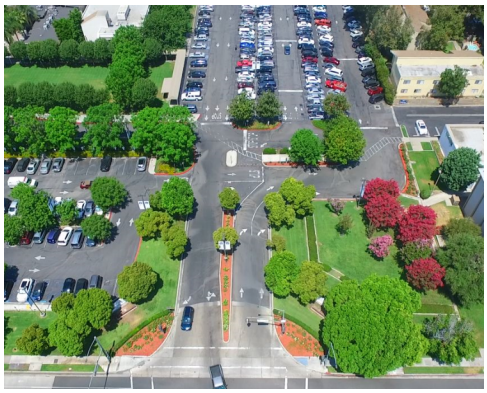
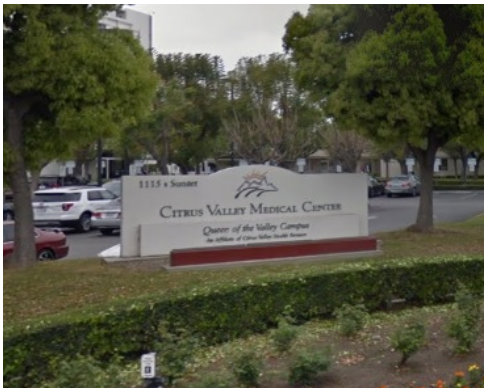
Traffic Impact Study for Queen of the Valley Hospital Specific Plan

Environmental Impact Report







PREPARED FOR

WEST COVINA

June 2019

Balancing the Natural and Built Environment

PSOMAS

TRAFFIC IMPACT STUDY
QUEEN OF THE VALLEY HOSPITAL SPECIFIC PLAN
ENVIRONMENTAL IMPACT REPORT
WEST COVINA, CA

PREPARED FOR

PREPARED BY

PSOMAS

PSOMAS PROJECT NO. 3WCO180100

JUNE 2019

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1. INTRODUCTION

The Queen of the Valley Hospital was founded in 1962 in the City of West Covina as shown in Figure 1. Existing services provided at the hospital include a Primary Stroke Center, a Family Birth and Newborn Center, a Level IIIB Newborn Intensive Care Unit (ICU), da Vinci Robotic Surgery, and Inpatient and Outpatient Rehabilitation services for adults and children. The hospital currently has approximately 355,000 square feet of various single- and multi-level structures, with surface parking provided throughout the site. A medical office building on site is approximately 89,000 square feet. The hospital is surrounded by various land uses, including primarily single- and multi-family residential uses, park and recreation uses, and other medical office uses.

To meet the increasing care needs of the community, Citrus Valley Health Partners is planning a major addition and renovation of the Queen of the Valley Hospital. The proposed improvements include a new critical care facility, a new medical office building and ambulatory surgery center, expansion of the emergency department, and renovation of several existing spaces. It is estimated that 330,000 square feet of new building spaces will be added to the hospital and approximately 20,000 square feet of existing spaces would be removed to accommodate the new facilities. In addition, approximately 180,000 square feet of new medical office buildings are expected to be constructed on the campus.

The project is expected to occur in phases, with the building changes listed below:

- Immediate (2019): Demolish 20,000 square feet (sq. ft.) of existing hospital uses
- Phase 1A (2020 – 2022): Construct new emergency room expansion (33,000 sq. ft.) and new ICU (33,000 sq. ft.)
- Phase 1B (2020 – 2022): Construct new medical office (90,000 sq. ft.)
- Phase 2 (2022 – 2026): Construct new hospital tower (132,000 sq. ft.)
- Long Range (2028+): Construct new hospital building (132,000 sq.ft.) and second new medical office (90,000 sq. ft.)

Note that the project includes other internal renovations and construction of parking structures, but those aspects of the project are not expected to alter the trip generation and are therefore not listed above.

Figure 1. Site Location



For this study, traffic impact analyses were conducted for existing conditions (2018), an interim phase in 2022 at the completion of Phases 1A and 1B, a second interim phase in 2026 at the completion of Phase 2, and the General Plan buildout in 2035. In summary, the following scenarios were evaluated in this study:

- Existing Conditions (2018)
- Existing Plus Project (full project buildout)
- Existing Plus Interim Year 2022 Cumulative Growth
- Existing Plus Interim Year 2022 Cumulative Plus Project Phases 1A and 1B
- Existing Plus Interim Year 2026 Cumulative Growth
- Existing Plus Interim Year 2026 Cumulative Plus Project Phases 1A, 1B, and 2
- General Plan Buildout (2035)
- General Plan Buildout Plus Project Buildout (2035)

The project boundaries, study area, and traffic impact analysis methodology used in this study are described in the following sections, and Section 3 provides additional information and detail about the project and each phase.

1.1. STUDY AREA

The study area includes 16 intersections. Peak hour turning movement counts (TMCs) were collected at each study intersection and daily volumes were estimated based on TMCs. The study intersections are shown in Figure 2 and listed below.

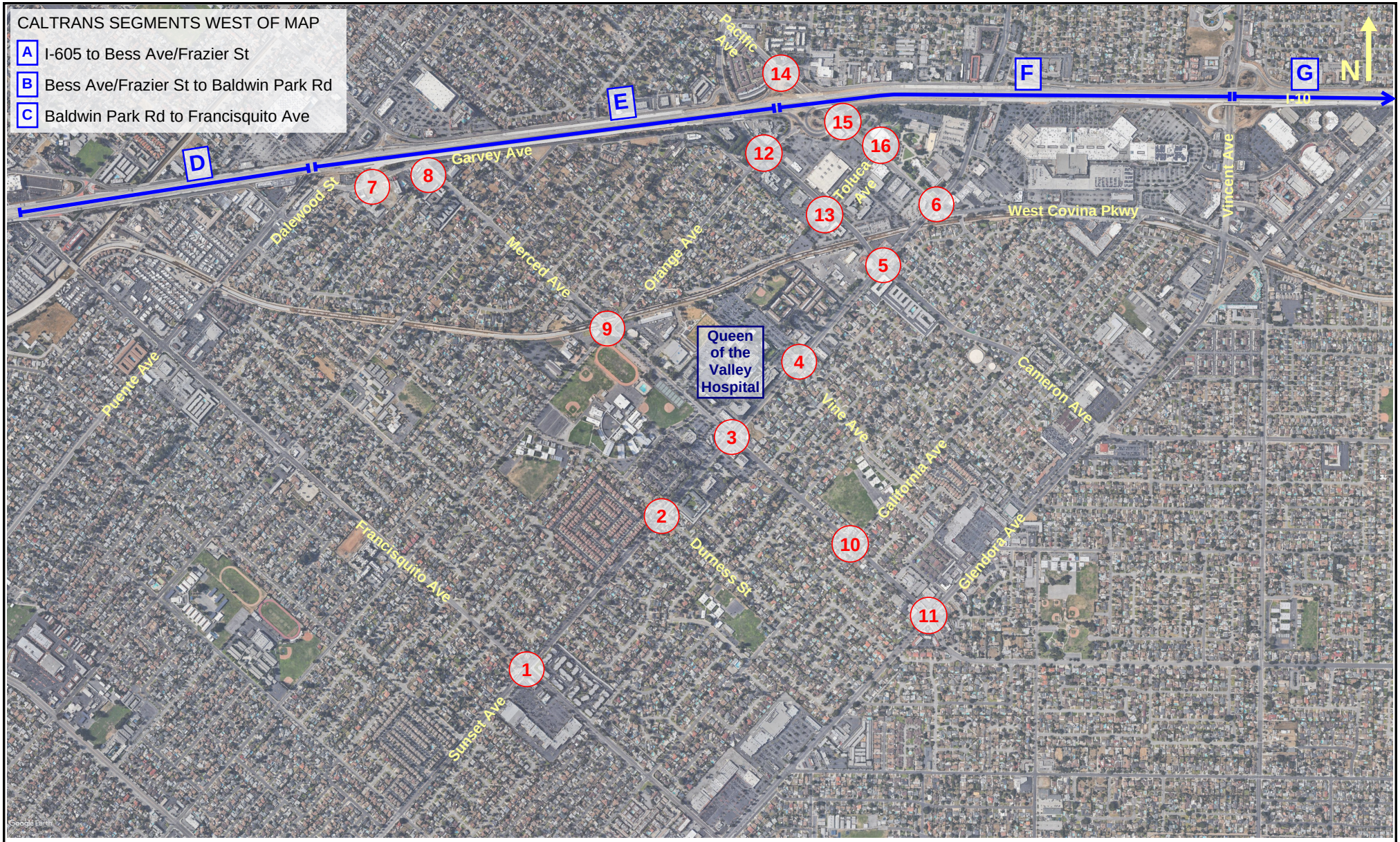
1. Francisquito Avenue/Sunset Avenue (signalized)
2. Durness Street/Sunset Avenue (signalized)
3. Merced Avenue/Sunset Avenue (signalized)
4. Vine Avenue/Sunset Avenue (signalized)
5. Cameron Avenue/Sunset Avenue (signalized)
6. West Covina Parkway/Sunset Avenue (signalized)
7. I-10 EB Ramps/Dalewood Street (signalized, Caltrans intersection)
8. Merced Avenue/Dalewood Street/Garvey Avenue (unsignalized)
9. Merced Avenue/Orange Avenue (signalized)
10. Merced Avenue/California Avenue (signalized)
11. Merced Avenue/Glendora Avenue (signalized)

12. Cameron Avenue/Orange Avenue (signalized)
13. Cameron Avenue/Toluca Avenue (unsignalized)
14. West Covina Parkway/I-10 WB Ramps (signalized, Caltrans intersection)
15. West Covina Parkway/I-10 EB Ramps (signalized, Caltrans intersection)
16. West Covina Parkway/Toluca Avenue (signalized)

In addition to the study intersections, the Caltrans segments of I-10 listed below were analyzed because the project is expected to add 50 or more peak hour trips along each of the segments:

A. I-605 to Bess Avenue/Frazier Street
B. Bess Avenue/Frazier Street to Baldwin Park Road
C. Baldwin Park Road to Francisquito Avenue
D. Francisquito Avenue to Puente Avenue (within study area)
E. Puente Avenue to Pacific Avenue/West Covina Parkway (within study area)
F. Pacific Avenue/West Covina Parkway to Vincent Avenue (within study area)
G. Vincent Avenue to Azusa Avenue

Figure 2 shows the study intersections and the Caltrans segments within the study area.



INTERSECTIONS (X)

1. Francisquito Ave/Sunset Ave
2. Durness St/Sunset Ave
3. Merced Ave/Sunset Ave
4. Vine Ave/Sunset Ave
5. Cameron Ave/Sunset Ave
6. West Covina Pkwy/Sunset Ave
7. I-10 EB Ramps/Dalewood St
8. Merced Ave/Dalewood St/Garvey Ave
9. Merced Ave/Orange Ave
10. Merced Ave/California Ave
11. Merced Ave/Glendora Ave
12. Cameron Ave/Orange Ave
13. Cameron Ave/Toluca Ave
14. West Covina Pkwy/I-10 WB Ramps
15. West Covina Pkwy/I-10 EB Ramps
16. West Covina Pkwy/Toluca Ave

CALTRANS SEGMENTS SHOWN (X)

- D Francisquito Ave to Puente Ave
- E Puente Ave to Pacific Ave
- F Pacific Ave to Vincent Ave
- G Vincent Ave to Azusa Ave

Queen of the Valley Hospital Traffic Impact Study	*Figure 2.* *Study Intersections and Segments*	PSOMAS June 2019

1.2. ANALYSIS METHODOLOGY

Level of Service (LOS) is the typical measure used to characterize the quality of traffic operations at an intersection or roadway segment. LOS A represents relatively free operating conditions, whereas LOS F has unstable flow and congestion with volumes at or near the capacity of the facility. Excessive delays and queues can occur when the LOS is not acceptable.

The traffic generated by the project or by the project in combination with other projects in the area could worsen the LOS of a facility. To assess the potential traffic impacts due to the project and due to background traffic growth, the following scenarios were evaluated:

- Existing Conditions (2018)
- Existing Plus Project (full project buildout)
- Existing Plus Interim Year 2022 Cumulative Growth
- Existing Plus Interim Year 2022 Cumulative Plus Project Phases 1A and 1B
- Existing Plus Interim Year 2026 Cumulative Growth
- Existing Plus Interim Year 2026 Cumulative Plus Project Phases 1A, 1B, and 2
- General Plan Buildout (2035)
- General Plan Buildout Plus Project Buildout (2035)

This TIS follows the *Los Angeles County Traffic Impact Analysis Report Guidelines*[1]. Non-freeway ramp intersections were evaluated based on the LA County guidelines, which apply the Intersection Capacity Utilization (ICU) methodology at signalized intersections. For the unsignalized intersections and the intersections operated under Caltrans' jurisdiction, operational analyses were based on the HCM methodology. Caltrans segments were evaluated based on the lane capacities listed in the Caltrans *Guide for the Preparation of Traffic Impact Studies*[2]. The methodologies and significance thresholds are discussed further in the following sections.

1.2.1. Intersection Capacity Utilization (ICU)

The ICU methodology is used to determine the operating LOS of signalized intersections. This methodology requires the calculation of the intersection volume/capacity (V/C) ratio, which is the summation of critical lane group flow ratios with a yellow clearance

adjustment. The LOS estimated by the ICU methodology is directly related to the intersection V/C ratio.

Per the LA County guidelines, a maximum of 2,880 vehicles per hour per lane should be used in the ICU method for dual left-turn lanes, and a maximum of 1,600 vehicles per hour per lane should be used for the remaining lane configurations. A ten percent yellow clearance cycle (i.e. lost time) should be included in the calculations.

The impact related to the project is considered significant if the increase in the volume to capacity (V/C) ratio with the project equals or exceeds the values shown in Table 1.

Table 1. Significant Impact Thresholds – ICU Methodology

Intersection Conditions Pre-Project		Project V/C Increase
LOS	V/C	
C	0.71 to 0.80	0.04 or more
D	0.81 to 0.90	0.02 or more
E/F	0.91 or more	0.01 or more

1.2.2. Highway Capacity Manual

The LA County guidelines do not refer to significant impacts at unsignalized intersections. Since the ICU is a methodology used for signalized intersections, this study applied the *HCM* methodology to evaluate unsignalized intersections, which defines LOS based on delay. The analyses for the unsignalized intersections were conducted using the software *Synchro*.

Even if no thresholds are available for significant impacts at unsignalized intersections, several jurisdictions recommend evaluation methodologies. This study followed the LADOT guidelines[3], which evaluate unsignalized intersections using the HCM methodology to determine the need for the installation of a traffic signal or other traffic control devices. Based on the estimated delay, if the resultant LOS is E or F in the "Future with Project" scenario, it is recommended that a traffic signal warrant analysis be conducted.

1.2.3. Caltrans Guidelines

The LOS at the intersections operating under Caltrans' jurisdiction is based on measures of effectiveness defined in the *HCM*. Caltrans aims to have facilities operate at the transition between LOS C and LOS D.

There are no formal thresholds from Caltrans to determine significant impacts. Considering that Caltrans wants to maintain facilities operating at LOS D or better, this study assumed that a project-related impact is considered significant if the LOS changes from D or better to E or F. Further, a significant impact occurs if the facility operates at LOS E or F during existing conditions and the project-related traffic results in an increase in delay.

For freeway facilities, Caltrans uses the segment flow rates shown in Table 2, listed in passenger cars per hour per lane.

Table 2. Freeway Segment Capacity

LOS	Maximum Flow Rate (pc/hr/ln)
A	710
B	1,170
C	1,680
D	2,090
E	2,350

2. EXISTING STUDY AREA CONDITIONS

2.1. ROADWAY NETWORK

There are several existing major roadways in the project vicinity, as discussed below:

California Avenue is a two-lane roadway with on-street parking on both sides. In the vicinity of the project, the roadway is classified as major collector by the City of West Covina[4]. From Valley Boulevard to Francisquito Avenue, California Avenue is classified as a minor arterial. The roadway has a posted speed limit of 35 mph.

