296			0.295				0.763			0.854	
Satd. Flow (perm)	551	3497	0	550	3483	0	0	1377	0	0	1468	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			17			19			87	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1293			1297			518			2216	
Travel Time (s)		29.4			29.5			11.8			50.4	
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
Adj. Flow (vph)	97	513	44	33	497	59	89	42	39	86	21	143
Shared Lane Traffic (%)												
Lane Group Flow (vph)	97	557	0	33	556	0	0	170	0	0	250	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		

Lanes, Volumes, Timings
7: Chico Ave & Rush St

04/11/2021

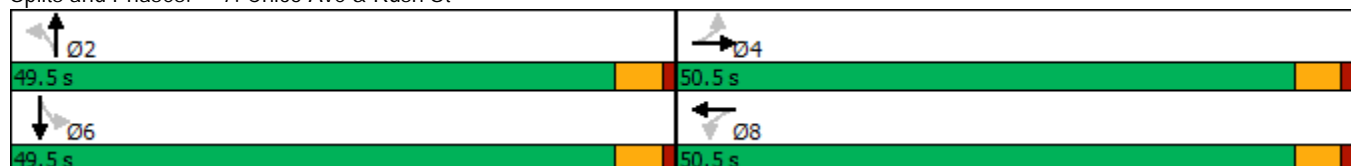


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	50.5	50.5		50.5	50.5		49.5	49.5		49.5	49.5	
Total Split (%)	50.5%	50.5%		50.5%	50.5%		49.5%	49.5%		49.5%	49.5%	
Maximum Green (s)	46.0	46.0		46.0	46.0		45.0	45.0		45.0	45.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)	18.1	18.1		18.1	18.1		45.2	45.2		45.2	45.2	
Actuated g/C Ratio	0.25	0.25		0.25	0.25		0.62	0.62		0.62	0.62	
v/c Ratio	0.70	0.63		0.24	0.63		0.20	0.20		0.26	0.26	
Control Delay	51.8	26.7		25.6	26.4		6.8	6.8		5.5	5.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	51.8	26.7		25.6	26.4		6.8	6.8		5.5	5.5	
LOS	D	C		C	C		A	A		A	A	
Approach Delay		30.4			26.4		6.8	6.8		5.5	5.5	
Approach LOS		C			C		A	A		A	A	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	72.4
Natural Cycle:	45
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.70
Intersection Signal Delay:	22.8
Intersection LOS:	C
Intersection Capacity Utilization:	46.9%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 7: Chico Ave & Rush St



Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑	↑	
Traffic Vol, veh/h	62	59	69	169	106	56
Future Vol, veh/h	62	59	69	169	106	56
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	66	63	73	180	113	60
Number of Lanes	1	0	0	1	1	0

































Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.7	9.6	8.5
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	29%	51%	0%
Vol Thru, %	71%	0%	65%
Vol Right, %	0%	49%	35%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	238	121	162
LT Vol	69	62	0
Through Vol	169	0	106
RT Vol	0	59	56
Lane Flow Rate	253	129	172
Geometry Grp	1	1	1
Degree of Util (X)	0.315	0.168	0.207
Departure Headway (Hd)	4.485	4.687	4.315
Convergence, Y/N	Yes	Yes	Yes
Cap	803	765	832
Service Time	2.511	2.718	2.342
HCM Lane V/C Ratio	0.315	0.169	0.207
HCM Control Delay	9.6	8.7	8.5
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1.4	0.6	0.8

Opening Year Without Project

Lanes, Volumes, Timings
1: Rosemead Blvd & Garvey Ave

04/11/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 		 	 	  	  	  	
Traffic Volume (vph)	126	304	125	179	303	247	110	813	55	292	1188	152
Future Volume (vph)	126	304	125	179	303	247	110	813	55	292	1188	152
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	240		0	215		180	210		0	275		0
Storage Lanes	1		0	1		1	2		0	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	0.97	0.91	0.91	0.97	0.91	0.91
Frt		0.956				0.850		0.991			0.983	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3383	0	1770	3539	1583	3433	5040	0	3433	4999	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3383	0	1770	3539	1583	3433	5040	0	3433	4999	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		60				106		10			23	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		424			1598			1364			420	
Travel Time (s)		9.6			36.3			31.0			9.5	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	135	327	134	192	326	266	118	874	59	314	1277	163
Shared Lane Traffic (%)												
Lane Group Flow (vph)	135	461	0	192	326	266	118	933	0	314	1440	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane				Yes								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						

Lanes, Volumes, Timings
1: Rosemead Blvd & Garvey Ave

04/11/2021

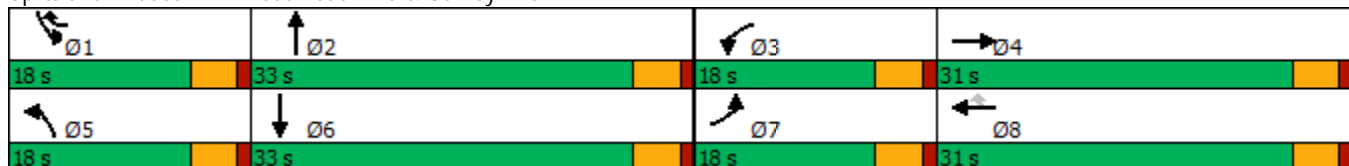


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5	9.5	9.5	22.5		9.5	22.5	
Total Split (s)	18.0	31.0		18.0	31.0	18.0	18.0	33.0		18.0	33.0	
Total Split (%)	18.0%	31.0%		18.0%	31.0%	18.0%	18.0%	33.0%		18.0%	33.0%	
Maximum Green (s)	13.5	26.5		13.5	26.5	13.5	13.5	28.5		13.5	28.5	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effect Green (s)	11.2	16.1		12.8	17.8	34.5	8.4	28.7		12.2	32.5	
Actuated g/C Ratio	0.13	0.18		0.15	0.20	0.39	0.10	0.33		0.14	0.37	
v/c Ratio	0.60	0.69		0.75	0.46	0.39	0.36	0.57		0.66	0.77	
Control Delay	49.0	34.9		56.2	33.5	13.0	41.5	26.7		43.8	28.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	49.0	34.9		56.2	33.5	13.0	41.5	26.7		43.8	28.7	
LOS	D	C		E	C	B	D	C		D	C	
Approach Delay		38.1			32.1			28.4			31.4	
Approach LOS		D			C			C			C	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	87.9
Natural Cycle:	75
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.77
Intersection Signal Delay:	31.7
Intersection LOS:	C
Intersection Capacity Utilization:	67.8%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 1: Rosemead Blvd & Garvey Ave



HCM 6th TWSC
2: Rosemead Blvd & Fern St

04/11/2021

Intersection						
Int Delay, s/veh	2.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	25	31	71	1349	1428	90
Future Vol, veh/h	25	31	71	1349	1428	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	140	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	32	74	1405	1488	94

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	2245	791	1582	0	0
Stage 1	1535	-	-	-	-
Stage 2	710	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-
Pot Cap-1 Maneuver	69	285	203	-	-
Stage 1	113	-	-	-	-
Stage 2	408	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	44	285	203	-	-
Mov Cap-2 Maneuver	44	-	-	-	-
Stage 1	72	-	-	-	-
Stage 2	408	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	116.4	1.6	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	203	-	83	-	-
HCM Lane V/C Ratio	0.364	-	0.703	-	-
HCM Control Delay (s)	32.6	-	116.4	-	-
HCM Lane LOS	D	-	F	-	-
HCM 95th %tile Q(veh)	1.6	-	3.4	-	-

HCM 6th TWSC
3: Rosemead Blvd & Project Dwy

04/11/2021

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗ ↑↑↑	↗ ↑↑↑			↑↑↑
Traffic Vol, veh/h	0	0	1420	0	0	1459
Future Vol, veh/h	0	0	1420	0	0	1459
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	1543	0	0	1586

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	772	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	7.14	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.92	-
Pot Cap-1 Maneuver	0	294	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	-	294	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	-	0
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	-

Lanes, Volumes, Timings
4: Chico Ave & Garvey Ave

04/11/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	
Traffic Volume (vph)	539	103	85	743	73	48
Future Volume (vph)	539	103	85	743	73	48
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	130		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.976				0.946	
Flt Protected			0.950		0.971	
Satd. Flow (prot)	3454	0	1770	3539	1711	0
Flt Permitted			0.386		0.971	
Satd. Flow (perm)	3454	0	719	3539	1711	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	29				43	
Link Speed (mph)	30			30	30	
Link Distance (ft)	1598			1320	1311	
Travel Time (s)	36.3			30.0	29.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	586	112	92	808	79	52
Shared Lane Traffic (%)						
Lane Group Flow (vph)	698	0	92	808	131	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	
Detector Template	Thru		Left	Thru	Left	
Leading Detector (ft)	100		20	100	20	
Trailing Detector (ft)	0		0	0	0	
Detector 1 Position(ft)	0		0	0	0	
Detector 1 Size(ft)	6		20	6	20	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			