Cameron Avenue is five-lane road (four travel lanes and a two-way left-turn lane) between Orange Avenue and Sunset Avenue, and a four-lane undivided roadway in the remaining segments. There is on-street parking on both sides of the road. The roadway is classified as a minor arterial by the City of West Covina, and has a posted speed limit of 40 mph.

Dalewood Street is a two-lane roadway in the project vicinity. On-street parking is prohibited along several segments of Dalewood Street , indicated by signs. The roadway is classified as a major collector by the City of West Covina, and has a posted speed limit of 45 mph.

Francisquito Avenue is a mostly a four-lane undivided roadway, with some five-lane (four travel lanes and a two-way left-turn lane) segments. The roadway is classified as a minor arterial by the City of West Covina and has a posted speed limit of 35 mph north of Willow Avenue and 40 mph south of Willow Avenue.

Garvey Avenue is a two-lane roadway in the project vicinity. On-street parking is prohibited along several segments of Garvey Avenue, indicated by signs. The roadway is classified as a major collector by the City of West Covina, and has a posted speed limit of 45 mph.

Glendora Avenue starts at Francisquito Avenue as a five-lane roadway (four travel lanes and a two-way left-turn lane) and becomes a four-lane divided roadway at Michelle Street.

On-street parking is allowed along some segments, indicated by signs. The roadway is classified as an other principal arterial by the City of West Covina, and has a posted speed limit of 40 mph.

Merced Avenue is a five-lane road (four travel lanes and a two-way left-turn lane) between Orange Avenue and Sunset Avenue, and a four-lane undivided roadway in the remaining segments. There is on-street parking on both sides of the road. The roadway is classified as a minor arterial by the City of West Covina, and has a posted speed limit of 40 mph.

Orange Avenue is a two-lane roadway in the project vicinity. There is on-street parking on both sides of the roadway, and parking restrictions are indicated by signs on several segments. In the vicinity of the project, the roadway is classified as a major collector by the City of West Covina. From Valley Boulevard to Fairgrove Avenue, Orange Avenue is classified as a minor arterial. The roadway has a posted speed limit of 35 mph.

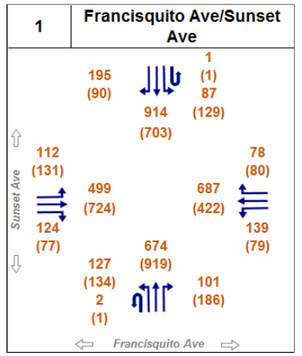
Sunset Avenue configuration varies between a four-lane undivided road, a five-lane road (four travel lanes and a two-way left-turn lane), and a four-lane divided road, depending on the segment. There is on-street parking on both sides of the roadway with parking restrictions are indicated by signs on several segments. The roadway is classified as an other principal arterial by the City of West Covina, and has a posted speed limit of 40 mph.

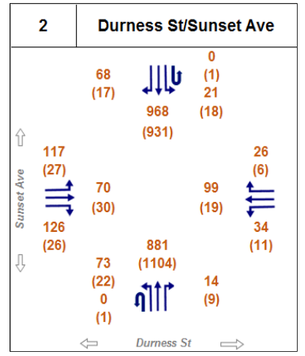
West Covina Parkway is a four-lane divided roadway with a few segments of five-lane road (four travel lanes and a two-way left-turn lane) and four-lane undivided road. On-street parking is prohibited on both sides of the road. The roadway is classified as a minor arterial by the City of West Covina, and has a posted speed limit of 35 mph.

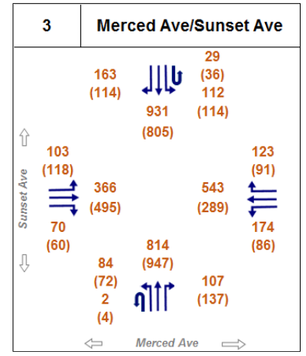
2.2. TRAFFIC VOLUMES

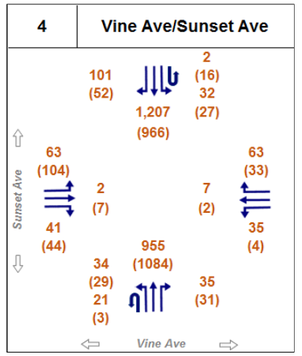
Traffic volume data was collected at the study intersections on Wednesday, May 23, 2018 by National Data & Surveying Services for Psomas from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM. The overall peak hours for the study area were found to be from 7:15 to 8:15 AM and from 5:00 to 6:00 PM. Figure 3 shows the existing peak hour traffic volumes. The volumes along I-10 are from 2016 Caltrans data[5]. All collected traffic volume data is included in Appendix A.

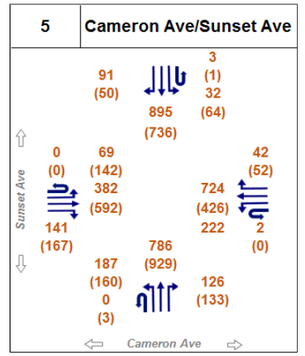


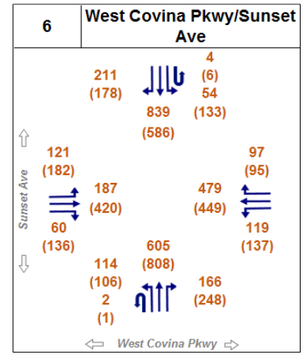


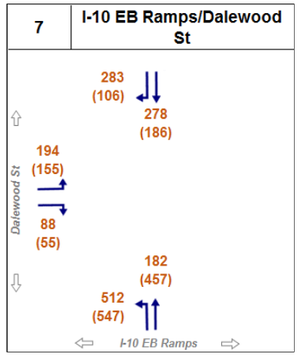


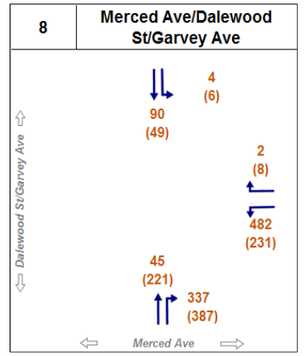


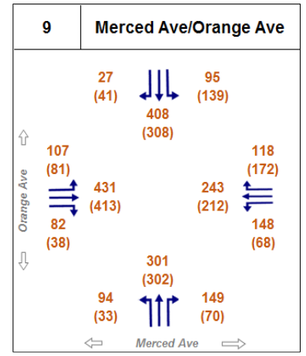


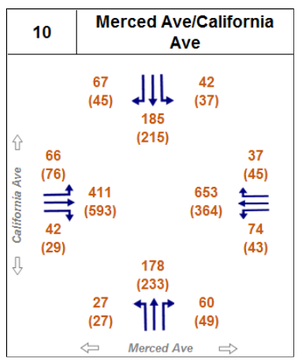


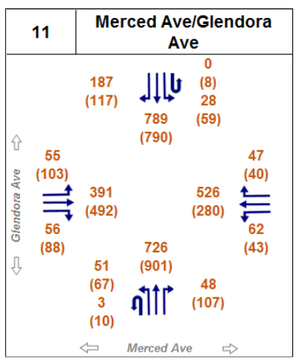


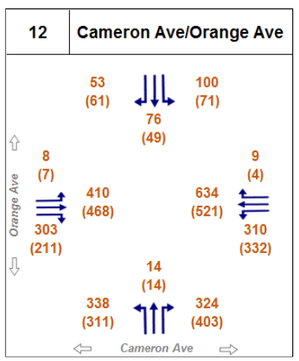


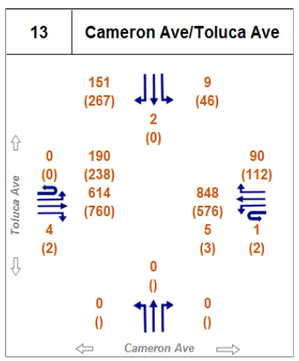


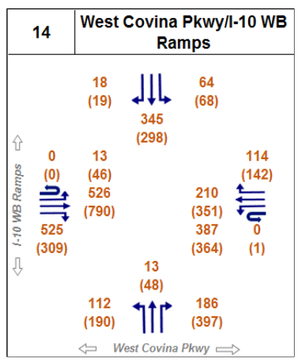


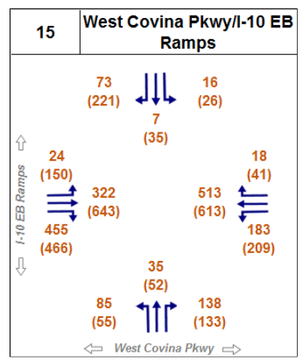


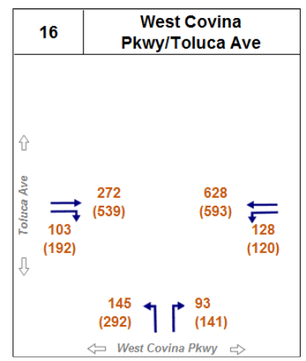












Queen of the Valley Hospital
Traffic Impact Study

Figure 3.
Existing Peak Hour Traffic Volumes

PSOMAS
June 2019

3. PROJECT DESCRIPTION

To meet the growing critical care needs of the community, the Queen of the Valley Hospital Campus will be expanded and renovated. The project will include several phases, including demolition of existing buildings, construction of new buildings, renovation of existing facilities, construction of new parking (both surface and structure), and additional signage/monumentation.

For the purposes of this study, the renovation of existing facilities, construction of new parking, and signage are not significant. The improvements that will affect this traffic study are listed below, by phase:

1. Immediate Improvements (2019)
    a. Demolition of 20,000 SF of existing hospital uses
2. Phase 1A (2020-2022)
    a. Addition of 33,000 SF of hospital uses (emergency room)
    b. Addition of 33,000 SF of hospital uses (ICU)
3. Phase 1B (2020-2022)
    a. New 90,000 SF medical office building (MOB)
4. Phase 2 (2022-2066)
    a. New 132,000 SF hospital tower (5-6 stories)
5. Buildout (2035)
    a. New 132,000 SF hospital building
    b. New 90,000 SF medical office building

4. PROJECTED TRAFFIC VOLUMES

4.1. CUMULATIVE GROWTH AND TRAFFIC VOLUMES

The cumulative traffic volumes are the anticipated traffic volumes in a future year without the project traffic. The anticipated annual growth in traffic volumes for this study was assumed to be 1.4% per year, which is the growth rate presented in the City of West Covina General Plan[6]. Figure 4, Figure 5, and Figure 6 show the traffic volumes based on the assumed growth rate for years 2022 (completion of Phase 1), 2026 (completion of Phase 2), and 2035 (project buildout), respectively.

4.2. PROJECT TRAFFIC VOLUMES

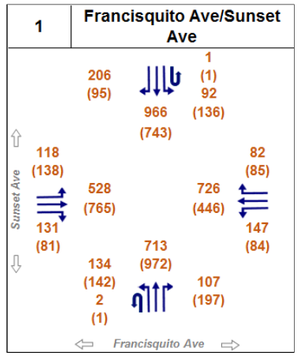
4.2.1. Project Trip Generation

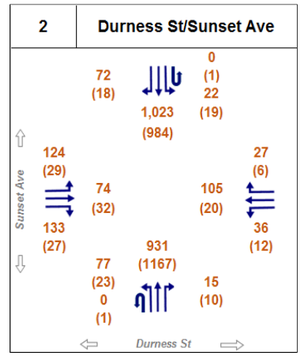
The project's anticipated traffic generation was estimated using the Institute of Transportation Engineers (ITE) *Trip Generation Manual*[7] for morning and afternoon weekday peak hour trips. The resulting project trip generation is shown in Table 3.

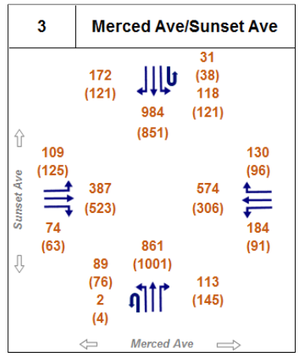
Table 3. Project Trip Generation

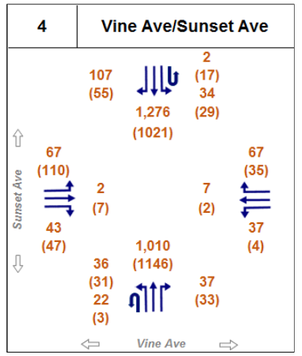
Development Type	Units	Number of Units	Daily	AM		PM	
				In	Out	In	Out
Immediate Improvements (2019)							
Hospital Area to be Demolished	1,000 SF	20	-214	-12	-6	-6	-13
Phase 1A (2022)							
Addition of Hospital Uses	1,000 SF	66	708	40	19	20	44
Phase 1B (2022)							
New Medical Building	1,000 SF	90	3,132	195	55	87	224
Total New Trips at the end of Phase 1			***3,625***	***223***	***68***	***101***	***255***
Phase 2 (2026)							
New Hospital Tower	1,000 SF	132	1,415	80	38	41	87
Total New Trips at the end of Phase 2			***5,040***	***303***	***106***	***142***	***342***
Buildout (2035)							
New Hospital Building	1,000 SF	132	1,415	80	38	41	87
New Medical Building	1,000 SF	90	3,132	195	55	87	224
Total New Trips Buildout			***9,587***	***578***	***198***	***271***	***653***

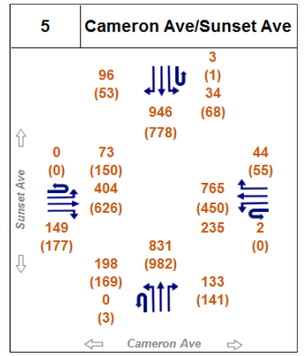


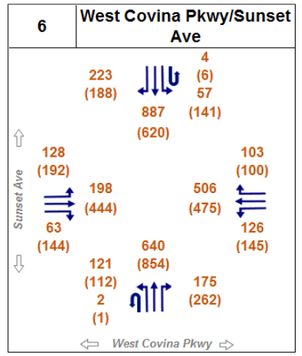


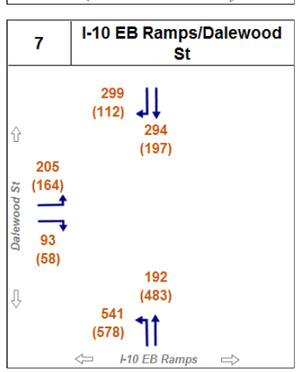


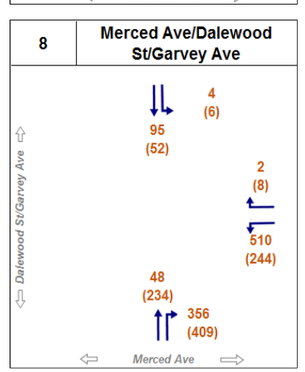


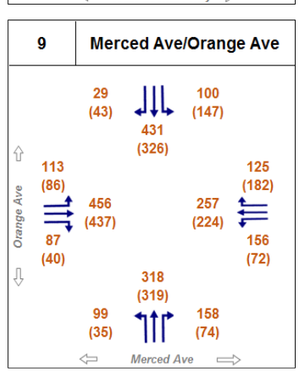


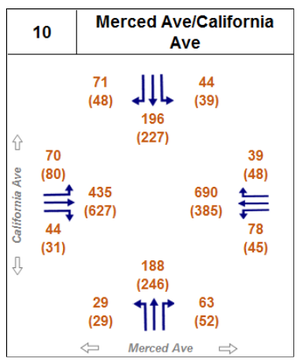


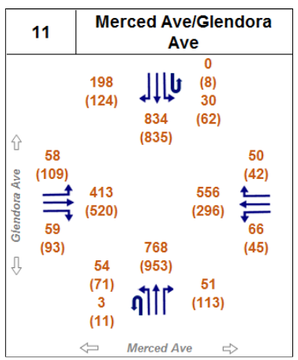


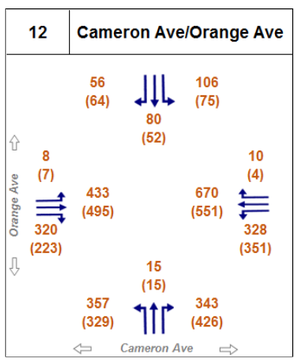


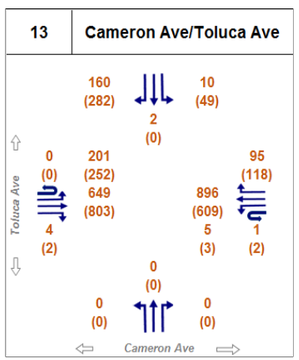


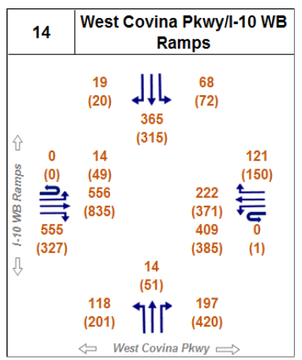


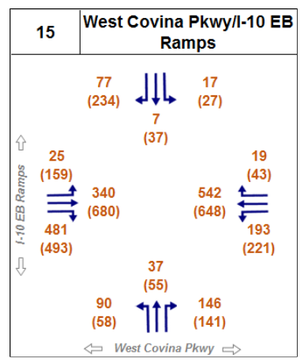


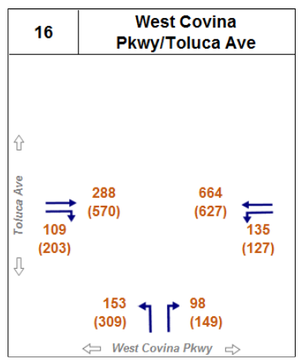












Queen of the Valley Hospital
Traffic Impact Study

Figure 4.
Existing + Interim Year 2022 Cumulative Traffic Volumes

PSOMAS
June 2019



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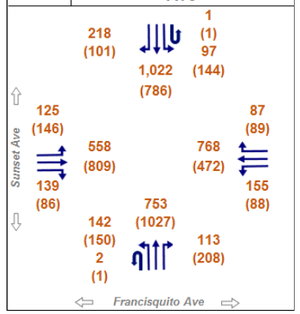
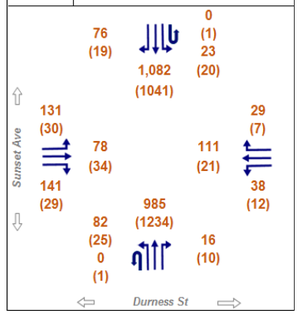
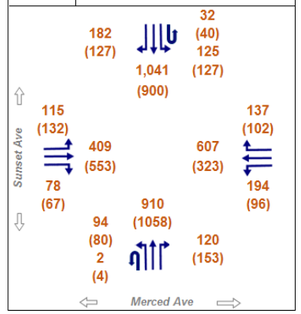


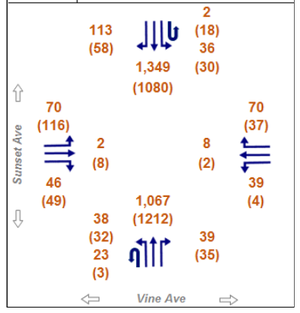
2 Durness St/Sunset Ave



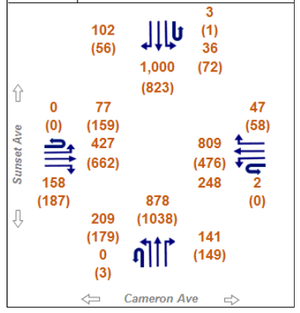
3 Merced Ave/Sunset Ave



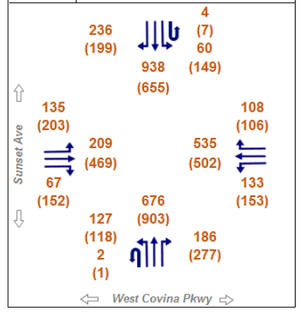
4 Vine Ave/Sunset Ave



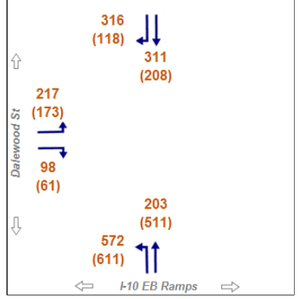
5 Cameron Ave/Sunset Ave



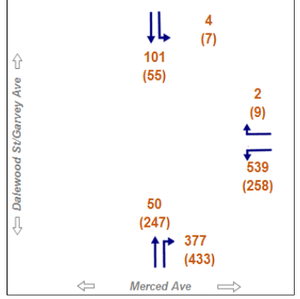
6 West Covina Pkwy/Sunset Ave



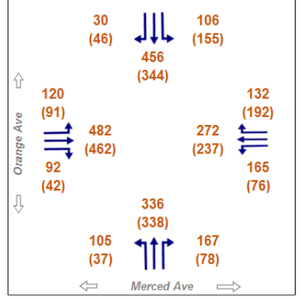
7 I-10 EB Ramps/Dalewood St



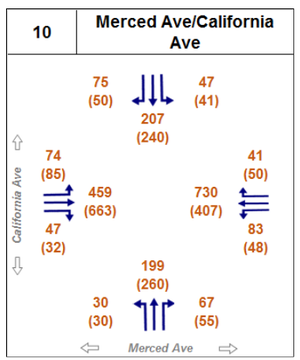
8 Merced Ave/Dalewood St/Garvey Ave



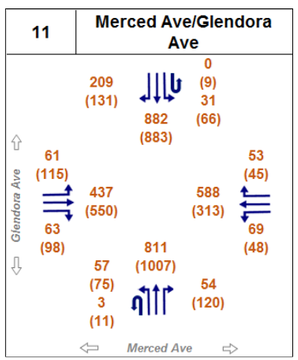
9 Merced Ave/Orange Ave



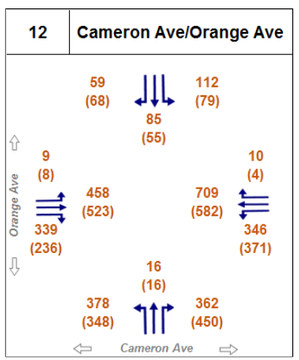
10 Merced Ave/California Ave



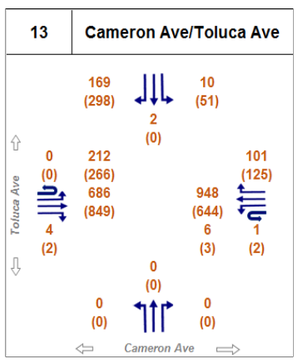
11 Merced Ave/Glendora Ave



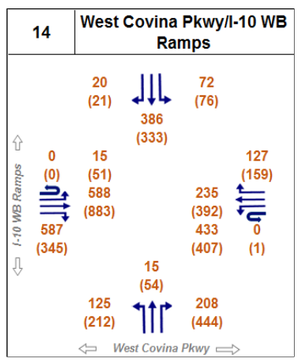
12 Cameron Ave/Orange Ave



13 Cameron Ave/Toluca Ave



14 West Covina Pkwy/I-10 WB Ramps



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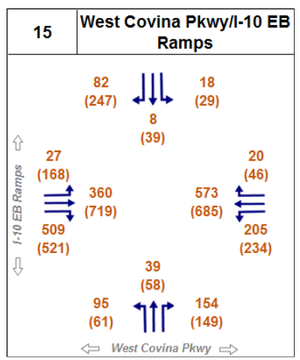

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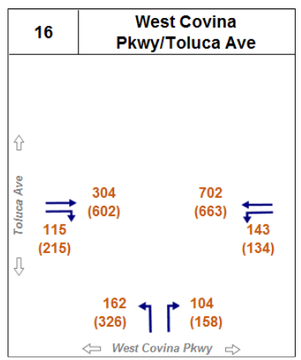


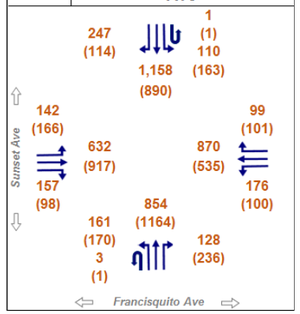
Queen of the Valley Hospital
Traffic Impact Study

Figure 5.
Existing + Interim Year 2026 Cumulative Traffic Volumes

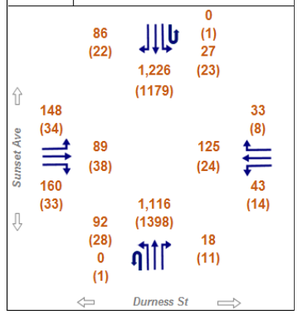
PSOMAS
June 2019



1 Francisquito Ave/Sunset Ave



2 Durness St/Sunset Ave



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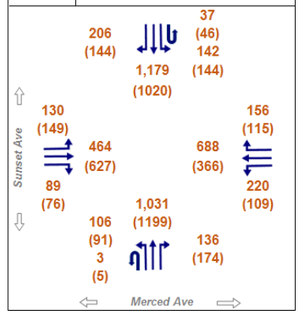

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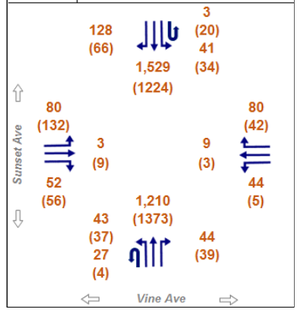

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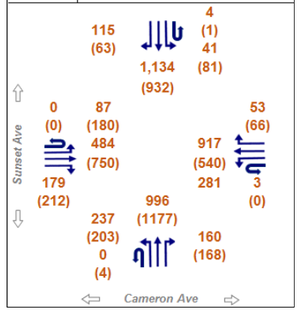

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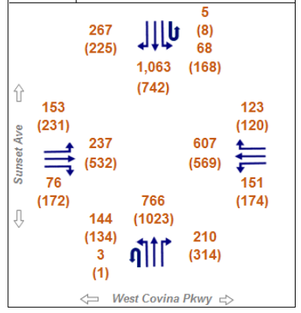
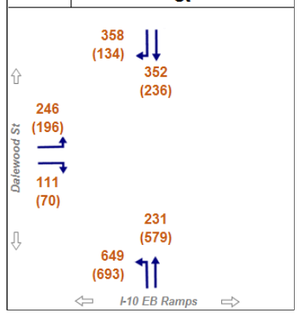
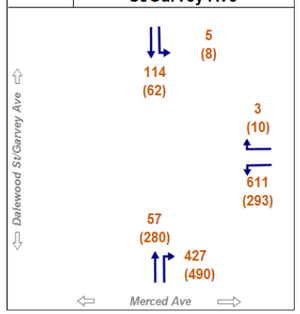


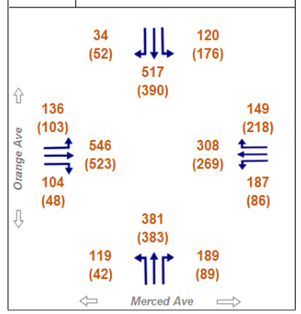
7 I-10 EB Ramps/Dalewood St



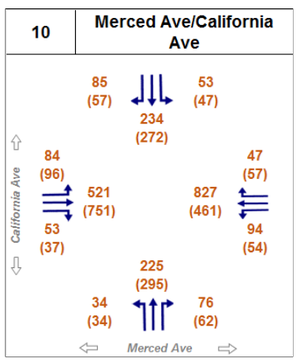
8 Merced Ave/Dalewood St/Garvey Ave



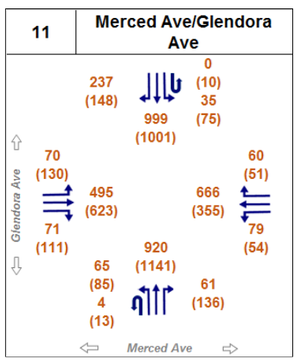
9 Merced Ave/Orange Ave



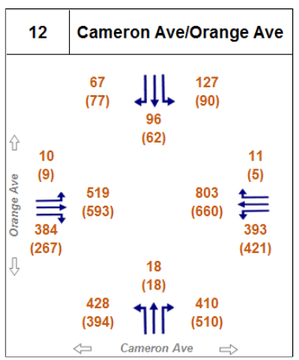
10 Merced Ave/California Ave



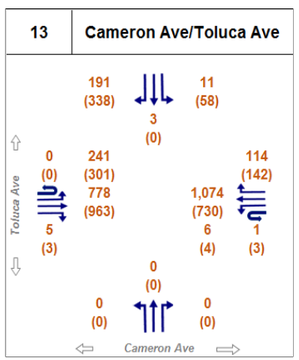
11 Merced Ave/Glendora Ave



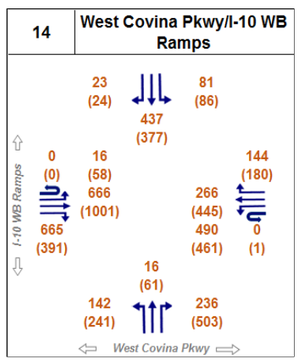
12 Cameron Ave/Orange Ave



13 Cameron Ave/Toluca Ave



14 West Covina Pkwy/I-10 WB Ramps



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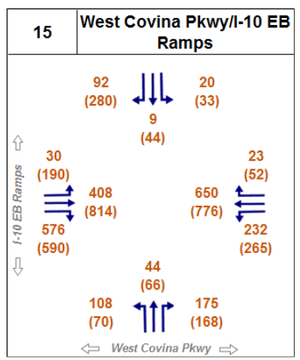
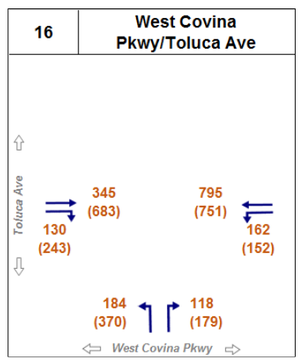


16 West Covina Pkwy/Toluca Ave



Queen of the Valley Hospital
Traffic Impact Study

Figure 6.
General Plan Buildout Traffic Volumes (2035)

PSOMAS
June 2019

4.2.2. Project Trip Distribution

The project trip distribution is shown in Figure 7. The distribution was estimated based on existing traffic distribution as well as projected traffic distribution relative to certain services on the campus and was approved by the City prior to the completion of this study.

4.2.3. Project Traffic Volumes

Using the project trip generation and trip distribution, the project traffic volumes at each of the study intersections were calculated and are shown in Figures 8, 9, and 10 for years 2022, 2026, and 2035, respectively.