Lanes, Volumes, Timings
4: Chico Ave & Garvey Ave

04/11/2021

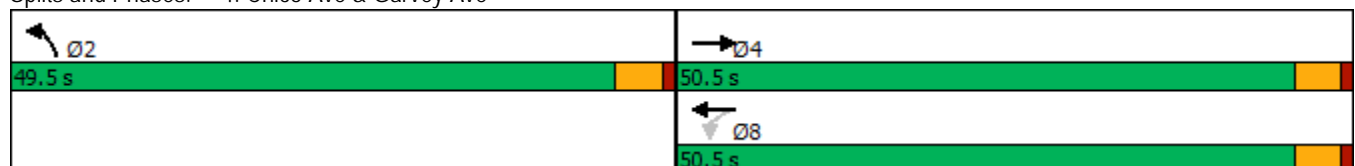


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	4		8	8	2	
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	
Minimum Split (s)	22.5		22.5	22.5	22.5	
Total Split (s)	50.5		50.5	50.5	49.5	
Total Split (%)	50.5%		50.5%	50.5%	49.5%	
Maximum Green (s)	46.0		46.0	46.0	45.0	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	4.5		4.5	4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	None		None	None	Min	
Walk Time (s)	7.0		7.0	7.0	7.0	
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0		0	0	0	
Act Effct Green (s)	15.4		15.4	15.4	7.8	
Actuated g/C Ratio	0.47		0.47	0.47	0.24	
v/c Ratio	0.42		0.27	0.48	0.30	
Control Delay	6.3		7.7	6.9	10.3	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	6.3		7.7	6.9	10.3	
LOS	A		A	A	B	
Approach Delay	6.3			7.0	10.3	
Approach LOS	A			A	B	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	32.5
Natural Cycle:	45
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.48
Intersection Signal Delay:	7.0
Intersection LOS:	A
Intersection Capacity Utilization:	41.1%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 4: Chico Ave & Garvey Ave



HCM 6th TWSC
5: Chico Ave & Fern St

04/11/2021

Intersection						
Int Delay, s/veh	3.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	62	39	65	17	28	173
Future Vol, veh/h	62	39	65	17	28	173
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	79	50	83	22	36	222

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	388	94	0	0	105
Stage 1	94	-	-	-	-
Stage 2	294	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	616	963	-	-	1486
Stage 1	930	-	-	-	-
Stage 2	756	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	599	963	-	-	1486
Mov Cap-2 Maneuver	599	-	-	-	-
Stage 1	930	-	-	-	-
Stage 2	735	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.3	0	1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	701	1486
HCM Lane V/C Ratio	-	-	0.185	0.024
HCM Control Delay (s)	-	-	11.3	7.5
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.7	0.1

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	0	0	0	82	235	0
Future Vol, veh/h	0	0	0	82	235	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	89	255	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	344	255	255	0	0
Stage 1	255	-	-	-	-
Stage 2	89	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	652	784	1310	-	-
Stage 1	788	-	-	-	-
Stage 2	934	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	652	784	1310	-	-
Mov Cap-2 Maneuver	652	-	-	-	-
Stage 1	788	-	-	-	-
Stage 2	934	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1310	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Lanes, Volumes, Timings
7: Chico Ave & Rush St

04/11/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	383	54	21	390	68	31	16	18	34	22	84
Future Volume (vph)	67	383	54	21	390	68	31	16	18	34	22	84
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		0	105		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.981			0.978			0.962			0.919	
Flt Protected	0.950			0.950				0.977			0.988	
Satd. Flow (prot)	1770	3472	0	1770	3461	0	0	1751	0	0	1691	0
Flt Permitted	0.326			0.348				0.867			0.937	
Satd. Flow (perm)	607	3472	0	648	3461	0	0	1554	0	0	1604	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			26			20			91	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1293			1297			518			2216	
Travel Time (s)		29.4			29.5			11.8			50.4	
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
Adj. Flow (vph)	73	416	59	23	424	74	34	17	20	37	24	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	73	475	0	23	498	0	0	71	0	0	152	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		

Lanes, Volumes, Timings
7: Chico Ave & Rush St

04/11/2021

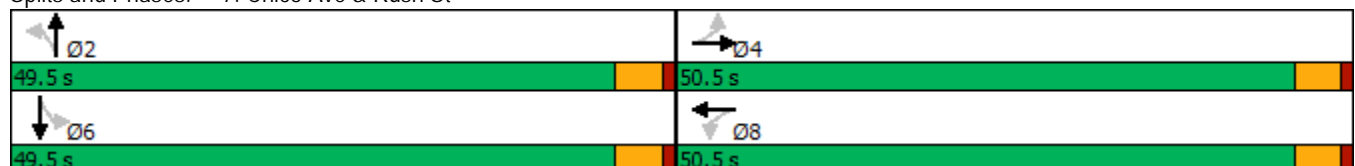


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	50.5	50.5		50.5	50.5		49.5	49.5		49.5	49.5	
Total Split (%)	50.5%	50.5%		50.5%	50.5%		49.5%	49.5%		49.5%	49.5%	
Maximum Green (s)	46.0	46.0		46.0	46.0		45.0	45.0		45.0	45.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)	15.4	15.4		15.4	15.4		45.1	45.1		45.1	45.1	
Actuated g/C Ratio	0.22	0.22		0.22	0.22		0.65	0.65		0.65	0.65	
v/c Ratio	0.54	0.61		0.16	0.63		0.07	0.07		0.14	0.14	
Control Delay	39.8	26.5		24.1	26.9		4.4	4.4		3.0	3.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	39.8	26.5		24.1	26.9		4.4	4.4		3.0	3.0	
LOS	D	C		C	C		A	A		A	A	
Approach Delay		28.3			26.8		4.4	4.4		3.0	3.0	
Approach LOS		C			C		A	A		A	A	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	69.5
Natural Cycle:	45
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.63
Intersection Signal Delay:	23.4
Intersection LOS:	C
Intersection Capacity Utilization:	37.2%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 7: Chico Ave & Rush St



Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A


































Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	38	44	36	81	109	25
Future Vol, veh/h	38	44	36	81	109	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	41	48	39	88	118	27
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.8	8.1	8
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	31%	46%	0%
Vol Thru, %	69%	0%	81%
Vol Right, %	0%	54%	19%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	117	82	134
LT Vol	36	38	0
Through Vol	81	0	109
RT Vol	0	44	25
Lane Flow Rate	127	89	146
Geometry Grp	1	1	1
Degree of Util (X)	0.151	0.107	0.165
Departure Headway (Hd)	4.263	4.304	4.076
Convergence, Y/N	Yes	Yes	Yes
Cap	829	838	867
Service Time	2.352	2.304	2.165
HCM Lane V/C Ratio	0.153	0.106	0.168
HCM Control Delay	8.1	7.8	8
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	0.4	0.6

Lanes, Volumes, Timings
1: Rosemead Blvd & Garvey Ave

04/11/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 		 	 	  	  	  	
Traffic Volume (vph)	258	567	91	176	494	374	227	1197	128	384	1142	168
Future Volume (vph)	258	567	91	176	494	374	227	1197	128	384	1142	168
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	240		0	215		180	210		0	275		0
Storage Lanes	1		0	1		1	2		0	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	0.97	0.91	0.91	0.97	0.91	0.91
Frt		0.979				0.850		0.986			0.981	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3465	0	1770	3539	1583	3433	5014	0	3433	4989	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3465	0	1770	3539	1583	3433	5014	0	3433	4989	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18				65		18			27	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		424			1598			1364			420	
Travel Time (s)		9.6			36.3			31.0			9.5	
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
Adj. Flow (vph)	280	616	99	191	537	407	247	1301	139	417	1241	183
Shared Lane Traffic (%)												
Lane Group Flow (vph)	280	715	0	191	537	407	247	1440	0	417	1424	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane				Yes								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						

Lanes, Volumes, Timings
1: Rosemead Blvd & Garvey Ave

04/11/2021

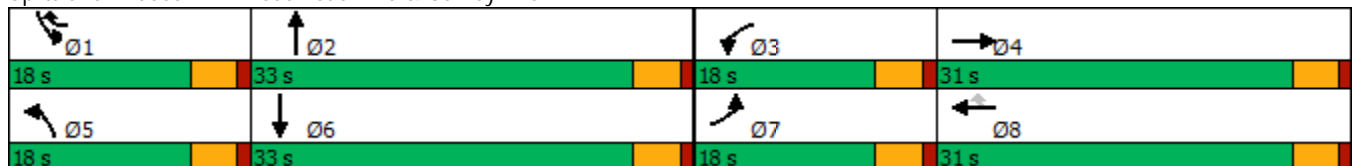


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5	9.5	9.5	22.5		9.5	22.5	
Total Split (s)	18.0	31.0		18.0	31.0	18.0	18.0	33.0		18.0	33.0	
Total Split (%)	18.0%	31.0%		18.0%	31.0%	18.0%	18.0%	33.0%		18.0%	33.0%	
Maximum Green (s)	13.5	26.5		13.5	26.5	13.5	13.5	28.5		13.5	28.5	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effect Green (s)	13.5	24.1		12.9	23.5	41.5	11.7	28.6		13.5	30.3	
Actuated g/C Ratio	0.14	0.25		0.13	0.24	0.43	0.12	0.29		0.14	0.31	
v/c Ratio	1.14	0.82		0.81	0.63	0.57	0.60	0.97		0.88	0.90	
Control Delay	140.5	42.2		68.4	36.3	20.9	47.1	51.6		62.2	41.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	140.5	42.2		68.4	36.3	20.9	47.1	51.6		62.2	41.8	
LOS	F	D		E	D	C	D	D		E	D	
Approach Delay		69.8			36.2			51.0			46.4	
Approach LOS		E			D			D			D	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	97.1
Natural Cycle:	90
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.14
Intersection Signal Delay:	49.8
Intersection LOS:	D
Intersection Capacity Utilization	80.3%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 1: Rosemead Blvd & Garvey Ave