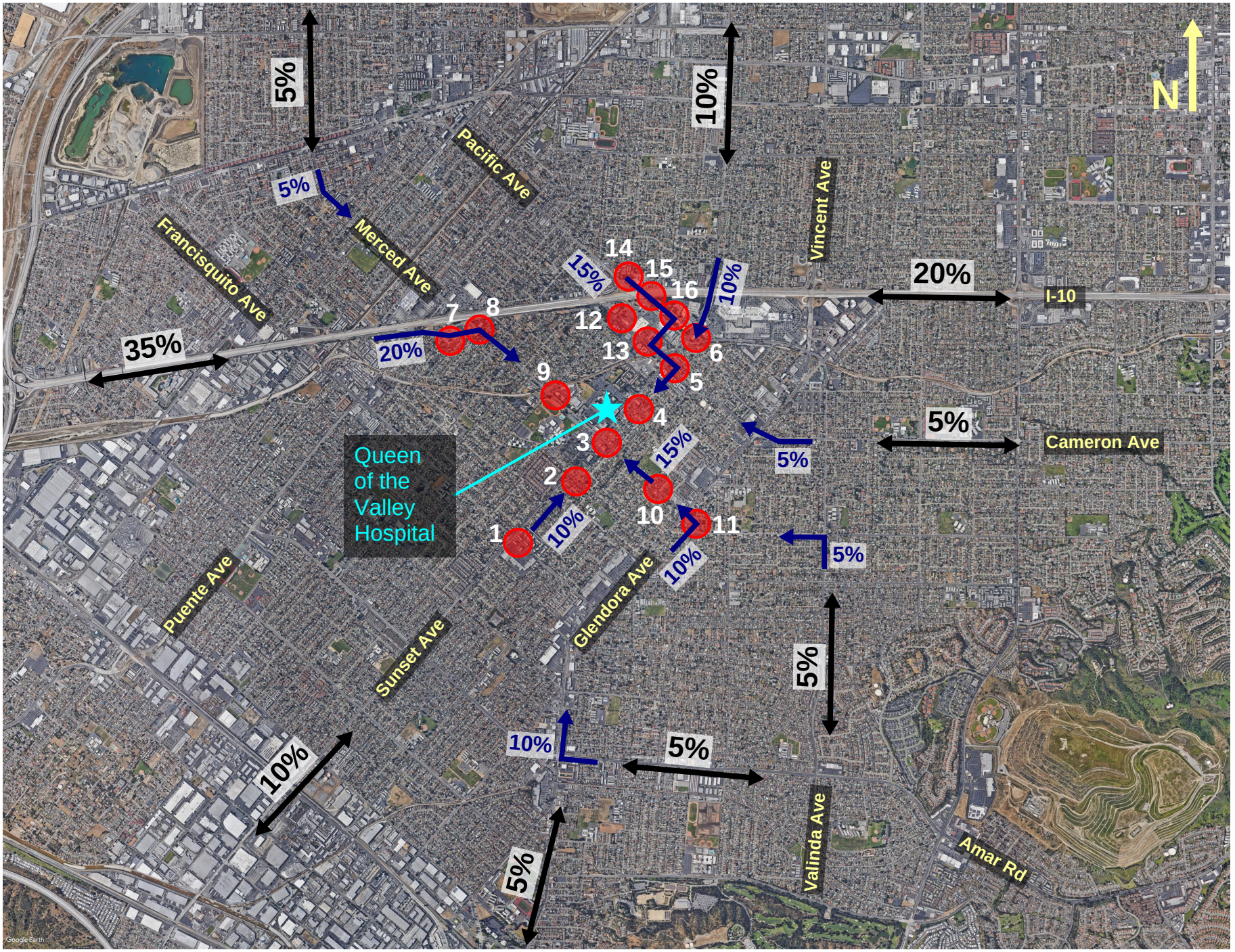
4.3. EXISTING + CUMULATIVE + PROJECT TRAFFIC VOLUMES

To estimate traffic volumes in a future year, traffic generated by cumulative growth and by the project must be considered. Future volumes with the project would generally be calculated by adding the cumulative growth and project traffic volumes. However, adjustments had to be made to account for the growth rate assumptions in the West Covina General Plan. The 1.4% annual growth rate in the General Plan included approximately 290,000 square feet (SF) of new "commercial" land uses would be in place by 2035 on the Queen of the Valley site. The following sections provide additional detail about the adjustments that were made to best estimate future traffic volumes.

4.3.1. General Plan Land Use Assumptions for the Campus Area

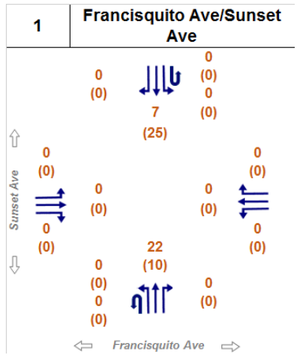
The "commercial" land use as described in the General Plan included commercial, entertainment, office, and housing uses. The percentage of the 290,000 SF for each land use was not specified and, therefore, was estimated in this study based on similar land use patterns in the vicinity of the Queen of the Valley Hospital Campus.

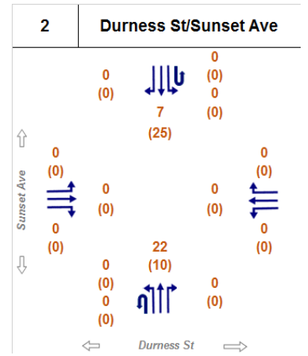
Commercial uses were assumed to be 15% of the area and trips were estimated based on ITE Land Use (LU) 820 – Shopping Center. Entertainment was also estimated to be 15% of the area, and trips were estimated based on ITE LU 495 – Recreational Community Center. Office uses were assumed to include 50% of the area, and trips were estimated based on ITE LU 720 – Medical-Dental Office Building. Finally, housing was assumed to be 20% of the area, and trips were estimated based on ITE LU 210 – Single-Family Detached Housing.

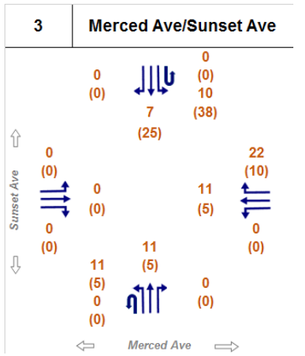


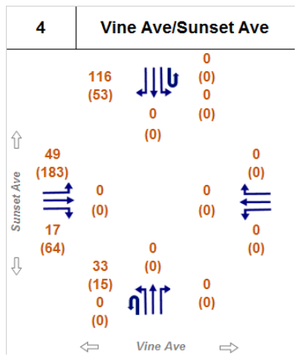
Queen of the Valley Hospital Traffic Impact Study	*Figure 7.* *Project Trip Distribution*	PSOMAS June 2019

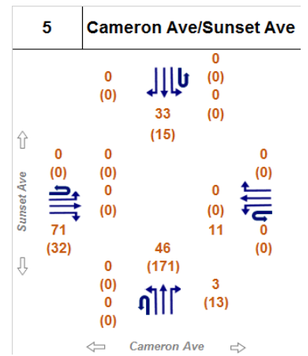


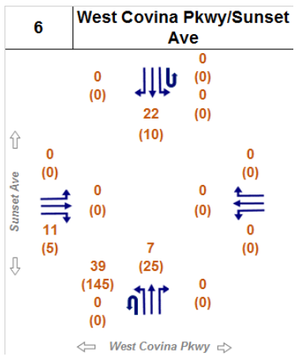


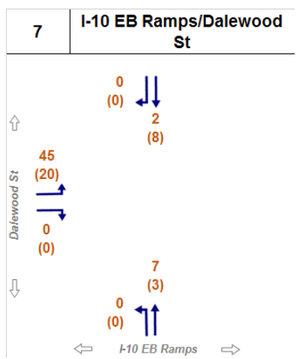


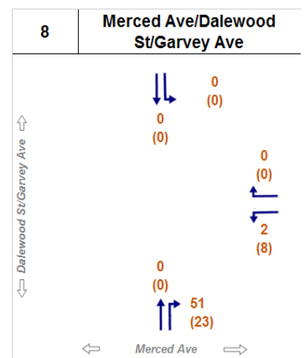


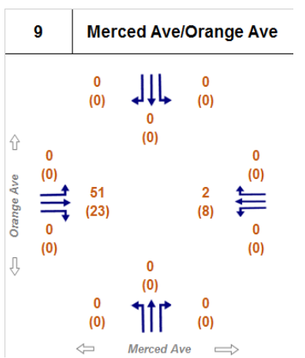


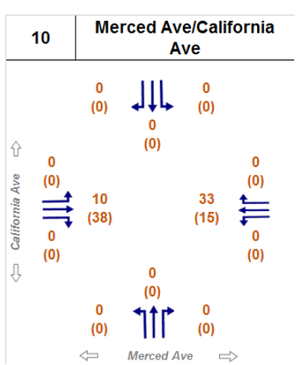


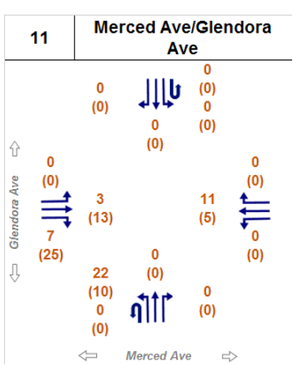


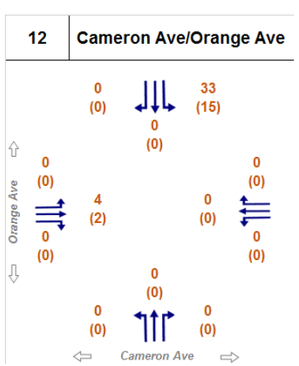


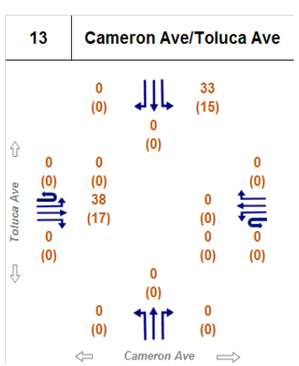


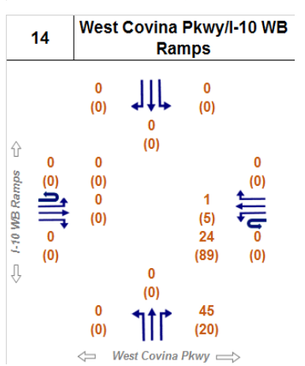


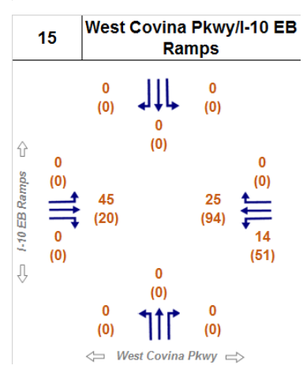


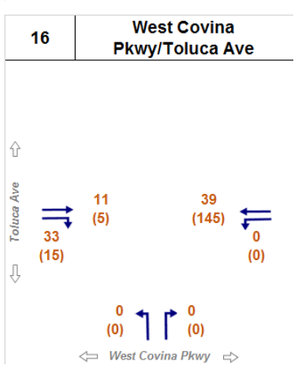










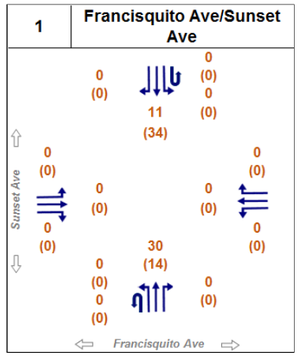


Queen of the Valley Hospital
Traffic Impact Study

Figure 8.
Phases 1A and 1B Project Traffic Volumes (2022)

PSOMAS
June 2019


West Covina Pkwy
Toluca Ave
Cameron Ave
Carvey Ave
I-10
Orange Ave
Vine Ave
California Ave
Glendora Ave
Queen of the Valley Hospital
Merced Ave
Dalewood St
Durness St
Sunset Ave
Francisquito Ave
100
200
14
15
16
6
12
13
5
4
8
9
3
10
11
7
2
1
LEGEND
XX Intersection Number
XX AM Peak Hour Traffic Volume (veh/hr)
(XX) PM Peak Hour Traffic Volume (veh/hr)
XX Segment Peak Hour Traffic Volume (pc/hr)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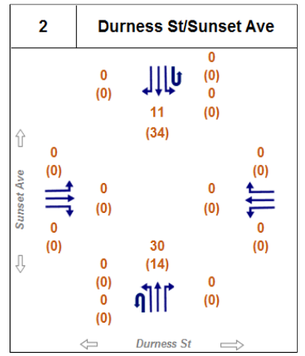
Francisquito Ave/Sunset Ave
Sunset Ave
Francisquito Ave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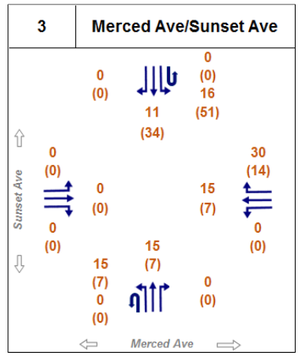
Durness St/Sunset Ave
Sunset Ave
Durness St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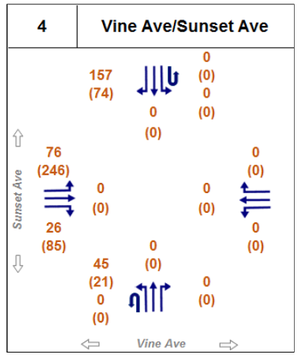
Merced Ave/Sunset Ave
Sunset Ave
Merced Ave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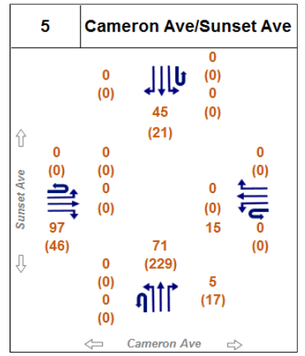
Vine Ave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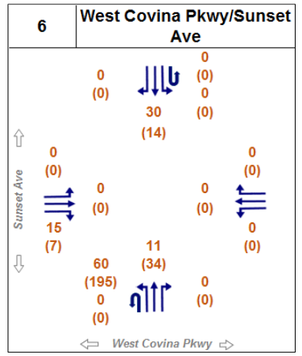
Cameron Ave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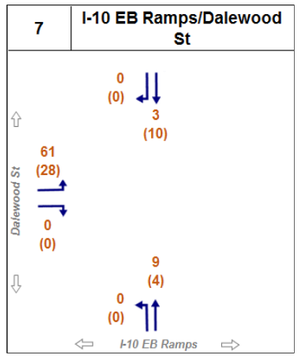
West Covina Pkwy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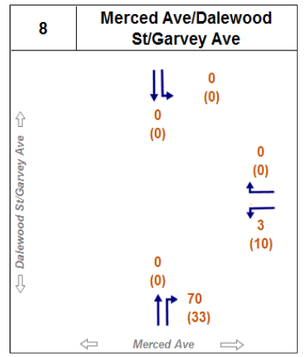
I-10 EB Ramps/Dalewood St
Dalewood St
I-10 EB Ramps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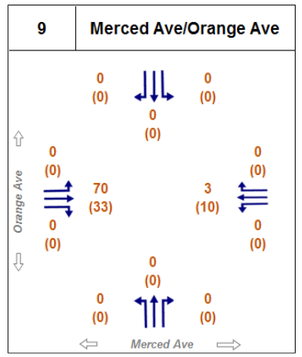
Merced Ave/Dalewood St/Garvey Ave
Dalewood St/Garvey Ave
Merced Ave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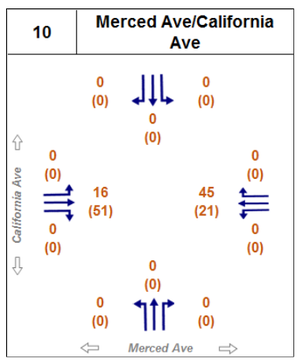
Merced Ave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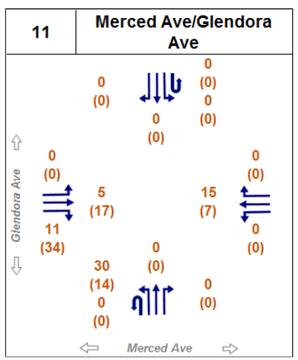
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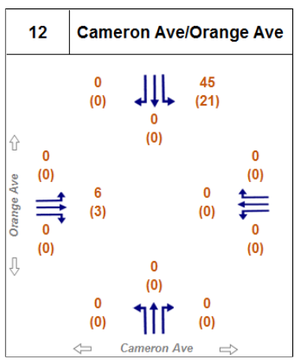
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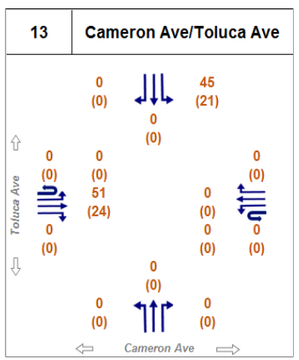
Cameron Ave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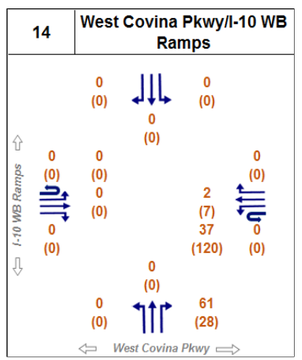
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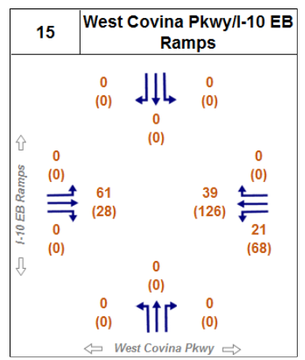
I-10 WB Ramps
West Covina Pkwy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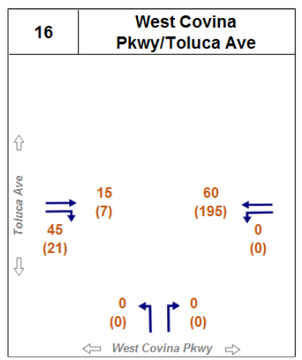
West Covina Pkwy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Toluca Ave
West Covina Pkwy