HCM 6th TWSC
2: Rosemead Blvd & Fern St

04/11/2021

Intersection						
Int Delay, s/veh	21.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y		Y	↑↑↑	↑↑↑	
Traffic Vol, veh/h	37	42	75	1594	1690	54
Future Vol, veh/h	37	42	75	1594	1690	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	140	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	39	45	80	1696	1798	57

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	2665	928	1855	0	-	0
Stage 1	1827	-	-	-	-	-
Stage 2	838	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	40	232	148	-	-	-
Stage 1	73	-	-	-	-	-
Stage 2	349	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 18	232	148	-	-	-
Mov Cap-2 Maneuver	~ 18	-	-	-	-	-
Stage 1	~ 34	-	-	-	-	-
Stage 2	349	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	\$ 882	2.5	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	148	-	35	-	-
HCM Lane V/C Ratio	0.539	-	2.401	-	-
HCM Control Delay (s)	54.7	-	\$ 882	-	-
HCM Lane LOS	F	-	F	-	-
HCM 95th %tile Q(veh)	2.7	-	9.5	-	-

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

HCM 6th TWSC
 3: Rosemead Blvd & Project Dwy

04/11/2021

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↑ ↑ ↑	↑ ↑ ↑			↑ ↑ ↑
Traffic Vol, veh/h	0	0	1669	0	0	1731
Future Vol, veh/h	0	0	1669	0	0	1731
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	1814	0	0	1882

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	907	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	7.14	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.92	-
Pot Cap-1 Maneuver	0	239	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	-	239	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	-	0
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	-

Lanes, Volumes, Timings
4: Chico Ave & Garvey Ave

04/11/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	
Traffic Volume (vph)	1108	82	71	899	119	117
Future Volume (vph)	1108	82	71	899	119	117
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	130		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.990				0.933	
Flt Protected			0.950		0.975	
Satd. Flow (prot)	3504	0	1770	3539	1694	0
Flt Permitted			0.130		0.975	
Satd. Flow (perm)	3504	0	242	3539	1694	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	10				21	
Link Speed (mph)	30			30	30	
Link Distance (ft)	1598			1320	1311	
Travel Time (s)	36.3			30.0	29.8	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	1335	99	86	1083	143	141
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1434	0	86	1083	284	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	
Detector Template	Thru		Left	Thru	Left	
Leading Detector (ft)	100		20	100	20	
Trailing Detector (ft)	0		0	0	0	
Detector 1 Position(ft)	0		0	0	0	
Detector 1 Size(ft)	6		20	6	20	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			

Lanes, Volumes, Timings
4: Chico Ave & Garvey Ave

04/11/2021

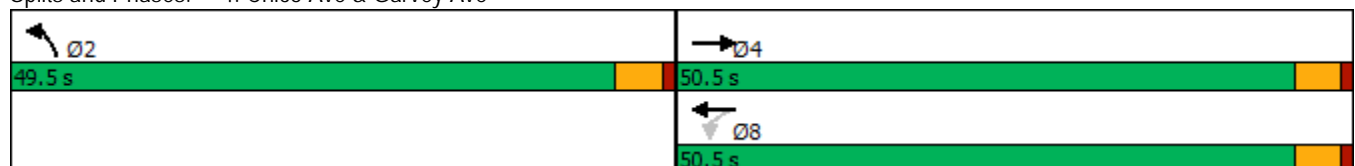


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	4		8	8	2	
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	
Minimum Split (s)	22.5		22.5	22.5	22.5	
Total Split (s)	50.5		50.5	50.5	49.5	
Total Split (%)	50.5%		50.5%	50.5%	49.5%	
Maximum Green (s)	46.0		46.0	46.0	45.0	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	4.5		4.5	4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	None		None	None	Min	
Walk Time (s)	7.0		7.0	7.0	7.0	
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0		0	0	0	
Act Effect Green (s)	46.1		46.1	46.1	16.2	
Actuated g/C Ratio	0.65		0.65	0.65	0.23	
v/c Ratio	0.63		0.55	0.47	0.71	
Control Delay	9.9		27.1	7.9	33.6	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	9.9		27.1	7.9	33.6	
LOS	A		C	A	C	
Approach Delay	9.9			9.4	33.6	
Approach LOS	A			A	C	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	71.4
Natural Cycle:	65
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.71
Intersection Signal Delay:	12.0
Intersection LOS:	B
Intersection Capacity Utilization:	62.4%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 4: Chico Ave & Garvey Ave



HCM 6th TWSC
5: Chico Ave & Fern St

04/11/2021

Intersection						
Int Delay, s/veh	3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	42	47	196	58	48	108
Future Vol, veh/h	42	47	196	58	48	108
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	51	57	239	71	59	132

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	525	275	0	0	310	0
Stage 1	275	-	-	-	-	-
Stage 2	250	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	513	764	-	-	1250	-
Stage 1	771	-	-	-	-	-
Stage 2	792	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	487	764	-	-	1250	-
Mov Cap-2 Maneuver	487	-	-	-	-	-
Stage 1	771	-	-	-	-	-
Stage 2	752	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.3	0	2.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	602	1250
HCM Lane V/C Ratio	-	-	0.18	0.047
HCM Control Delay (s)	-	-	12.3	8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.7	0.1

HCM 6th TWSC
6: Chico Ave & Project Dwy

04/11/2021

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	0	0	0	255	149	0
Future Vol, veh/h	0	0	0	255	149	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	277	162	0



















Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	439	162	162	0	-	0
Stage 1	162	-	-	-	-	-
Stage 2	277	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	575	883	1417	-	-	-
Stage 1	867	-	-	-	-	-
Stage 2	770	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	575	883	1417	-	-	-
Mov Cap-2 Maneuver	575	-	-	-	-	-
Stage 1	867	-	-	-	-	-
Stage 2	770	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1417	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Lanes, Volumes, Timings
7: Chico Ave & Rush St

04/11/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	93	494	43	33	474	52	85	40	37	76	20	113
Future Volume (vph)	93	494	43	33	474	52	85	40	37	76	20	113
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		0	105		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.988			0.985			0.969			0.927	
Flt Protected	0.950			0.950				0.974			0.982	
Satd. Flow (prot)	1770	3497	0	1770	3486	0	0	1758	0	0	1696	0
Flt Permitted	0.304			0.294				0.776			0.851	
Satd. Flow (perm)	566	3497	0	548	3486	0	0	1401	0	0	1469	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			15			19			77	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1293			1297			518			2216	
Travel Time (s)		29.4			29.5			11.8			50.4	
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
Adj. Flow (vph)	97	515	45	34	494	54	89	42	39	79	21	118
Shared Lane Traffic (%)												
Lane Group Flow (vph)	97	560	0	34	548	0	0	170	0	0	218	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		

Lanes, Volumes, Timings
7: Chico Ave & Rush St

04/11/2021

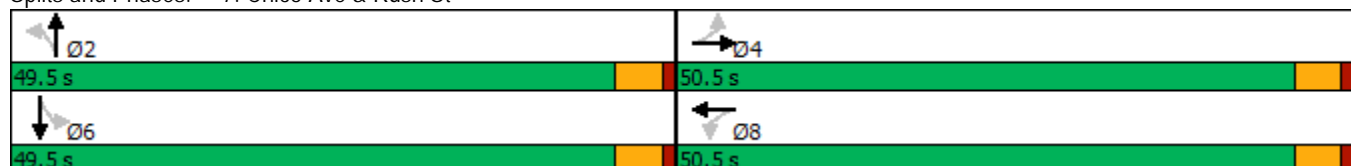


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	50.5	50.5		50.5	50.5		49.5	49.5		49.5	49.5	
Total Split (%)	50.5%	50.5%		50.5%	50.5%		49.5%	49.5%		49.5%	49.5%	
Maximum Green (s)	46.0	46.0		46.0	46.0		45.0	45.0		45.0	45.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)	18.2	18.2		18.2	18.2		45.2	45.2		45.2	45.2	
Actuated g/C Ratio	0.25	0.25		0.25	0.25		0.62	0.62		0.62	0.62	
v/c Ratio	0.68	0.63		0.25	0.62		0.19	0.19		0.23	0.23	
Control Delay	49.1	26.7		25.8	26.3		6.8	6.8		5.3	5.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	49.1	26.7		25.8	26.3		6.8	6.8		5.3	5.3	
LOS	D	C		C	C		A	A		A	A	
Approach Delay		30.0			26.3		6.8	6.8		5.3	5.3	
Approach LOS		C			C		A	A		A	A	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	72.4
Natural Cycle:	45
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.68
Intersection Signal Delay:	22.9
Intersection LOS:	C
Intersection Capacity Utilization:	45.1%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 7: Chico Ave & Rush St



Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑	↑	
Traffic Vol, veh/h	58	59	70	169	107	51
Future Vol, veh/h	58	59	70	169	107	51
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	62	63	74	180	114	54
Number of Lanes	1	0	0	1	1	0
























Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.6	9.6	8.4
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	29%	50%	0%
Vol Thru, %	71%	0%	68%
Vol Right, %	0%	50%	32%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	239	117	158
LT Vol	70	58	0
Through Vol	169	0	107
RT Vol	0	59	51
Lane Flow Rate	254	124	168
Geometry Grp	1	1	1
Degree of Util (X)	0.316	0.161	0.202
Departure Headway (Hd)	4.469	4.667	4.317
Convergence, Y/N	Yes	Yes	Yes
Cap	806	768	832
Service Time	2.493	2.697	2.342
HCM Lane V/C Ratio	0.315	0.161	0.202
HCM Control Delay	9.6	8.6	8.4
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1.4	0.6	0.8

Opening Year With Project

Lanes, Volumes, Timings
1: Rosemead Blvd & Garvey Ave

04/11/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	126	305	125	179	303	247	115	840	61	301	1188	152
Future Volume (vph)	126	305	125	179	303	247	115	840	61	301	1188	152
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	240		0	215		180	210		0	275		0
Storage Lanes	1		0	1		1	2		0	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	0.97	0.91	0.91	0.97	0.91	0.91
Frt		0.956				0.850		0.990			0.983	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3383	0	1770	3539	1583	3433	5034	0	3433	4999	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3383	0	1770	3539	1583	3433	5034	0	3433	4999	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		60				105		11			23	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		424			1598			1364			420	
Travel Time (s)		9.6			36.3			31.0			9.5	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	135	328	134	192	326	266	124	903	66	324	1277	163
Shared Lane Traffic (%)												
Lane Group Flow (vph)	135	462	0	192	326	266	124	969	0	324	1440	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						

Lanes, Volumes, Timings
1: Rosemead Blvd & Garvey Ave

04/11/2021

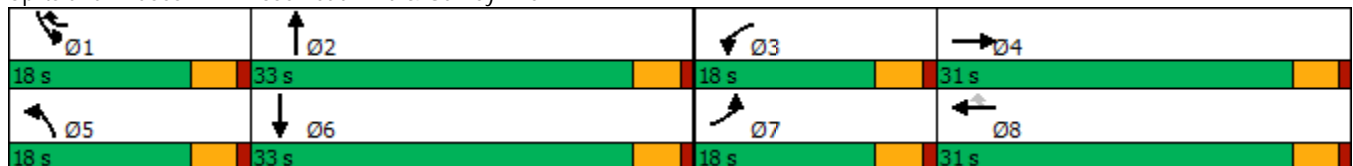


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5	9.5	9.5	22.5		9.5	22.5	
Total Split (s)	18.0	31.0		18.0	31.0	18.0	18.0	33.0		18.0	33.0	
Total Split (%)	18.0%	31.0%		18.0%	31.0%	18.0%	18.0%	33.0%		18.0%	33.0%	
Maximum Green (s)	13.5	26.5		13.5	26.5	13.5	13.5	28.5		13.5	28.5	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effect Green (s)	11.2	16.2		12.8	17.8	34.7	8.6	28.7		12.3	32.4	
Actuated g/C Ratio	0.13	0.18		0.15	0.20	0.39	0.10	0.33		0.14	0.37	
v/c Ratio	0.60	0.69		0.75	0.46	0.39	0.37	0.59		0.68	0.78	
Control Delay	49.0	35.0		56.4	33.5	13.1	41.6	27.2		44.4	28.9	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	49.0	35.0		56.4	33.5	13.1	41.6	27.2		44.4	28.9	
LOS	D	C		E	C	B	D	C		D	C	
Approach Delay		38.1			32.2			28.8			31.8	
Approach LOS		D			C			C			C	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	88.1
Natural Cycle:	75
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.78
Intersection Signal Delay:	32.0
Intersection LOS:	C
Intersection Capacity Utilization:	67.9%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 1: Rosemead Blvd & Garvey Ave



HCM 6th TWSC
2: Rosemead Blvd & Fern St

04/11/2021

Intersection						
Int Delay, s/veh	3.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	25	31	76	1387	1428	90
Future Vol, veh/h	25	31	76	1387	1428	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	140	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	32	79	1445	1488	94

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	2271	791	1582	0	-	0
Stage 1	1535	-	-	-	-	-
Stage 2	736	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	67	285	203	-	-	-
Stage 1	113	-	-	-	-	-
Stage 2	395	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	41	285	203	-	-	-
Mov Cap-2 Maneuver	41	-	-	-	-	-
Stage 1	69	-	-	-	-	-
Stage 2	395	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	131.4	1.7	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	203	-	78	-	-
HCM Lane V/C Ratio	0.39	-	0.748	-	-
HCM Control Delay (s)	33.6	-	131.4	-	-
HCM Lane LOS	D	-	F	-	-
HCM 95th %tile Q(veh)	1.7	-	3.6	-	-

HCM 6th TWSC
 3: Rosemead Blvd & Project Dwy

04/11/2021

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗ ↑↑↑	↗ ↑↑↑			↑↑↑
Traffic Vol, veh/h	0	43	1420	16	0	1465
Future Vol, veh/h	0	43	1420	16	0	1465
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	47	1543	17	0	1592

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	-	780	0	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-
Pot Cap-1 Maneuver	0	290	-	-	0
Stage 1	0	-	-	-	0
Stage 2	0	-	-	-	0
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	-	290	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	290
HCM Lane V/C Ratio	-	-	0.161
HCM Control Delay (s)	-	-	19.8
HCM Lane LOS	-	-	C
HCM 95th %tile Q(veh)	-	-	0.6

Lanes, Volumes, Timings

4: Chico Ave & Garvey Ave

04/11/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Traffic Volume (vph)	544	114	91	743	73	59
Future Volume (vph)	544	114	91	743	73	59
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	130		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.974				0.940	
Flt Protected			0.950		0.973	
Satd. Flow (prot)	3447	0	1770	3539	1704	0
Flt Permitted			0.380		0.973	
Satd. Flow (perm)	3447	0	708	3539	1704	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	33				53	
Link Speed (mph)	30			30	30	
Link Distance (ft)	1598			1320	1311	
Travel Time (s)	36.3			30.0	29.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	591	124	99	808	79	64
Shared Lane Traffic (%)						
Lane Group Flow (vph)	715	0	99	808	143	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	
Detector Template	Thru		Left	Thru	Left	
Leading Detector (ft)	100		20	100	20	
Trailing Detector (ft)	0		0	0	0	
Detector 1 Position(ft)	0		0	0	0	
Detector 1 Size(ft)	6		20	6	20	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			

Lanes, Volumes, Timings
4: Chico Ave & Garvey Ave

04/11/2021

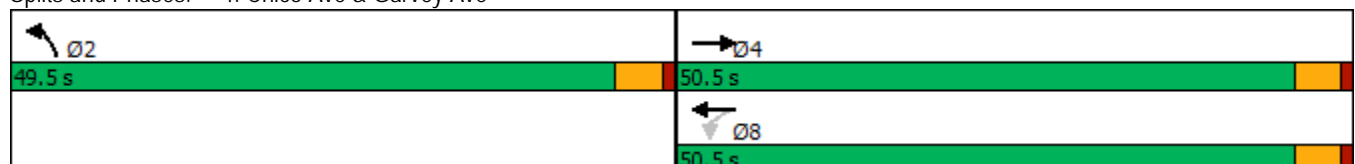


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	4		8	8	2	
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	
Minimum Split (s)	22.5		22.5	22.5	22.5	
Total Split (s)	50.5		50.5	50.5	49.5	
Total Split (%)	50.5%		50.5%	50.5%	49.5%	
Maximum Green (s)	46.0		46.0	46.0	45.0	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	4.5		4.5	4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	None		None	None	Min	
Walk Time (s)	7.0		7.0	7.0	7.0	
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0		0	0	0	
Act Effct Green (s)	15.7		15.7	15.7	7.9	
Actuated g/C Ratio	0.48		0.48	0.48	0.24	
v/c Ratio	0.43		0.29	0.48	0.32	
Control Delay	6.3		8.1	7.0	10.3	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	6.3		8.1	7.0	10.3	
LOS	A		A	A	B	
Approach Delay	6.3			7.1	10.3	
Approach LOS	A			A	B	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	33
Natural Cycle:	45
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.48
Intersection Signal Delay:	7.0
Intersection LOS:	A
Intersection Capacity Utilization:	42.6%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 4: Chico Ave & Garvey Ave



HCM 6th TWSC
5: Chico Ave & Fern St

04/11/2021

Intersection						
Int Delay, s/veh	3.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	64	39	76	22	28	189
Future Vol, veh/h	64	39	76	22	28	189
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	82	50	97	28	36	242

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	425	111	0	0	125	0
Stage 1	111	-	-	-	-	-
Stage 2	314	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	586	942	-	-	1462	-
Stage 1	914	-	-	-	-	-
Stage 2	741	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	570	942	-	-	1462	-
Mov Cap-2 Maneuver	570	-	-	-	-	-
Stage 1	914	-	-	-	-	-
Stage 2	720	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.7	0	1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	670	1462
HCM Lane V/C Ratio	-	-	0.197	0.025
HCM Control Delay (s)	-	-	11.7	7.5
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.7	0.1

Intersection						
Int Delay, s/veh	1.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	16	48	2	82	235	18
Future Vol, veh/h	16	48	2	82	235	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	52	2	89	255	20



















Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	358	265	275	0	-	0
Stage 1	265	-	-	-	-	-
Stage 2	93	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	640	774	1288	-	-	-
Stage 1	779	-	-	-	-	-
Stage 2	931	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	639	774	1288	-	-	-
Mov Cap-2 Maneuver	639	-	-	-	-	-
Stage 1	777	-	-	-	-	-
Stage 2	931	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1288	-	735	-	-
HCM Lane V/C Ratio	0.002	-	0.095	-	-
HCM Control Delay (s)	7.8	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Lanes, Volumes, Timings
7: Chico Ave & Rush St

04/11/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	383	54	21	391	70	31	16	18	44	22	122
Future Volume (vph)	67	383	54	21	391	70	31	16	18	44	22	122
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		0	105		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.981			0.977			0.962			0.912	
Flt Protected	0.950			0.950				0.977			0.988	
Satd. Flow (prot)	1770	3472	0	1770	3458	0	0	1751	0	0	1678	0
Flt Permitted	0.323			0.348				0.853			0.933	
Satd. Flow (perm)	602	3472	0	648	3458	0	0	1529	0	0	1585	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			27			20			121	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1293			1297			518			2216	
Travel Time (s)		29.4			29.5			11.8			50.4	
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
Adj. Flow (vph)	73	416	59	23	425	76	34	17	20	48	24	133
Shared Lane Traffic (%)												
Lane Group Flow (vph)	73	475	0	23	501	0	0	71	0	0	205	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		

Lanes, Volumes, Timings
7: Chico Ave & Rush St

04/11/2021

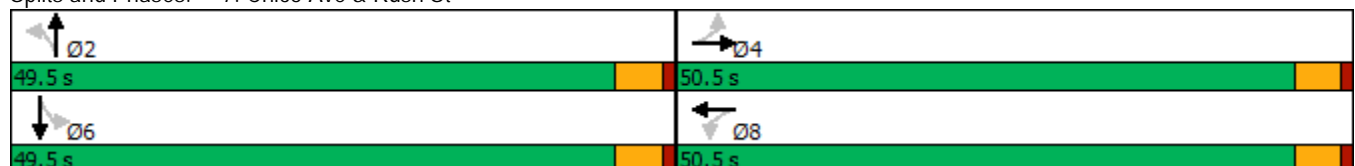


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	50.5	50.5		50.5	50.5		49.5	49.5		49.5	49.5	
Total Split (%)	50.5%	50.5%		50.5%	50.5%		49.5%	49.5%		49.5%	49.5%	
Maximum Green (s)	46.0	46.0		46.0	46.0		45.0	45.0		45.0	45.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)	15.4	15.4		15.4	15.4		45.1	45.1		45.1	45.1	
Actuated g/C Ratio	0.22	0.22		0.22	0.22		0.65	0.65		0.65	0.65	
v/c Ratio	0.55	0.60		0.16	0.64		0.07	0.07		0.19	0.19	
Control Delay	40.1	26.5		24.1	26.9		4.4	4.4		3.1	3.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	40.1	26.5		24.1	26.9		4.4	4.4		3.1	3.1	
LOS	D	C		C	C		A	A		A	A	
Approach Delay		28.3			26.8		4.4	4.4		3.1	3.1	
Approach LOS		C			C		A	A		A	A	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	69.6
Natural Cycle:	45
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.64
Intersection Signal Delay:	22.6
Intersection LOS:	C
Intersection Capacity Utilization:	40.3%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 7: Chico Ave & Rush St



Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	44	44	36	81	109	26
Future Vol, veh/h	44	44	36	81	109	26
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	48	48	39	88	118	28
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.9	8.1	8
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	31%	50%	0%
Vol Thru, %	69%	0%	81%
Vol Right, %	0%	50%	19%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	117	88	135
LT Vol	36	44	0
Through Vol	81	0	109
RT Vol	0	44	26
Lane Flow Rate	127	96	147
Geometry Grp	1	1	1
Degree of Util (X)	0.151	0.115	0.166
Departure Headway (Hd)	4.276	4.335	4.084
Convergence, Y/N	Yes	Yes	Yes
Cap	825	832	864
Service Time	2.369	2.335	2.178
HCM Lane V/C Ratio	0.154	0.115	0.17
HCM Control Delay	8.1	7.9	8
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	0.4	0.6

Lanes, Volumes, Timings
1: Rosemead Blvd & Garvey Ave

04/11/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↷		↶	↶↷	↶	↶↷	↶↷↸		↶↷	↶↷↸	
Traffic Volume (vph)	258	573	91	176	494	374	230	1215	132	414	1142	168
Future Volume (vph)	258	573	91	176	494	374	230	1215	132	414	1142	168
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	240		0	215		180	210		0	275		0
Storage Lanes	1		0	1		1	2		0	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	0.97	0.91	0.91	0.97	0.91	0.91
Frt		0.979				0.850		0.985			0.981	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3465	0	1770	3539	1583	3433	5009	0	3433	4989	0
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	3465	0	1770	3539	1583	3433	5009	0	3433	4989	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17				65		18			27	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		424			1598			1364			420	
Travel Time (s)		9.6			36.3			31.0			9.5	
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
Adj. Flow (vph)	280	623	99	191	537	407	250	1321	143	450	1241	183
Shared Lane Traffic (%)												
Lane Group Flow (vph)	280	722	0	191	537	407	250	1464	0	450	1424	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane					Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						

Lanes, Volumes, Timings
1: Rosemead Blvd & Garvey Ave

04/11/2021

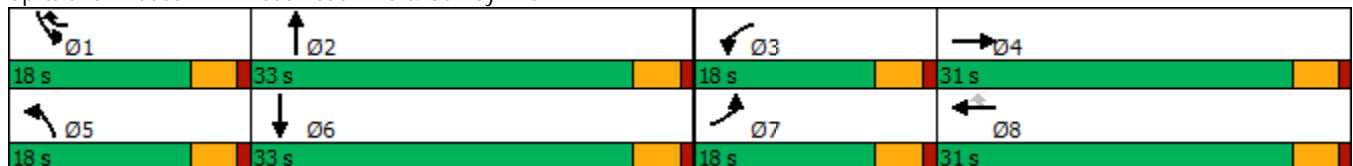


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8	1	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5	9.5	9.5	22.5		9.5	22.5	
Total Split (s)	18.0	31.0		18.0	31.0	18.0	18.0	33.0		18.0	33.0	
Total Split (%)	18.0%	31.0%		18.0%	31.0%	18.0%	18.0%	33.0%		18.0%	33.0%	
Maximum Green (s)	13.5	26.5		13.5	26.5	13.5	13.5	28.5		13.5	28.5	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effect Green (s)	13.5	24.4		12.9	23.8	41.8	11.8	28.5		13.5	30.3	
Actuated g/C Ratio	0.14	0.25		0.13	0.24	0.43	0.12	0.29		0.14	0.31	
v/c Ratio	1.14	0.82		0.82	0.62	0.57	0.60	0.99		0.95	0.91	
Control Delay	141.9	42.3		68.9	36.1	20.8	47.3	56.0		72.9	42.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	141.9	42.3		68.9	36.1	20.8	47.3	56.0		72.9	42.4	
LOS	F	D		E	D	C	D	E		E	D	
Approach Delay		70.1			36.1			54.8			49.7	
Approach LOS		E			D			D			D	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	97.4
Natural Cycle:	90
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.14
Intersection Signal Delay:	52.1
Intersection LOS:	D
Intersection Capacity Utilization:	81.7%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 1: Rosemead Blvd & Garvey Ave



HCM 6th TWSC
2: Rosemead Blvd & Fern St

04/11/2021

Intersection						
Int Delay, s/veh	21.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	37	42	79	1618	1690	54
Future Vol, veh/h	37	42	79	1618	1690	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	140	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	39	45	84	1721	1798	57