West Covina Pkwy
Toluca Ave
Cameron Ave
Carvey Ave
I-10
Orange Ave
Vine Ave
California Ave
Glendora Ave
Queen of the Valley Hospital
Merced Ave
Dalewood St
Durness St
Sunset Ave
Francisquito Ave
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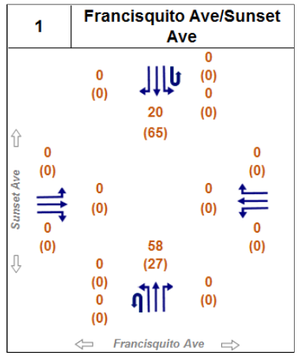
LEGEND
XX Intersection Number
XX AM Peak Hour Traffic Volume (veh/hr)
(XX) PM Peak Hour Traffic Volume (veh/hr)
XX Segment Peak Hour Traffic Volume (pc/hr)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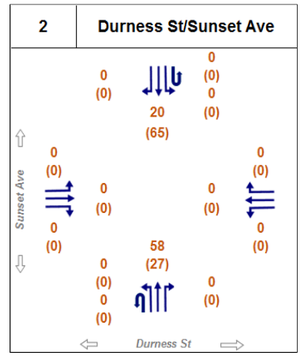
Sunset Ave
Francisquito Ave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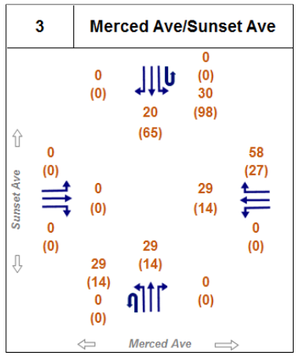
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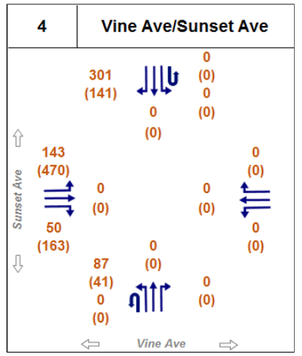
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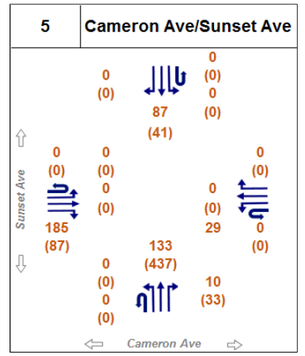
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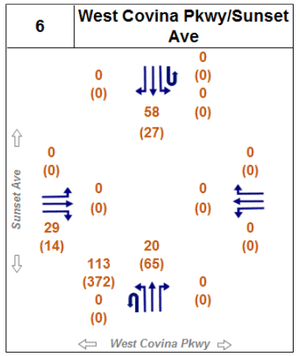
Cameron Ave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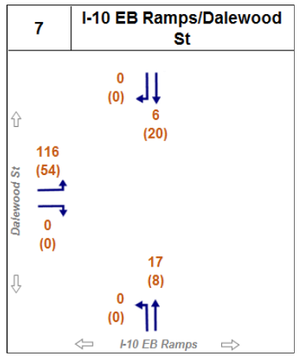
West Covina Pkwy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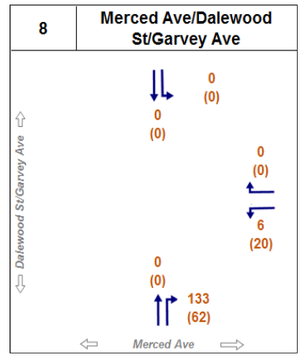
I-10 EB Ramps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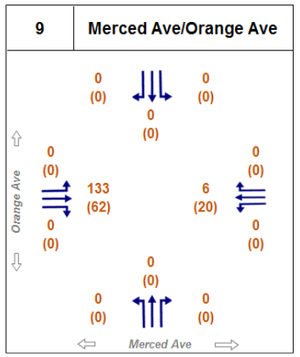
Dalewood St/Garvey Ave
Merced Ave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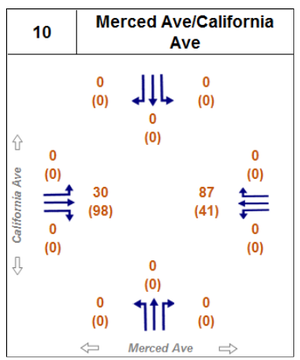
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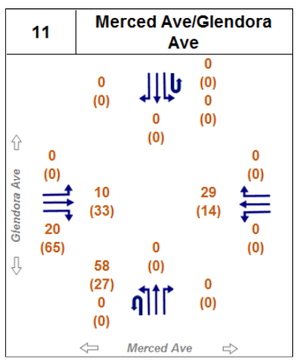
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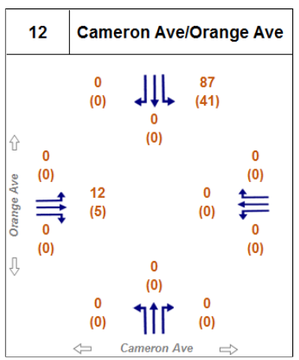
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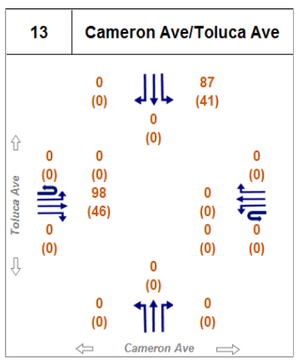
Cameron Ave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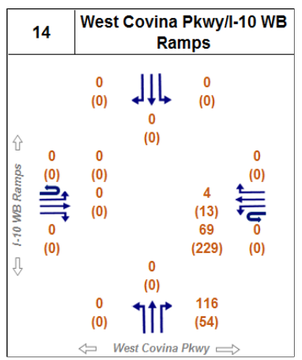
Cameron Ave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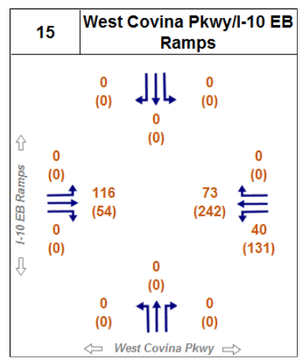
West Covina Pkwy/I-10 WB Ramps
I-10 WB Ramps
West Covina Pkwy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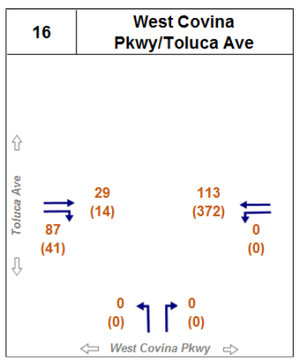
West Covina Pkwy


16
West Covina Pkwy/Toluca Ave
Toluca Ave
West Covina Pkwy

4.3.2. Adjusted Existing + Cumulative + Project Traffic Volumes

For existing conditions, existing peak hour traffic volumes and the project buildout traffic volumes were added to represent Existing + Project conditions. For interim and buildout conditions, adjustments were made to cumulative traffic volumes.

It is assumed that the 1.4% growth in the General Plan contained trips generated by the project site, with the land use assumptions described in section 4.3.1. To correct for this, trips estimated to be generated by the land use assumptions in the General Plan were subtracted from the cumulative traffic volumes. To be conservative, only trips generated by half of the 290,000 SF commercial area included in the General Plan (145,000 SF) were subtracted from the cumulative traffic volumes.

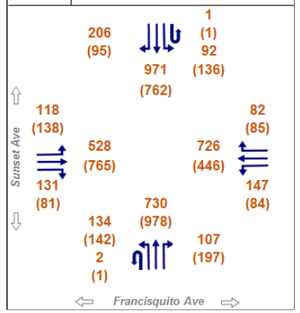
The adjusted new project trips are seen in Table 4. Trip distribution of the subtracted trips was assumed to be the same as project trips (Figure 7). Figures 11, 12, and 13 show traffic volumes for Existing + Cumulative + Project conditions in 2022, 2026, and 2035, respectively.

Table 4. Adjusted Project Trips

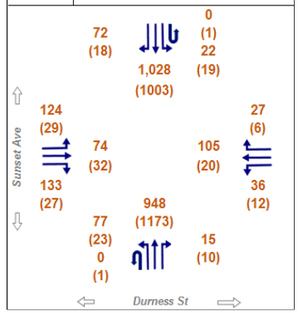
Development Type	Daily	AM		PM	
		In	Out	In	Out
Phase 1 (2022)					
New Project Trips	3,625	223	68	101	255
Estimated General Plan Trips on Project Site	-1,068	-49	-23	-40	-64
Adjusted New Site Trips at the end of Phase 1	***2,558***	***174***	***45***	***61***	***190***
Phase 2 (2026)					
New Project Trips	5,040	303	106	142	342
Estimated General Plan Trips on Project Site	-2,135	-97	-46	-80	-128
Adjusted New Site Trips at the end of Phase 2	***2,905***	***206***	***59***	***62***	***213***
Buildout (2035)					
New Project Trips	9,587	578	198	271	653
Estimated General Plan Trips on Project Site	-4,537	-206	-98	-171	-272
Adjusted New Site Trips at Buildout	***5,050***	***372***	***100***	***100***	***381***



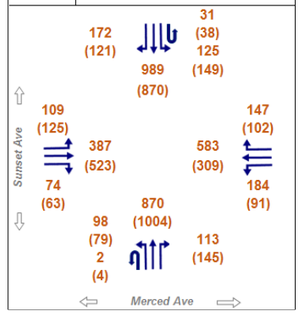
1 Francisquito Ave/Sunset Ave



2 Durness St/Sunset Ave



3 Merced Ave/Sunset Ave



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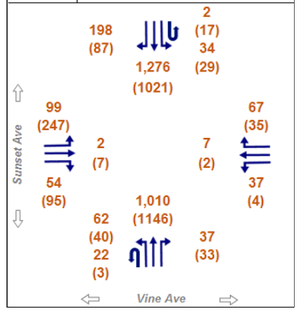

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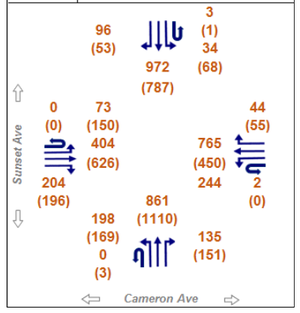

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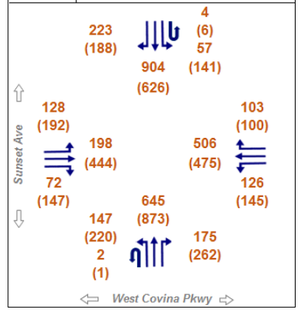
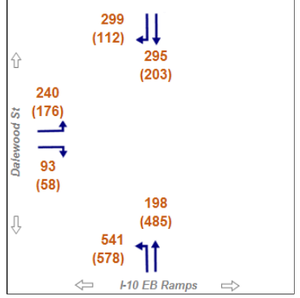
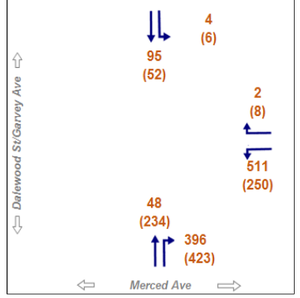


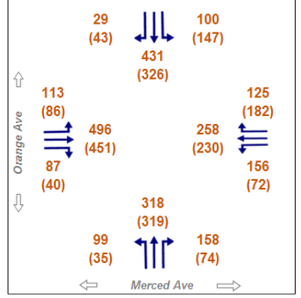
7 I-10 EB Ramps/Dalewood St



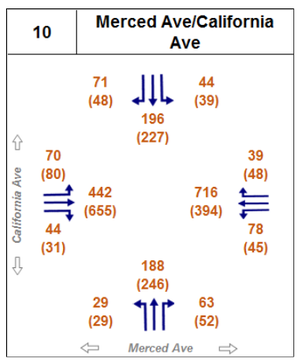
8 Merced Ave/Dalewood St/Garvey Ave



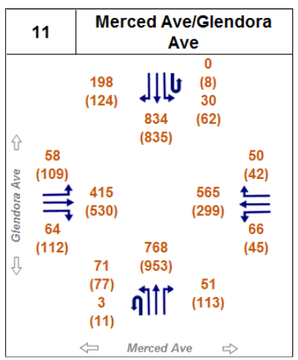
9 Merced Ave/Orange Ave



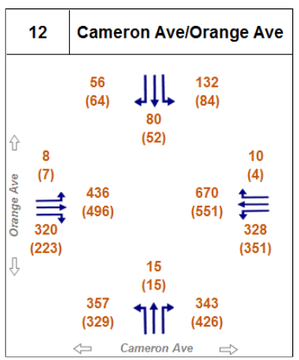
10 Merced Ave/California Ave



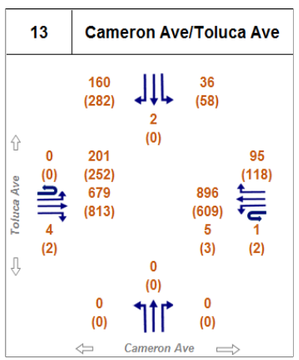
11 Merced Ave/Glendora Ave



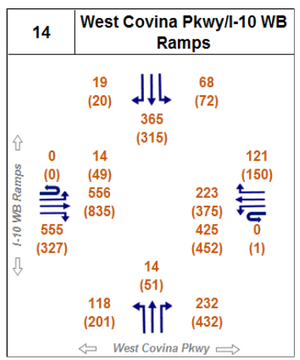
12 Cameron Ave/Orange Ave



13 Cameron Ave/Toluca Ave



14 West Covina Pkwy/I-10 WB Ramps



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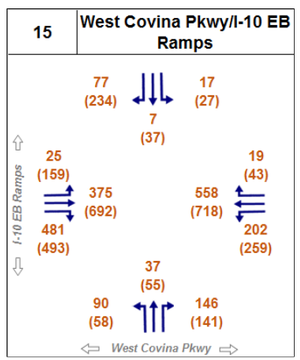
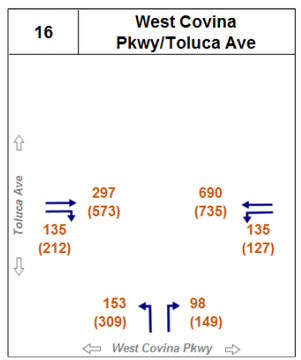


16 West Covina Pkwy/Toluca Ave



Queen of the Valley Hospital
Traffic Impact Study

Figure 11.
Existing + Interim Year 2022 + Project Phases 1A and 1B Traffic Volumes

PSOMAS
June 2019



1	Francisquito Ave/Sunset Ave
Sunset Ave	218 (101) / 1 (1) / 1,028 (807) / 97 (144) / 125 (146) / 87 (89) / 558 (809) / 768 (472) / 139 (86) / 155 (88) / 142 (150) / 773 (1033) / 2 (1) / 113 (208)
Francisquito Ave	

2	Durness St/Sunset Ave
Sunset Ave	76 (19) / 0 (1) / 1,088 (1062) / 23 (20) / 131 (30) / 29 (7) / 78 (34) / 111 (21) / 141 (29) / 38 (12) / 82 (25) / 1,005 (1240) / 0 (1) / 16 (10)
Durness St	

3	Merced Ave/Sunset Ave
Sunset Ave	182 (127) / 32 (40) / 1,047 (921) / 134 (159) / 115 (132) / 157 (108) / 409 (553) / 617 (326) / 78 (67) / 194 (96) / 104 (83) / 920 (1061) / 2 (4) / 120 (153)
Merced Ave	

4	Vine Ave/Sunset Ave
Sunset Ave	220 (90) / 2 (18) / 1,349 (1080) / 36 (30) / 113 (270) / 70 (37) / 2 (8) / 8 (2) / 60 (102) / 39 (4) / 68 (41) / 1,067 (1212) / 23 (3) / 39 (35)
Vine Ave	

5	Cameron Ave/Sunset Ave
Sunset Ave	102 (56) / 3 (1) / 1,030 (832) / 36 (72) / 0 (0) / 47 (58) / 77 (159) / 427 (662) / 224 (207) / 809 (476) / 258 / 2 (0) / 209 (179) / 918 (1181) / 0 (3) / 144 (160)
Cameron Ave	

6	West Covina Pkwy/Sunset Ave
Sunset Ave	236 (199) / 4 (7) / 958 (661) / 60 (149) / 135 (203) / 108 (106) / 209 (469) / 535 (502) / 77 (155) / 133 (153) / 161 (240) / 682 (924) / 2 (1) / 186 (277)
West Covina Pkwy	

7	I-10 EB Ramps/Dalewood St
Dalewood St	316 (118) / 313 (214) / 259 (185) / 98 (61) / 209 (513) / 572 (611)
I-10 EB Ramps	

8	Merced Ave/Dalewood St/Garvey Ave
Dalewood St/Garvey Ave	4 (7) / 101 (55) / 2 (9) / 541 (264) / 50 (247) / 425 (447)
Merced Ave	

9	Merced Ave/Orange Ave
Orange Ave	30 (46) / 106 (155) / 456 (344) / 120 (91) / 132 (192) / 530 (476) / 274 (243) / 92 (42) / 165 (76) / 336 (338) / 105 (37) / 167 (78)
Merced Ave	

10	Merced Ave/California Ave
California Ave	75 (50) / 47 (41) / 207 (240) / 74 (85) / 41 (50) / 468 (695) / 760 (416) / 47 (32) / 83 (48) / 199 (260) / 30 (30) / 67 (55)
Merced Ave	

11	Merced Ave/Glendora Ave
Glendora Ave	209 (131) / 0 (9) / 882 (883) / 31 (66) / 61 (115) / 53 (45) / 440 (561) / 598 (316) / 69 (119) / 69 (48) / 77 (81) / 811 (1007) / 3 (11) / 54 (120)
Merced Ave	

12	Cameron Ave/Orange Ave
Orange Ave	59 (68) / 142 (88) / 85 (55) / 9 (8) / 10 (4) / 462 (524) / 709 (582) / 339 (236) / 346 (371) / 16 (16) / 378 (348) / 362 (450)
Cameron Ave	

13	Cameron Ave/Toluca Ave
Toluca Ave	169 (298) / 40 (60) / 2 (0) / 0 (0) / 212 (266) / 101 (125) / 721 (859) / 948 (644) / 4 (2) / 6 (3) / 1 (2) / 0 (0) / 0 (0) / 0 (0)
Cameron Ave	

14	West Covina Pkwy/I-10 WB Ramps
I-10 WB Ramps	20 (21) / 72 (76) / 386 (333) / 0 (0) / 15 (51) / 127 (159) / 588 (883) / 236 (396) / 587 (345) / 454 (482) / 0 (1) / 15 (54) / 125 (212) / 250 (456)
West Covina Pkwy	

15	West Covina Pkwy/I-10 EB Ramps
I-10 EB Ramps	82 (247) / 18 (29) / 8 (39) / 27 (168) / 20 (46) / 402 (731) / 595 (764) / 509 (521) / 217 (276) / 39 (58) / 95 (61) / 154 (149)
West Covina Pkwy	

16	West Covina Pkwy/Toluca Ave
Toluca Ave	314 (605) / 736 (785) / 145 (224) / 143 (134) / 162 (326) / 104 (158)
West Covina Pkwy	

Queen of the Valley Hospital
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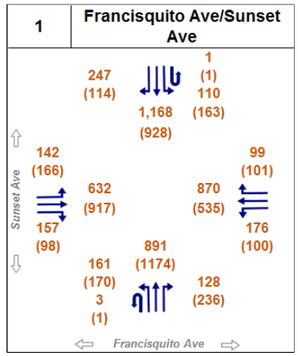
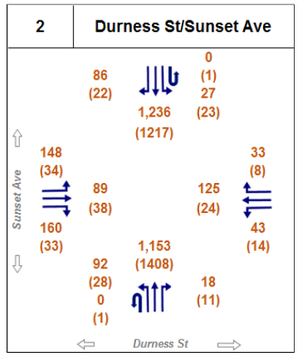
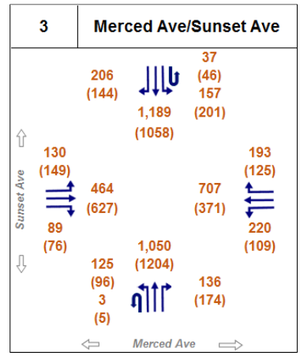
Figure 12.
Existing + Interim Year 2026 + Project Phases 1A, 1B, and 2 Traffic Volumes

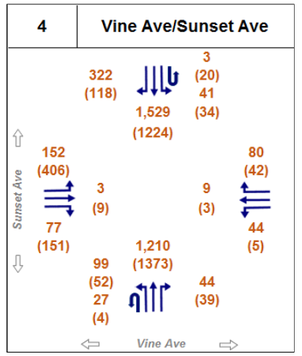
PSOMAS
June 2019

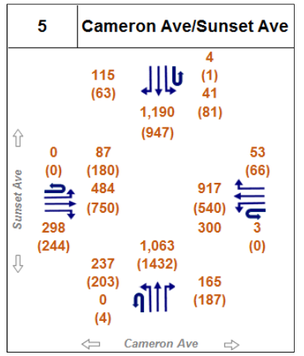


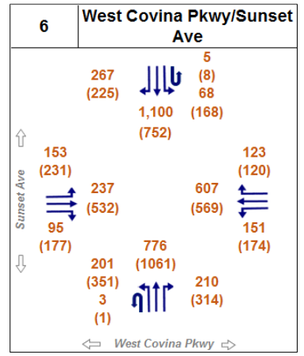


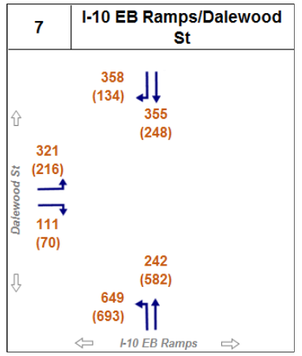


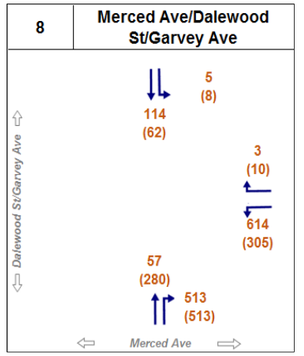


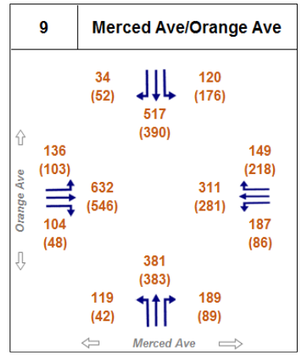


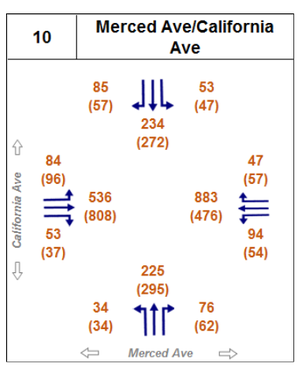


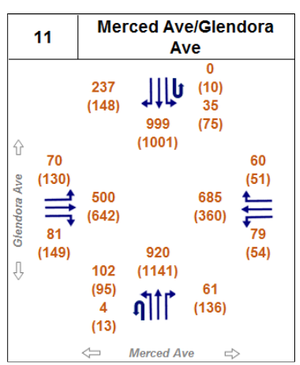


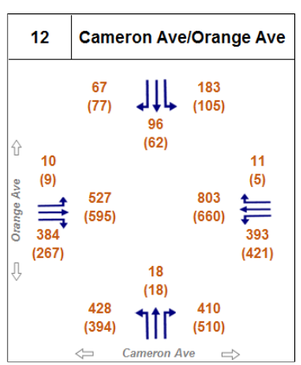


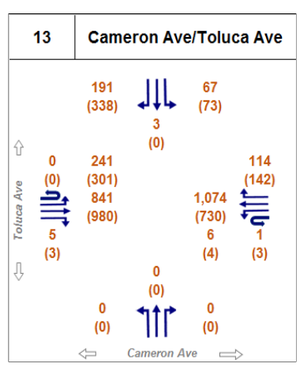


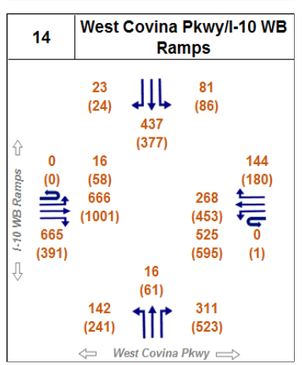


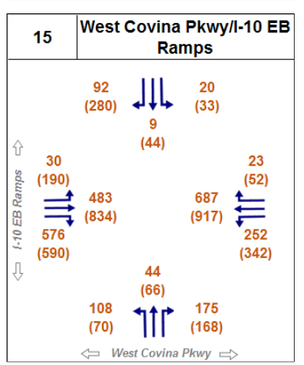












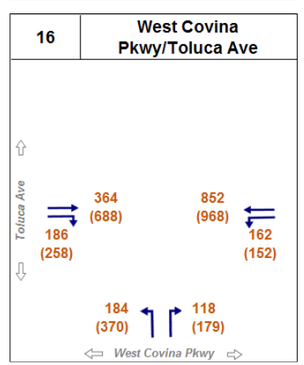


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Figure 13.
General Plan Buildout + Project Buildout Traffic Volumes (2035)

PSOMAS
June 2019

5. SIGNIFICANT IMPACT ANALYSIS

5.1. EXISTING + PROJECT

As previously discussed, the non-Caltrans signalized intersections were evaluated using the ICU methodology, and the unsignalized intersections and Caltrans signalized intersections were evaluated using the HCM methodology.

The General Plan buildout (2035) version of the project was assumed in this analysis for existing plus project conditions. The purpose of the Existing Plus Project Buildout analysis is to provide the baseline for assessing environmental impacts, which is generally the existing conditions at the time that the environmental document for the project is prepared. The analysis assesses the transportation and circulation impacts of the proposed project against existing traffic conditions, irrespective of the proposed project's horizon year.

While a requirement of CEQA, a comparative traffic analysis of the impacts associated with implementation of the proposed project (in this case realization of the full estimated traffic in the year 2035) as assessed against existing traffic conditions, is an unrealistic, hypothetical scenario for the following reasons:

(1) Implementation of the proposed project is not an immediate-term construction project (the horizon year is 2035)

(2) This scenario does not account for future population and development growth in the City and surrounding areas with or without the proposed project

(3) This scenario does not account for other projected land use projects that should also be conditioned to provide for, or contribute to, needed traffic improvements to the circulation system in the study area

(4) The circulation system is projected to change over time with or without the proposed project.

Figure 14 shows the existing plus project traffic volumes. For existing conditions and existing plus project conditions, the ICU spreadsheets and HCM reports are included in Appendix B. Table 5 shows the resulting LOS for each of the study intersections under Existing conditions and Existing Plus Project Buildout conditions, as well as the significant impact analysis. As seen in the table, there are significant impacts at seven intersections.



1	Francisquito Ave/Sunset Ave
Sunset Ave	195 (90) / 934 (768) / 1 (1) / 87 (129) / 112 (131) / 499 (724) / 687 (422) / 78 (80) / 124 (77) / 139 (79) / 127 (134) / 732 (946) / 101 (186) / 2 (1)
Francisquito Ave	

2	Durness St/Sunset Ave
Sunset Ave	68 (17) / 988 (996) / 0 (1) / 21 (18) / 117 (27) / 70 (30) / 99 (19) / 26 (6) / 126 (26) / 939 (1131) / 34 (11) / 73 (22) / 0 (1) / 14 (9)
Durness St	

3	Merced Ave/Sunset Ave
Sunset Ave	163 (114) / 951 (870) / 29 (36) / 142 (212) / 103 (118) / 366 (495) / 572 (303) / 181 (118) / 70 (60) / 843 (961) / 174 (86) / 113 (86) / 2 (4) / 107 (137)
Merced Ave	

4	Vine Ave/Sunset Ave
Sunset Ave	402 (193) / 1,207 (966) / 2 (16) / 32 (27) / 206 (574) / 2 (7) / 7 (2) / 63 (33) / 91 (207) / 955 (1084) / 35 (4) / 121 (70) / 21 (3) / 35 (31)
Vine Ave	

5	Cameron Ave/Sunset Ave
Sunset Ave	91 (50) / 982 (777) / 3 (1) / 32 (64) / 0 (0) / 69 (142) / 382 (592) / 42 (52) / 326 (254) / 919 (1366) / 251 (426) / 2 (0) / 187 (160) / 0 (3) / 136 (166)
Cameron Ave	

6	West Covina Pkwy/Sunset Ave
Sunset Ave	211 (178) / 897 (613) / 4 (6) / 54 (133) / 121 (182) / 187 (420) / 479 (449) / 97 (95) / 89 (150) / 625 (873) / 119 (137) / 227 (478) / 2 (1) / 166 (248)
West Covina Pkwy	

7	I-10 EB Ramps/Dalewood St
Dalewood St	283 (106) / 284 (206) / 310 (209) / 88 (55) / 199 (465) / 512 (547)
I-10 EB Ramps	

8	Merced Ave/Dalewood St/Garvey Ave
Dalewood St/Garvey Ave	90 (49) / 4 (6) / 2 (8) / 488 (251) / 45 (221) / 470 (449)
Merced Ave	

9	Merced Ave/Orange Ave
Orange Ave	27 (41) / 408 (308) / 95 (139) / 107 (81) / 564 (475) / 249 (232) / 118 (172) / 82 (38) / 301 (302) / 148 (68) / 94 (33) / 149 (70)
Merced Ave	

10	Merced Ave/California Ave
California Ave	67 (45) / 185 (215) / 42 (37) / 66 (76) / 441 (691) / 740 (405) / 37 (45) / 42 (29) / 178 (233) / 74 (43) / 27 (27) / 60 (49)
Merced Ave	

11	Merced Ave/Glendora Ave
Glendora Ave	187 (117) / 789 (790) / 0 (8) / 28 (59) / 55 (103) / 401 (525) / 555 (294) / 47 (40) / 76 (153) / 726 (901) / 62 (43) / 109 (94) / 3 (10) / 48 (107)
Merced Ave	

12	Cameron Ave/Orange Ave
Orange Ave	53 (61) / 76 (49) / 187 (112) / 8 (7) / 422 (473) / 634 (521) / 9 (4) / 303 (211) / 14 (14) / 310 (332) / 338 (311) / 324 (403)
Cameron Ave	

13	Cameron Ave/Toluca Ave
Toluca Ave	151 (267) / 2 (0) / 96 (87) / 0 (0) / 190 (238) / 712 (806) / 848 (576) / 90 (112) / 4 (2) / 5 (3) / 1 (2) / 0 () / 0 () / 0 ()
Cameron Ave	