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	2683	928	1855	0	-	0
Stage 1	1827	-	-	-	-	-
Stage 2	856	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	40	232	148	-	-	-
Stage 1	73	-	-	-	-	-
Stage 2	341	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 17	232	148	-	-	-
Mov Cap-2 Maneuver	~ 17	-	-	-	-	-
Stage 1	~ 32	-	-	-	-	-
Stage 2	341	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	\$ 919	2.7	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	148	-	34	-	-
HCM Lane V/C Ratio	0.568	-	2.472	-	-
HCM Control Delay (s)	57.3	-	\$ 919	-	-
HCM Lane LOS	F	-	F	-	-
HCM 95th %tile Q(veh)	2.9	-	9.6	-	-

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

HCM 6th TWSC
3: Rosemead Blvd & Project Dwy

04/11/2021

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↑ ↑↑	↑ ↑↑			↑ ↑↑
Traffic Vol, veh/h	0	28	1669	53	0	1735
Future Vol, veh/h	0	28	1669	53	0	1735
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	30	1814	58	0	1886

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	936	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	7.14	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.92	-
Pot Cap-1 Maneuver	0	229	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	-	229	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	23.1	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	229
HCM Lane V/C Ratio	-	-	0.133
HCM Control Delay (s)	-	-	23.1
HCM Lane LOS	-	-	C
HCM 95th %tile Q(veh)	-	-	0.5

Lanes, Volumes, Timings
4: Chico Ave & Garvey Ave

04/11/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	
Traffic Volume (vph)	1111	118	89	899	119	124
Future Volume (vph)	1111	118	89	899	119	124
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	130		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt	0.986				0.931	
Flt Protected			0.950		0.976	
Satd. Flow (prot)	3490	0	1770	3539	1693	0
Flt Permitted			0.119		0.976	
Satd. Flow (perm)	3490	0	222	3539	1693	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	15				21	
Link Speed (mph)	30			30	30	
Link Distance (ft)	1598			1320	1311	
Travel Time (s)	36.3			30.0	29.8	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	1339	142	107	1083	143	149
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1481	0	107	1083	292	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Number of Detectors	2		1	2	1	
Detector Template	Thru		Left	Thru	Left	
Leading Detector (ft)	100		20	100	20	
Trailing Detector (ft)	0		0	0	0	
Detector 1 Position(ft)	0		0	0	0	
Detector 1 Size(ft)	6		20	6	20	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	
Detector 2 Position(ft)	94			94		
Detector 2 Size(ft)	6			6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			

Lanes, Volumes, Timings
4: Chico Ave & Garvey Ave

04/11/2021

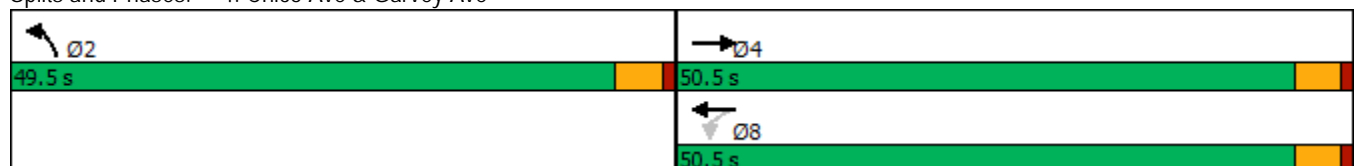


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	4		8	8	2	
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0	5.0	
Minimum Split (s)	22.5		22.5	22.5	22.5	
Total Split (s)	50.5		50.5	50.5	49.5	
Total Split (%)	50.5%		50.5%	50.5%	49.5%	
Maximum Green (s)	46.0		46.0	46.0	45.0	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	1.0		1.0	1.0	1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	4.5		4.5	4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	None		None	None	Min	
Walk Time (s)	7.0		7.0	7.0	7.0	
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0		0	0	0	
Act Effect Green (s)	46.2		46.2	46.2	16.7	
Actuated g/C Ratio	0.64		0.64	0.64	0.23	
v/c Ratio	0.66		0.75	0.48	0.72	
Control Delay	10.5		49.1	8.2	33.7	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	10.5		49.1	8.2	33.7	
LOS	B		D	A	C	
Approach Delay	10.5			11.8	33.7	
Approach LOS	B			B	C	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	71.9
Natural Cycle:	75
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.75
Intersection Signal Delay:	13.3
Intersection LOS:	B
Intersection Capacity Utilization:	64.8%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 4: Chico Ave & Garvey Ave



HCM 6th TWSC
5: Chico Ave & Fern St

04/11/2021

Intersection						
Int Delay, s/veh	2.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	47	47	203	62	48	161
Future Vol, veh/h	47	47	203	62	48	161
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	57	57	248	76	59	196

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	600	286	0	0	324
Stage 1	286	-	-	-	-
Stage 2	314	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	464	753	-	-	1236
Stage 1	763	-	-	-	-
Stage 2	741	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	439	753	-	-	1236
Mov Cap-2 Maneuver	439	-	-	-	-
Stage 1	763	-	-	-	-
Stage 2	701	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.2	0	1.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	555	1236
HCM Lane V/C Ratio	-	-	0.207	0.047
HCM Control Delay (s)	-	-	13.2	8.1
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.8	0.1

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	31	6	255	149	59
Future Vol, veh/h	10	31	6	255	149	59
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	34	7	277	162	64



















Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	485	194	226	0	-	0
Stage 1	194	-	-	-	-	-
Stage 2	291	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	541	847	1342	-	-	-
Stage 1	839	-	-	-	-	-
Stage 2	759	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	538	847	1342	-	-	-
Mov Cap-2 Maneuver	538	-	-	-	-	-
Stage 1	834	-	-	-	-	-
Stage 2	759	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1342	-	743	-	-
HCM Lane V/C Ratio	0.005	-	0.06	-	-
HCM Control Delay (s)	7.7	0	10.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Lanes, Volumes, Timings
7: Chico Ave & Rush St

04/11/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	93	494	43	33	480	58	85	40	37	83	20	138
Future Volume (vph)	93	494	43	33	480	58	85	40	37	83	20	138
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	105		0	105		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.988			0.984			0.969			0.923	
Flt Protected	0.950			0.950				0.974			0.983	
Satd. Flow (prot)	1770	3497	0	1770	3483	0	0	1758	0	0	1690	0
Flt Permitted	0.294			0.294				0.763			0.854	
Satd. Flow (perm)	548	3497	0	548	3483	0	0	1377	0	0	1468	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			17			19			88	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1293			1297			518			2216	
Travel Time (s)		29.4			29.5			11.8			50.4	
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
Adj. Flow (vph)	97	515	45	34	500	60	89	42	39	86	21	144
Shared Lane Traffic (%)												
Lane Group Flow (vph)	97	560	0	34	560	0	0	170	0	0	251	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		

Lanes, Volumes, Timings
7: Chico Ave & Rush St

04/11/2021

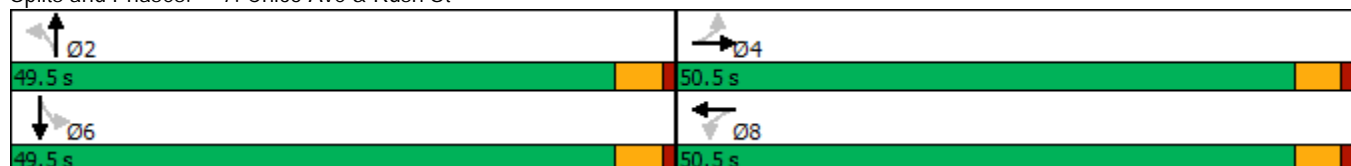


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	50.5	50.5		50.5	50.5		49.5	49.5		49.5	49.5	
Total Split (%)	50.5%	50.5%		50.5%	50.5%		49.5%	49.5%		49.5%	49.5%	
Maximum Green (s)	46.0	46.0		46.0	46.0		45.0	45.0		45.0	45.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)	18.3	18.3		18.3	18.3		45.2	45.2		45.2	45.2	
Actuated g/C Ratio	0.25	0.25		0.25	0.25		0.62	0.62		0.62	0.62	
v/c Ratio	0.70	0.63		0.25	0.63		0.20	0.20		0.26	0.26	
Control Delay	51.8	26.6		25.7	26.4		6.9	6.9		5.6	5.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	51.8	26.6		25.7	26.4		6.9	6.9		5.6	5.6	
LOS	D	C		C	C		A	A		A	A	
Approach Delay		30.3			26.3		6.9	6.9		5.6	5.6	
Approach LOS		C			C		A	A		A	A	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	72.5
Natural Cycle:	45
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.70
Intersection Signal Delay:	22.8
Intersection LOS:	C
Intersection Capacity Utilization:	47.1%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 7: Chico Ave & Rush St



Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑	↑	
Traffic Vol, veh/h	62	59	70	169	107	56
Future Vol, veh/h	62	59	70	169	107	56
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	66	63	74	180	114	60
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.7	9.6	8.5
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	29%	51%	0%
Vol Thru, %	71%	0%	66%
Vol Right, %	0%	49%	34%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	239	121	163
LT Vol	70	62	0
Through Vol	169	0	107
RT Vol	0	59	56
Lane Flow Rate	254	129	173
Geometry Grp	1	1	1
Degree of Util (X)	0.317	0.168	0.208
Departure Headway (Hd)	4.489	4.691	4.319
Convergence, Y/N	Yes	Yes	Yes
Cap	801	765	831
Service Time	2.512	2.723	2.345
HCM Lane V/C Ratio	0.317	0.169	0.208
HCM Control Delay	9.6	8.7	8.5
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1.4	0.6	0.8

APPENDIX C – LOS CALCULATION SHEETS FOR ROSEMEAD
BLVD/PROJECT DWY ALTERNATIVES

HCM 6th TWSC
3: Rosemead Blvd & Project Dwy

04/13/2021

Intersection						
Int Delay, s/veh	3.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T		T	T
Traffic Vol, veh/h	43	38	1404	16	9	1439
Future Vol, veh/h	43	38	1404	16	9	1439
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	80	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	47	41	1526	17	10	1564

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	2181	772	0	0	1543
Stage 1	1535	-	-	-	-
Stage 2	646	-	-	-	-
Critical Hdwy	5.74	7.14	-	-	5.34
Critical Hdwy Stg 1	6.64	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-
Follow-up Hdwy	3.82	3.92	-	-	3.12
Pot Cap-1 Maneuver	75	294	-	-	212
Stage 1	113	-	-	-	-
Stage 2	440	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	71	294	-	-	212
Mov Cap-2 Maneuver	71	-	-	-	-
Stage 1	113	-	-	-	-
Stage 2	419	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	110.3	0	0.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	110	212
HCM Lane V/C Ratio	-	-	0.8	0.046
HCM Control Delay (s)	-	-	110.3	22.8
HCM Lane LOS	-	-	F	C
HCM 95th %tile Q(veh)	-	-	4.5	0.1

HCM 6th TWSC
3: Rosemead Blvd & Project Dwy

04/12/2021

Intersection						
Int Delay, s/veh	3.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↑↑↑		Y	↑↑↑
Traffic Vol, veh/h	28	24	1627	53	30	1694
Future Vol, veh/h	28	24	1627	53	30	1694
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	80	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	26	1768	58	33	1841













Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	2599	913	0	0	1826
Stage 1	1797	-	-	-	-
Stage 2	802	-	-	-	-
Critical Hdwy	5.74	7.14	-	-	5.34
Critical Hdwy Stg 1	6.64	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-
Follow-up Hdwy	3.82	3.92	-	-	3.12
Pot Cap-1 Maneuver	44	237	-	-	153
Stage 1	77	-	-	-	-
Stage 2	364	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	34	237	-	-	153
Mov Cap-2 Maneuver	34	-	-	-	-
Stage 1	77	-	-	-	-
Stage 2	285	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	242.3	0	0.6
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	56	153
HCM Lane V/C Ratio	-	-	1.009	0.213
HCM Control Delay (s)	-	-	242.3	34.8
HCM Lane LOS	-	-	F	D
HCM 95th %tile Q(veh)	-	-	4.6	0.8

Lanes, Volumes, Timings 3: Rosemead Blvd & Project Dwy

04/12/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (vph)	43	38	1404	16	9	1439
Future Volume (vph)	43	38	1404	16	9	1439
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	80	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.91	0.91	1.00	0.91
Frt	0.937		0.998			
Flt Protected	0.974				0.950	
Satd. Flow (prot)	1700	0	5075	0	1770	5085
Flt Permitted	0.974				0.123	
Satd. Flow (perm)	1700	0	5075	0	229	5085
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	41		3			
Link Speed (mph)	30		30			30
Link Distance (ft)	369		2370			232
Travel Time (s)	8.4		53.9			5.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	47	41	1526	17	10	1564
Shared Lane Traffic (%)						
Lane Group Flow (vph)	88	0	1543	0	10	1564
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		2		1	2
Detector Template	Left		Thru		Left	Thru
Leading Detector (ft)	20		100		20	100
Trailing Detector (ft)	0		0		0	0
Detector 1 Position(ft)	0		0		0	0
Detector 1 Size(ft)	20		6		20	6
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases					6	

Lanes, Volumes, Timings
 3: Rosemead Blvd & Project Dwy

04/12/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	8		2		1	6
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	22.5		22.5		9.5	22.5
Total Split (s)	27.0		61.0		12.0	73.0
Total Split (%)	27.0%		61.0%		12.0%	73.0%
Maximum Green (s)	22.5		56.5		7.5	68.5
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	1.0		1.0		1.0	1.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.5		4.5		4.5	4.5
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		Min		None	Min
Walk Time (s)	7.0		7.0			7.0
Flash Dont Walk (s)	11.0		11.0			11.0
Pedestrian Calls (#/hr)	0		0			0
Act Effect Green (s)	7.8		42.3		42.4	43.9
Actuated g/C Ratio	0.14		0.75		0.75	0.78
v/c Ratio	0.33		0.41		0.03	0.40
Control Delay	19.6		4.8		2.8	3.5
Queue Delay	0.0		0.0		0.0	0.0
Total Delay	19.6		4.8		2.8	3.5
LOS	B		A		A	A
Approach Delay	19.6		4.8			3.5
Approach LOS	B		A			A

Intersection Summary















Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	56.6
Natural Cycle:	60
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.41
Intersection Signal Delay:	4.6
Intersection LOS:	A
Intersection Capacity Utilization:	40.0%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 3: Rosemead Blvd & Project Dwy



Lanes, Volumes, Timings
3: Rosemead Blvd & Project Dwy

04/12/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			  			  
Traffic Volume (vph)	28	24	1627	53	30	1694
Future Volume (vph)	28	24	1627	53	30	1694
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	80	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.91	0.91	1.00	0.91
Frt	0.937		0.995			
Flt Protected	0.974				0.950	
Satd. Flow (prot)	1700	0	5060	0	1770	5085
Flt Permitted	0.974				0.094	
Satd. Flow (perm)	1700	0	5060	0	175	5085
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	26		8			
Link Speed (mph)	30		30			30
Link Distance (ft)	369		2370			232
Travel Time (s)	8.4		53.9			5.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	30	26	1768	58	33	1841
Shared Lane Traffic (%)						
Lane Group Flow (vph)	56	0	1826	0	33	1841
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		2		1	2
Detector Template	Left		Thru		Left	Thru
Leading Detector (ft)	20		100		20	100
Trailing Detector (ft)	0		0		0	0
Detector 1 Position(ft)	0		0		0	0
Detector 1 Size(ft)	20		6		20	6
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases					6	

Lanes, Volumes, Timings
 3: Rosemead Blvd & Project Dwy

04/12/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	8		2		1	6
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	22.5		22.5		9.5	22.5
Total Split (s)	24.0		64.0		12.0	76.0
Total Split (%)	24.0%		64.0%		12.0%	76.0%
Maximum Green (s)	19.5		59.5		7.5	71.5
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	1.0		1.0		1.0	1.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.5		4.5		4.5	4.5
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		Max		None	Max
Walk Time (s)	7.0		7.0			7.0
Flash Dont Walk (s)	11.0		11.0			11.0
Pedestrian Calls (#/hr)	0		0			0
Act Effect Green (s)	7.4		73.9		79.4	80.4
Actuated g/C Ratio	0.08		0.79		0.85	0.86
v/c Ratio	0.36		0.46		0.13	0.42
Control Delay	30.9		5.3		2.9	2.4
Queue Delay	0.0		0.0		0.0	0.0
Total Delay	30.9		5.3		2.9	2.4
LOS	C		A		A	A
Approach Delay	30.9		5.3			2.5
Approach LOS	C		A			A

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	93.8
Natural Cycle:	60
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.46
Intersection Signal Delay:	4.3
Intersection LOS:	A
Intersection Capacity Utilization:	44.4%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 3: Rosemead Blvd & Project Dwy



HCM 6th TWSC
3: Rosemead Blvd & Project Dwy

04/13/2021

Intersection						
Int Delay, s/veh	3.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T		T	T
Traffic Vol, veh/h	43	38	1420	16	9	1459
Future Vol, veh/h	43	38	1420	16	9	1459
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	80	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	47	41	1543	17	10	1586

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	2206	780	0	0	1560
Stage 1	1552	-	-	-	-
Stage 2	654	-	-	-	-
Critical Hdwy	5.74	7.14	-	-	5.34
Critical Hdwy Stg 1	6.64	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-
Follow-up Hdwy	3.82	3.92	-	-	3.12
Pot Cap-1 Maneuver	72	290	-	-	208
Stage 1	110	-	-	-	-
Stage 2	436	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	69	290	-	-	208
Mov Cap-2 Maneuver	69	-	-	-	-
Stage 1	110	-	-	-	-
Stage 2	415	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	117.3	0	0.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	107	208
HCM Lane V/C Ratio	-	-	0.823	0.047
HCM Control Delay (s)	-	-	117.3	23.2
HCM Lane LOS	-	-	F	C
HCM 95th %tile Q(veh)	-	-	4.7	0.1