14	West Covina Pkwy/I-10 WB Ramps
I-10 WB Ramps	18 (19) / 345 (298) / 64 (68) / 0 (0) / 13 (46) / 526 (790) / 214 (364) / 114 (142) / 525 (309) / 13 (48) / 456 (593) / 0 (1) / 112 (190) / 302 (451)
West Covina Pkwy	

15	West Covina Pkwy/I-10 EB Ramps
I-10 EB Ramps	73 (221) / 7 (35) / 16 (26) / 24 (150) / 438 (697) / 586 (855) / 18 (41) / 455 (466) / 35 (52) / 223 (340) / 85 (55) / 138 (133)
West Covina Pkwy	

16	West Covina Pkwy/Toluca Ave
Toluca Ave	301 (553) / 741 (965) / 190 (233) / 128 (120) / 145 (292) / 93 (141)
West Covina Pkwy	

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Figure 14.
Existing + Project Buildout Traffic Volumes

PSOMAS
June 2019

Table 5. Existing + Project Buildout Significant Impacts

	Intersection	Intersection Control	Existing						Existing Plus Project Buildout						Increase in Delay (E or F only)		Increase in V/C		Significant Impact?	
			AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour								
			Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	AM	PM	AM	PM	AM	PM
1	Francisquito Ave/Sunset Ave	Signalized		0.751	C		0.768	C		0.757	C		0.777	C			0.01	0.01	NO	NO
2	Durness St/Sunset Ave	Signalized		0.648	B		0.511	A		0.654	B		0.520	A			0.01	0.01	NO	NO
3	Merced Ave/Sunset Ave	Signalized		0.717	C		0.717	C		0.770	C		0.783	C			0.05	0.07	YES	YES
4	Vine Ave/Sunset Ave	Signalized		0.592	A		0.556	A		0.735	C		0.849	D			0.14	0.29	NO	NO
5	Cameron Ave/Sunset Ave	Signalized		0.800	C		0.730	C		0.903	E		0.902	E			0.10	0.17	YES	YES
6	West Covina Pkwy/Sunset Ave	Signalized		0.690	B		0.723	C		0.779	C		0.875	D			0.09	0.15	NO	YES
7	I-10 EB Ramps/Dalewood St*	Signalized	23.2		C	17.3		B	27.0		C	19.1		B	N/A	N/A			NO	NO
8	Merced Ave/Dalewood St/Garvey Ave	Unsignalized	40.0		E	23.8		C	60.8		F	35.8		E	20.8	12.0			YES	YES
9	Merced Ave/Orange Ave	Signalized		0.527	A		0.475	A		0.569	A		0.494	A			0.04	0.02	NO	NO
10	Merced Ave/California Ave	Signalized		0.962	E		0.958	E		1.026	F		1.032	F			0.06	0.07	YES	YES
11	Merced Ave/Glendora Ave	Signalized		0.594	A		0.632	B		0.639	B		0.662	B			0.05	0.03	NO	NO
12	Cameron Ave/Orange Ave	Signalized		0.847	D		0.847	D		0.905	E		0.874	D			0.06	0.03	YES	YES
13	Cameron Ave/Toluca Ave	Unsignalized	86.1**		F	159.8**		F	> 5 min**		F	> 5 min**		F	N/A	N/A			NO***	NO***
14	West Covina Pkwy/I-10 WB Ramps*	Signalized	39.8		D	36.5		D	44.7		D	76.0		E	N/A	39.5			NO	YES
15	West Covina Pkwy/I-10 EB Ramps*	Signalized	10.0		A	13.7		B	10.7		B	15.8		B	N/A	N/A			NO	NO
16	West Covina Pkwy/Toluca Ave	Signalized		0.445	A		0.614	B		0.480	A		0.672	B			0.04	0.06	NO	NO

*Caltrans Intersection
**Highest lane delay at TWSC Intersection
***No significant impact because intersection delay is not defined for TWSC

The Cameron Avenue/Toluca Avenue intersection is two-way stop-controlled (TWSC). Because intersection delay is not defined for TWSC intersections, Table 5 shows the highest lane delay at the intersection, which occurs on the Toluca Avenue southwest shared through-left lane. Although the highest lane delay represents a LOS F, a traffic signal is not recommended because the low left turn volumes from Toluca Avenue would not warrant a traffic signal. Left turning vehicles from Toluca Avenue could also take alternative routes to avoid delays at the intersection during the peak hours.

In addition to the study intersections, the seven Caltrans study segments were evaluated for existing conditions. As shown in Table 6, all segments are shown to operate at LOS D or better; therefore, no mitigation is required.

Table 6. Existing + Project Buildout Segment Analysis

Caltrans Segment	Peak Hour Volumes (pc/hr/ln)		LOS	
	Existing	Existing Plus Project Buildout	Existing	Existing Plus Project Buildout
I-10, between I-605 and Bess Ave/Frazier St	1,236	1,243	C	C
I-10, between Bess Ave/Frazier St and Baldwin Park Blvd	1,210	1,233	C	C
I-10, between Baldwin Park Blvd and Francisquito Ave	1,166	1,193	B	C
I-10, between Francisquito Ave and Puente Ave	1,575	1,616	C	C
I-10, between Puente Ave and Pacific Ave/West Covina Pkwy	1,602	1,636	C	C
I-10, between Pacific Ave/West Covina Pkwy and Vincent Ave	1,722	1,745	D	D
I-10, between Vincent Ave and Azusa Ave	1,862	1,875	D	D

5.1.1. Mitigation Measures

To reduce significant traffic impacts to a level considered to be less than significant for the Existing Plus Project Buildout conditions, several mitigation measures were recommended. Most of the improvements are not expected to require physical construction, with only one exception (West Covina Parkway/Sunset Avenue).

The following list includes the recommended improvements for each of the intersections with a significant project impact under the Existing Plus Project Buildout scenario.

- Merced Ave/Sunset Ave
    - Due to right-of-way constraints, no improvements are considered to be feasible at this intersection. This impact would be significant and unavoidable and a statement of overriding considerations is required.
- Cameron Ave/Sunset Ave
    - Convert the outside lane on Sunset Avenue to a shared thru-right turn lane in both directions. This will require additional striping on the downstream side of the intersection in both directions and will require that parking be prohibited on Sunset Avenue in the improvement area.
        - Even with this improvement, there will still be a significant impact in the PM peak hour. This impact would be significant and unavoidable and a statement of overriding considerations is required.
    - These recommendations are also applicable to impacts that occur at this intersection in 2022, 2026, and at buildout; in those cases, the improvement is expected to fully mitigate any otherwise significant impact.
- West Covina Pkwy/Sunset Ave
    - Restripe both approaches of West Covina Parkway to include two thru lanes and an exclusive right turn lane. This should only require restriping, but if needed, right-of-way is available.
        - Even with this improvement, there will still be a significant impact in the PM peak hour. This impact would be significant and unavoidable and a statement of overriding considerations is required.
    - These recommendations are also applicable to impacts that occur at this intersection in 2022, 2026, and at buildout; in those cases, the improvement is expected to fully mitigate any otherwise significant impact.
- Merced Ave/Dalewood St/Garvey Ave
    - Restripe the eastbound approach to include one thru lane and one exclusive right turn lane.
    - Convert the intersection to two-way stop control, with free eastbound and westbound movements.

    - This recommendation is also applicable to impacts that occur at this intersection in 2022, 2026, and at buildout.
- Merced Ave/California Ave
    - Restripe both approaches on Merced Avenue to include one exclusive left turn lane, one thru lane, and one shared thru-right turn lane.
    - This recommendation is also applicable to impacts that occur at this intersection in 2022, 2026, and at buildout.
- Cameron Ave/Orange Ave
    - Restripe both approaches on Orange Avenue to include one exclusive left turn lane and a shared thru-right turn lane.
    - This recommendation is also applicable to impacts that occur at this intersection in 2022, 2026, and at buildout.
- West Covina Pkwy/I-10 WB Ramps
    - Restripe the northwest-bound West Covina Parkway approach to include two left turn lanes, one thru lane, and a shared thru-right turn lane.
    - This recommendation is also applicable to impacts that occur at this intersection in 2022 and at buildout.

Table 7 shows the significant impact evaluation with the listed mitigation measures in place. As seen in the table, the mitigation measures reduce the project impact to a less than significant level for four of the seven intersections. Since the Merced Avenue/Dalewood Street/Garvey Avenue intersection mitigation is to convert the intersection into a TWSC configuration, the highest lane delay, which occurs for left turns from Merced Avenue, is shown in Table 7.

5.2. EXISTING + INTERIM YEAR 2022 + PROJECT PHASES 1A AND 1B

As for existing conditions, the non-Caltrans signalized intersections were evaluated using the ICU methodology, and the unsignalized intersections and Caltrans signalized intersections were evaluated using the HCM methodology. The ICU spreadsheets and HCM reports for the interim year 2022 are included in Appendix C. Table 8 shows the resulting LOS for each of the study intersections under Existing Plus Interim Year 2022 conditions and Existing Plus Interim Year 2022 Plus Project Phases 1A and 1B conditions, as well as the significant impact analysis.

Table 7. Existing + Project Buildout Mitigated Impacts Analysis

	Intersection	Intersection Control	Existing						Existing Plus Project Buildout With Mitigation						Increase in Delay (E or F only)		Increase in V/C		Significant Impact?	
			AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour								
			Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	AM	PM	AM	PM	AM	PM
3	Merced Ave/Sunset Ave	Signalized		0.717	C		0.717	C		0.770	C		0.783	C			0.05	0.07	YES	YES
5	Cameron Ave/Sunset Ave	Signalized		0.800	C		0.730	C		0.820	D		0.794	C			0.02	0.06	NO	YES
6	West Covina Pkwy/Sunset Ave	Signalized		0.690	B		0.723	C		0.749	C		0.845	D			0.06	0.12	NO	YES
8	Merced Ave/Dalewood St/Garvey Ave	Unsignalized	40.0		E	23.8		C	17.6**		C	14.3**		B	N/A	N/A			NO***	NO***
10	Merced Ave/California Ave	Signalized		0.962	E		0.958	E		0.654	B		0.672	B			-0.31	-0.29	NO	NO
12	Cameron Ave/Orange Ave	Signalized		0.847	D		0.847	D		0.848	D		0.852	D			0.00	0.01	NO	NO
14	West Covina Pkwy/I-10 WB Ramps*	Signalized	39.8		D	36.5		D	30.3		C	33.0		C	N/A	N/A			NO	NO

*Caltrans Intersection

**Highest lane delay at TWSC Intersection

***No significant impact because intersection delay is not defined for TWSC

Table 8. Existing + Interim Year 2022 + Project Phases 1A and 1B Significant Impacts

	Intersection	Intersection Control	Existing Plus Interim Year 2022						Existing Plus Interim Year 2022 Plus Project Phases 1A and 1B						Increase in Delay (E or F only)		Increase in V/C		Significant Impact?	
			AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour								
			Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	AM	PM	AM	PM	AM	PM
1	Francisquito Ave/Sunset Ave	Signalized		0.788	C		0.806	D		0.789	C		0.808	D			0.00	0.00	NO	NO
2	Durness St/Sunset Ave	Signalized		0.680	B		0.535	A		0.681	B		0.537	A			0.00	0.00	NO	NO
3	Merced Ave/Sunset Ave	Signalized		0.753	C		0.752	C		0.768	C		0.771	C			0.02	0.02	NO	NO
4	Vine Ave/Sunset Ave	Signalized		0.620	B		0.582	A		0.656	B		0.668	B			0.04	0.09	NO	NO
5	Cameron Ave/Sunset Ave	Signalized		0.840	D		0.767	C		0.871	D		0.814	D			0.03	0.05	YES	YES
6	West Covina Pkwy/Sunset Ave	Signalized		0.724	C		0.758	C		0.746	C		0.764	C			0.02	0.01	NO	NO
7	I-10 EB Ramps/Dalewood St*	Signalized	25.3		C	18.0		B	26.5		C	18.3		B	N/A	N/A			NO	NO
8	Merced Ave/Dalewood St/Garvey Ave	Unsignalized	51.9		F	30.2		D	56.6		F	32.5		D	4.7	N/A			YES	NO
9	Merced Ave/Orange Ave	Signalized		0.551	A		0.496	A		0.564	A		0.501	A			0.01	0.00	NO	NO
10	Merced Ave/California Ave	Signalized		1.012	F		1.007	F		1.030	F		1.027	F			0.02	0.02	YES	YES
11	Merced Ave/Glendora Ave	Signalized		0.622	B		0.661	B		0.635	B		0.670	B			0.01	0.01	NO	NO
12	Cameron Ave/Orange Ave	Signalized		0.889	D		0.889	D		0.906	E		0.895	D			0.02	0.01	YES	NO
13	Cameron Ave/Toluca Ave	Unsignalized	115.2**		F	246**		F	241.9**		F	286.6**		F	N/A	N/A			NO***	NO***
14	West Covina Pkwy/I-10 WB Ramps*	Signalized	48.6		D	43.2		D	49.2		D	50.0		D	N/A	N/A			NO	NO
15	West Covina Pkwy/I-10 EB Ramps*	Signalized	10.3		B	14.1		B	10.4		B	15.0		B	N/A	N/A			NO	NO
16	West Covina Pkwy/Toluca Ave	Signalized		0.464	A		0.644	B		0.473	A		0.645	B			0.01	0.00	NO	NO

*Caltrans Intersection
**Highest lane delay at TWSC Intersection
***No significant impact because intersection delay is not defined for TWSC

As seen in the table, there are significant impacts at four intersections. As previously mentioned, the highest lane delay, which occurs on the Toluca Avenue southwest shared through-left lane, is shown in Table 8 for the Cameron Avenue/Toluca Avenue intersection. Again, although the highest lane delay represents a LOS F, a traffic signal is not recommended since the low left turn volumes from Toluca Avenue would not warrant a traffic signal. Left turning vehicles from Toluca Avenue could also take alternative routes to avoid delays at the intersection during the peak hours.

In addition to the study intersections, the seven Caltrans study segments were evaluated for 2022 conditions. As shown in Table 9, all segments are expected to operate at LOS C with or without the project; therefore, no mitigation is required.

Table 9. Existing + Interim Year 2022 + Project Phases 1A and 1B Segment Analysis

Caltrans Segment	Peak Hour Volumes (pc/hr/ln)		LOS	
	Existing Plus Interim Year 2022	Existing Plus Interim Year 2022 Plus Project Phases 1A and 1B	Existing Plus Interim Year 2022	Existing Plus Interim Year 2022 Plus Project Phases 1A and 1B
I-10, between I-605 and Bess Ave/Frazier St	1,313	1,315	C	C
I-10, between Bess Ave/Frazier St and Baldwin Park Blvd	1,285	1,294	C	C
I-10, between Baldwin Park Blvd and Francisquito Ave	1,238	1,248	C	C
I-10, between Francisquito Ave and Puente Ave	1,338	1,350	C	C
I-10, between Puente Ave and Pacific Ave/West Covina Pkwy	1,360	1,371	C	C
I-10, between Pacific Ave/West Covina Pkwy and Vincent Ave	1,462	1,470	C	C
I-10, between Vincent Ave and Azusa Ave	1,581	1,585	C	C

5.2.1. Mitigation Measures

The following list includes the recommended improvements for each of the intersections with a significant project impact under the Existing Plus Interim Year 2022 Plus Project Phases 1A and 1B scenario. Note that all the improvements listed below were also included in the Existing Plus Project Buildout mitigation.

- Cameron Ave/Sunset Ave
    - Convert the outside lane on Sunset Avenue to a shared thru-right turn lane in both directions. This will require additional striping on the downstream side of the intersection in both directions and will require that parking be prohibited on Sunset Avenue in the improvement area.
- Merced Ave/Dalewood St/Garvey Ave
    - Restripe the eastbound approach to include one thru lane and one exclusive right turn lane.
    - Convert intersection to a two-way stop control, with free eastbound and westbound approaches.
- Merced Ave/California Ave
    - Restripe both approaches on Merced Avenue to include one exclusive left turn lane, one thru lane, and one shared thru-right turn lane.
- Cameron Ave/Orange Ave
    - Restripe both approaches on Orange Avenue to include one exclusive left turn lane and a shared thru-right turn lane.