HCM 6th TWSC
3: Rosemead Blvd & Project Dwy

04/13/2021

Intersection						
Int Delay, s/veh	4.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	TT		TTT		T	TTT
Traffic Vol, veh/h	28	24	1669	53	30	1731
Future Vol, veh/h	28	24	1669	53	30	1731
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	80	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	26	1814	58	33	1882















Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	2662	936	0	0	1872
Stage 1	1843	-	-	-	-
Stage 2	819	-	-	-	-
Critical Hdwy	5.74	7.14	-	-	5.34
Critical Hdwy Stg 1	6.64	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-
Follow-up Hdwy	3.82	3.92	-	-	3.12
Pot Cap-1 Maneuver	41	229	-	-	145
Stage 1	72	-	-	-	-
Stage 2	357	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	32	229	-	-	145
Mov Cap-2 Maneuver	32	-	-	-	-
Stage 1	72	-	-	-	-
Stage 2	276	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	269	0	0.6
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	53	145
HCM Lane V/C Ratio	-	-	1.066	0.225
HCM Control Delay (s)	-	-	269	36.9
HCM Lane LOS	-	-	F	E
HCM 95th %tile Q(veh)	-	-	4.8	0.8

Lanes, Volumes, Timings
3: Rosemead Blvd & Project Dwy

04/13/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			  			  
Traffic Volume (vph)	43	38	1420	16	9	1459
Future Volume (vph)	43	38	1420	16	9	1459
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	80	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.91	0.91	1.00	0.91
Frt	0.937		0.998			
Flt Protected	0.974				0.950	
Satd. Flow (prot)	1700	0	5075	0	1770	5085
Flt Permitted	0.974				0.121	
Satd. Flow (perm)	1700	0	5075	0	225	5085
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	41		3			
Link Speed (mph)	30		30			30
Link Distance (ft)	369		2370			232
Travel Time (s)	8.4		53.9			5.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	47	41	1543	17	10	1586
Shared Lane Traffic (%)						
Lane Group Flow (vph)	88	0	1560	0	10	1586
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		2		1	2
Detector Template	Left		Thru		Left	Thru
Leading Detector (ft)	20		100		20	100
Trailing Detector (ft)	0		0		0	0
Detector 1 Position(ft)	0		0		0	0
Detector 1 Size(ft)	20		6		20	6
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases					6	

Lanes, Volumes, Timings
 3: Rosemead Blvd & Project Dwy

04/13/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	8		2		1	6
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	22.5		22.5		9.5	22.5
Total Split (s)	27.0		61.0		12.0	73.0
Total Split (%)	27.0%		61.0%		12.0%	73.0%
Maximum Green (s)	22.5		56.5		7.5	68.5
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	1.0		1.0		1.0	1.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.5		4.5		4.5	4.5
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		Min		None	Min
Walk Time (s)	7.0		7.0			7.0
Flash Dont Walk (s)	11.0		11.0			11.0
Pedestrian Calls (#/hr)	0		0			0
Act Effect Green (s)	7.8		42.9		43.0	44.4
Actuated g/C Ratio	0.14		0.75		0.75	0.78
v/c Ratio	0.33		0.41		0.03	0.40
Control Delay	19.8		4.8		2.8	3.5
Queue Delay	0.0		0.0		0.0	0.0
Total Delay	19.8		4.8		2.8	3.5
LOS	B		A		A	A
Approach Delay	19.8		4.8			3.5
Approach LOS	B		A			A

Intersection Summary















Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	57.2
Natural Cycle:	60
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.41
Intersection Signal Delay:	4.6
Intersection LOS:	A
Intersection Capacity Utilization:	40.4%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 3: Rosemead Blvd & Project Dwy



Lanes, Volumes, Timings
3: Rosemead Blvd & Project Dwy

04/13/2021

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			  			  
Traffic Volume (vph)	28	24	1669	53	30	1731
Future Volume (vph)	28	24	1669	53	30	1731
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	80	
Storage Lanes	1	0		0	1	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.91	0.91	1.00	0.91
Frt	0.937		0.995			
Flt Protected	0.974				0.950	
Satd. Flow (prot)	1700	0	5060	0	1770	5085
Flt Permitted	0.974				0.089	
Satd. Flow (perm)	1700	0	5060	0	166	5085
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	26		8			
Link Speed (mph)	30		30			30
Link Distance (ft)	369		2370			232
Travel Time (s)	8.4		53.9			5.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	30	26	1814	58	33	1882
Shared Lane Traffic (%)						
Lane Group Flow (vph)	56	0	1872	0	33	1882
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		2		1	2
Detector Template	Left		Thru		Left	Thru
Leading Detector (ft)	20		100		20	100
Trailing Detector (ft)	0		0		0	0
Detector 1 Position(ft)	0		0		0	0
Detector 1 Size(ft)	20		6		20	6
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	8		2		1	6
Permitted Phases					6	

Lanes, Volumes, Timings
 3: Rosemead Blvd & Project Dwy

04/13/2021



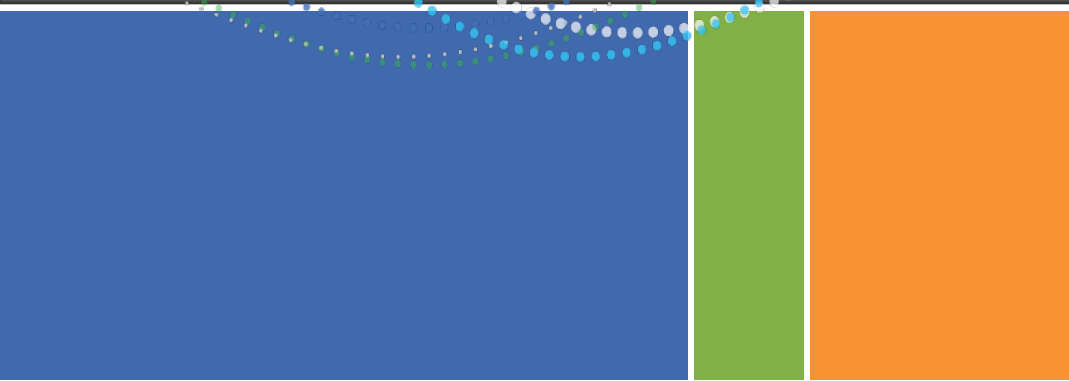
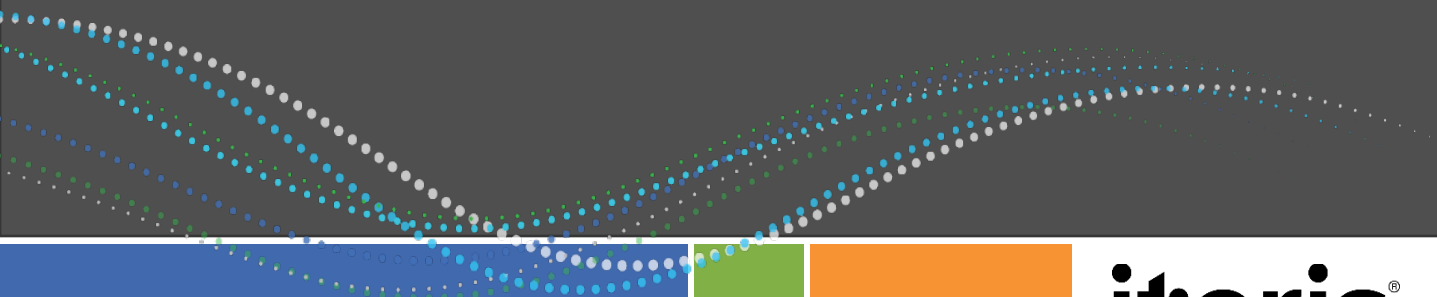
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Detector Phase	8		2		1	6
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	22.5		22.5		9.5	22.5
Total Split (s)	24.0		64.0		12.0	76.0
Total Split (%)	24.0%		64.0%		12.0%	76.0%
Maximum Green (s)	19.5		59.5		7.5	71.5
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	1.0		1.0		1.0	1.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	4.5		4.5		4.5	4.5
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		Max		None	Max
Walk Time (s)	7.0		7.0			7.0
Flash Dont Walk (s)	11.0		11.0			11.0
Pedestrian Calls (#/hr)	0		0			0
Act Effect Green (s)	7.4		73.9		79.4	80.4
Actuated g/C Ratio	0.08		0.79		0.85	0.86
v/c Ratio	0.36		0.47		0.14	0.43
Control Delay	30.9		5.4		3.0	2.5
Queue Delay	0.0		0.0		0.0	0.0
Total Delay	30.9		5.4		3.0	2.5
LOS	C		A		A	A
Approach Delay	30.9		5.4			2.5
Approach LOS	C		A			A

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	93.8
Natural Cycle:	60
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.47
Intersection Signal Delay:	4.3
Intersection LOS:	A
Intersection Capacity Utilization:	45.1%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 3: Rosemead Blvd & Project Dwy





iteris[®]

1700 Carnegie Avenue, Suite 100
Santa Ana, CA 92705

iteris.com

© 2017 Iteris, Inc. All rights reserved.