Table 10 shows the significant impact evaluation with the listed mitigation measures in place. As seen in the table, the mitigation measures reduce the project impact to a less than significant level for all four of the intersections. Since the Merced Avenue/Dalewood Street/Garvey Avenue intersection mitigation is to convert the intersection into a TWSC configuration, the highest lane delay, which occurs for left turns from Merced Avenue, is shown in Table 10.

5.3. EXISTING + INTERIM YEAR 2026 + PROJECT PHASES 1A, 1B, AND 2

As for the previous scenarios, the non-Caltrans signalized intersections were evaluated using the ICU methodology, and the unsignalized intersections and Caltrans signalized intersections were evaluated using the HCM methodology. The ICU spreadsheets and HCM reports for the interim year 2026 are included in Appendix D. Table 11 shows the resulting LOS for each of the study intersections under Existing Plus Interim Year 2026 conditions and Existing Plus Interim Year 2026 Plus Project Phases 1A, 1B, and 2 conditions, as well as the significant impact analysis.

Table 10. Existing + Interim Year 2022 + Project Phases 1A and 1B Mitigated Impacts Analysis

	Intersection	Intersection Control	Existing Plus Interim Year 2022						Existing Plus Interim Year 2022 Plus Project Phases 1A and 1B With Mitigation						Increase in Delay (E or F only)		Increase in V/C		Significant Impact?	
			AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour								
			Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	AM	PM	AM	PM	AM	PM
5	Cameron Ave/Sunset Ave	Signalized		0.840	D		0.767	C		0.790	C		0.730	C			-0.05	-0.04	NO	NO
8	Merced Ave/Dalewood St/Garvey Ave	Unsignalized	51.9		F	30.2		D	19.2**		C	14.8**		B	N/A	N/A			NO***	NO***
10	Merced Ave/California Ave	Signalized		1.012	F		1.007	F		0.665	B		0.681	B			-0.35	-0.33	NO	NO
12	Cameron Ave/Orange Ave	Signalized		0.889	D		0.889	D		0.849	D		0.872	D			-0.04	-0.02	NO	NO

**Highest lane delay at TWSC Intersection

***No significant impact because intersection delay is not defined for TWSC

Table 11. Existing + Interim Year 2026 + Project Phases 1A, 1B, and 2 Significant Impacts

	Intersection	Intersection Control	Existing Plus Interim Year 2026						Existing Plus Interim Year 2026 Plus Project Phases 1A, 1B, and 2						Increase in Delay (E or F only)		Increase in V/C		Significant Impact?	
			AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour								
			Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	AM	PM	AM	PM	AM	PM
1	Francisquito Ave/Sunset Ave	Signalized		0.828	D		0.846	D		0.829	D		0.848	D			0.00	0.00	NO	NO
2	Durness St/Sunset Ave	Signalized		0.713	C		0.559	A		0.715	C		0.561	A			0.00	0.00	NO	NO
3	Merced Ave/Sunset Ave	Signalized		0.790	C		0.789	C		0.807	D		0.810	D			0.02	0.02	NO	NO
4	Vine Ave/Sunset Ave	Signalized		0.648	B		0.609	B		0.694	B		0.706	C			0.05	0.10	NO	NO
5	Cameron Ave/Sunset Ave	Signalized		0.882	D		0.805	D		0.918	E		0.857	D			0.04	0.05	YES	YES
6	West Covina Pkwy/Sunset Ave	Signalized		0.759	C		0.797	C		0.787	C		0.803	D			0.03	0.01	NO	NO
7	I-10 EB Ramps/Dalewood St*	Signalized	28.6		C	18.8		B	30.4		C	19.2		B	N/A	N/A			NO	NO
8	Merced Ave/Dalewood St/Garvey Ave	Unsignalized	66.5		F	40.8		E	73.8		F	44.7		E	7.3	3.9			YES	YES
9	Merced Ave/Orange Ave	Signalized		0.577	A		0.519	A		0.592	A		0.523	A			0.01	0.00	NO	NO
10	Merced Ave/California Ave	Signalized		1.064	F		1.059	F		1.086	F		1.081	F			0.02	0.02	YES	YES
11	Merced Ave/Glendora Ave	Signalized		0.652	B		0.694	B		0.667	B		0.704	C			0.02	0.01	NO	NO
12	Cameron Ave/Orange Ave	Signalized		0.935	E		0.934	E		0.955	E		0.940	E			0.02	0.01	YES	YES
13	Cameron Ave/Toluca Ave	Unsignalized	153.9**		F	> 5 min**		F	> 5 min**		F	> 5 min**		F	N/A	N/A			NO***	NO***
14	West Covina Pkwy/I-10 WB Ramps*	Signalized	61.1		E	52.5		D	62.3		E	62.6		E	1.2	10.1			YES	YES
15	West Covina Pkwy/I-10 EB Ramps*	Signalized	10.9		B	14.9		B	11.1		B	15.5		B	N/A	N/A			NO	NO
16	West Covina Pkwy/Toluca Ave	Signalized		0.486	A		0.674	B		0.496	A		0.675	B			0.01	0.00	NO	NO

*Caltrans Intersection
**Highest lane delay at TWSC Intersection
***No significant impact because intersection delay is not defined for TWSC

As seen in Table 11, there are significant impacts at five intersections. As previously mentioned, the highest lane delay, which occurs on the Toluca Avenue southwest shared through-left lane, is shown in the table for the Cameron Avenue/Toluca Avenue intersection. As was the case for the 2022 conditions, a traffic signal is not recommended because the low left turn volumes from Toluca Avenue would not warrant a traffic signal. Left turning vehicles from Toluca Avenue could also take alternative routes to avoid delays at the intersection during the peak hours.

In addition to the study intersections, the seven Caltrans study segments were evaluated for 2026 conditions with and without the project. As shown in Table 12, all the segments are expected to operate at LOS C with or without the project; therefore, no mitigation is required.

Table 12. Existing + Interim Year 2026 + Project Phases 1A, 1B, and 2 Segment Analysis

Caltrans Segment	Peak Hour Volumes (pc/hr/ln)		LOS	
	Existing Plus Interim Year 2026	Existing Plus Interim Year 2026 Plus Project Phases 1A, 1B, and 2	Existing Plus Interim Year 2026	Existing Plus Interim Year 2026 Plus Project Phases 1A, 1B, and 2
I-10, between I-605 and Bess Ave/Frazier St	1,366	1,369	C	C
I-10, between Bess Ave/Frazier St and Baldwin Park Blvd	1,337	1,349	C	C
I-10, between Baldwin Park Blvd and Francisquito Ave	1,288	1,302	C	C
I-10, between Francisquito Ave and Puente Ave	1,392	1,409	C	C
I-10, between Puente Ave and Pacific Ave/West Covina Pkwy	1,416	1,430	C	C
I-10, between Pacific Ave/West Covina Pkwy and Vincent Ave	1,522	1,531	C	C
I-10, between Vincent Ave and Azusa Ave	1,645	1,651	C	C

5.3.1. Mitigation Measures

The following list includes the recommended improvements for each of the intersections with a significant project impact under the Existing Plus Interim Year 2026 Plus Project Phases 1A, 1B, and 2 scenario. Note that all the improvements listed below were also included in the Existing Plus Project Buildout mitigation.

- Cameron Ave/Sunset Ave
    - Convert the outside lane on Sunset Avenue to a shared thru-right turn lane in both directions. This will require additional striping on the downstream side of the intersection in both directions and will require that parking be prohibited on Sunset Avenue in the improvement area.
- Merced Ave/Dalewood St/Garvey Ave
    - Restripe the eastbound approach to include one thru lane and one exclusive right turn lane.
    - Convert intersection to a two-way stop control, with free eastbound and westbound approaches.
- Merced Ave/California Ave
    - Restripe both approaches on Merced Avenue to include one exclusive left turn lane, one thru lane, and one shared thru-right turn lane.
- Cameron Ave/Orange Ave
    - Restripe both approaches on Orange Avenue to include one exclusive left turn lane and a shared thru-right turn lane.
- West Covina Pkwy/I-10 WB Ramps
    - Restripe the northwest-bound West Covina Parkway approach to include two left turn lanes, one thru lane, and a shared thru-right turn lane.

Table 13 shows the significant impact evaluation with the listed mitigation measures in place. As seen in the table, the mitigation measures reduce the project impact to a less than significant level for all five of the intersections. Because the Merced Avenue/ Dalewood Street/Garvey Avenue intersection mitigation will convert the intersection into a TWSC configuration, the highest lane delay is shown in Table 13.

5.4. GENERAL PLAN BUILDOUT + PROJECT BUILDOUT (2035)

For the General Plan Buildout scenario, the non-Caltrans signalized intersections were evaluated using the ICU methodology, and the unsignalized intersections and Caltrans signalized intersections were evaluated using the HCM methodology, as for the previous scenarios. The ICU spreadsheets and HCM reports for the year 2035 are included in Appendix E.

Table 13. Existing + Interim Year 2026 + Project Phases 1A, 1B, and 2 Mitigated Impacts Analysis

	Intersection	Intersection Control	Existing Plus Interim Year 2026						Existing Plus Interim Year 2026 Plus Project Phases 1A, 1B, and 2 With Mitigation						Increase in Delay (E or F only)		Increase in V/C		Significant Impact?	
			AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour								
			Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	AM	PM	AM	PM	AM	PM
5	Cameron Ave/Sunset Ave	Signalized		0.882	D		0.805	D		0.832	D		0.767	C			-0.05	-0.04	NO	NO
8	Merced Ave/Dalewood St/Garvey Ave	Unsignalized	66.5		F	40.8		E	21.8**		C	16.0**		C	N/A	N/A			NO***	NO***
10	Merced Ave/California Ave	Signalized		1.064	F		1.059	F		0.698	B		0.714	C			-0.37	-0.34	NO	NO
12	Cameron Ave/Orange Ave	Signalized		0.935	E		0.934	E		0.893	D		0.916	E			-0.04	-0.02	NO	NO
14	West Covina Pkwy/I-10 WB Ramps*	Signalized	61.1		E	52.5		D	37.4		D	39.8		D	N/A	N/A			NO	NO

*Caltrans Intersection
**Highest lane delay at TWSC Intersection
***No significant impact because intersection delay is not defined for TWSC

Table 14 (on the following page) shows the resulting LOS for each of the study intersections under General Plan Buildout conditions and General Plan Buildout Plus Project Buildout conditions, as well as the significant impact analysis.

As shown in the table, there are significant impacts at eight intersections. As previously mentioned, the highest lane delay, which occurs on the Toluca Avenue southwest shared through-left lane, is shown in Table 14 (next page) for the Cameron Avenue/Toluca Avenue intersection. A traffic signal is not recommended because the low left turn volumes from Toluca Avenue would not warrant a traffic signal. Left turning vehicles from Toluca Avenue could also take alternative routes to avoid delays at the intersection during the peak hours.

In addition to the study intersections, the seven Caltrans study segments were evaluated for buildout conditions. As shown in Table 15, all the segments are expected to operate at LOS D or better with or without the project; therefore, no mitigation is required.

Table 15. General Plan Buildout + Project Buildout Segment Analysis

Caltrans Segment	Peak Hour Volumes (pc/hr/ln)		LOS	
	General Plan Buildout	General Plan Buildout Plus Project Buildout	General Plan Buildout	General Plan Buildout Plus Project Buildout
I-10, between I-605 and Bess Ave/Frazier St	1,494	1,500	C	C
I-10, between Bess Ave/Frazier St and Baldwin Park Blvd	1,462	1,485	C	C
I-10, between Baldwin Park Blvd and Francisquito Ave	1,408	1,435	C	C
I-10, between Francisquito Ave and Puente Ave	1,522	1,555	C	C
I-10, between Puente Ave and Pacific Ave/West Covina Pkwy	1,548	1,575	C	C
I-10, between Pacific Ave/West Covina Pkwy and Vincent Ave	1,664	1,683	C	D
I-10, between Vincent Ave and Azusa Ave	1,799	1,810	D	D

Table 14. General Plan Buildout + Project Buildout Significant Impacts

	Intersection	Intersection Control	General Plan Buildout						General Plan Buildout Plus Project Buildout (2035)						Increase in Delay (E or F only)		Increase in V/C		Significant Impact?	
			AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour								
			Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	AM	PM	AM	PM	AM	PM
1	Francisquito Ave/Sunset Ave	Signalized		0.925	E		0.946	E		0.928	E		0.949	E			0.00	0.00	NO	NO
2	Durness St/Sunset Ave	Signalized		0.794	C		0.621	B		0.797	C		0.624	B			0.00	0.00	NO	NO
3	Merced Ave/Sunset Ave	Signalized		0.882	D		0.881	D		0.914	E		0.918	E			0.03	0.04	YES	YES
4	Vine Ave/Sunset Ave	Signalized		0.723	C		0.677	B		0.803	D		0.848	D			0.08	0.17	YES	YES
5	Cameron Ave/Sunset Ave	Signalized		0.987	E		0.899	D		1.054	F		0.990	E			0.07	0.09	YES	YES
6	West Covina Pkwy/Sunset Ave	Signalized		0.848	D		0.889	D		0.895	D		0.915	E			0.05	0.03	YES	YES
7	I-10 EB Ramps/Dalewood St*	Signalized	43.9		D	24.1		C	49.6		D	25.5		C	N/A	N/A			NO	NO
8	Merced Ave/Dalewood St/Garvey Ave	Unsignalized	111.4		F	79.1		F	128.4		F	90.7		F	17.0	11.6			YES	YES
9	Merced Ave/Orange Ave	Signalized		0.641	B		0.575	A		0.668	B		0.582	A			0.03	0.01	NO	NO
10	Merced Ave/California Ave	Signalized		1.192	F		1.186	F		1.232	F		1.227	F			0.04	0.04	YES	YES
11	Merced Ave/Glendora Ave	Signalized		0.726	C		0.773	C		0.755	C		0.791	C			0.03	0.02	NO	NO
12	Cameron Ave/Orange Ave	Signalized		1.046	F		1.046	F		1.083	F		1.056	F			0.04	0.01	YES	YES
13	Cameron Ave/Toluca Ave	Unsignalized	> 5 min**		F	> 5 min**		F	> 5 min**		F	> 5 min**		F	N/A	N/A			NO***	NO***
14	West Covina Pkwy/I-10 WB Ramps*	Signalized	103.9		F	85.3		F	106.3		F	109.6		F	2.4	24.3			YES	YES
15	West Covina Pkwy/I-10 EB Ramps*	Signalized	11.7		B	16.0		B	12.1		B	17.2		B	N/A	N/A			NO	NO
16	West Covina Pkwy/Toluca Ave	Signalized		0.537	A		0.752	C		0.555	A		0.753	C			0.02	0.00	NO	NO

*Caltrans Intersection
**Highest lane delay at TWSC Intersection
***No significant impact because intersection delay is not defined for TWSC

5.4.1. Mitigation Measures

The following list includes the recommended improvements for each of the intersections with a significant project impact under the General Plan Buildout Plus Project Buildout scenario. Note that most of the improvements listed below were also included in the Existing Plus Project Buildout mitigation.

- Merced Ave/Sunset Ave
    - Due to right-of-way constraints, no improvements are considered to be feasible at this intersection. This impact would be significant and unavoidable and a statement of overriding considerations is required.
- Vine Ave/Sunset Avenue
    - Restripe both approaches of Sunset Avenue to include two thru lanes and a shared thru-right turn lane. This will require additional striping on the downstream side of the intersection in both directions and will require that parking be prohibited on Sunset Avenue in the improvement area.
    - Widen the project driveway across from Vine Avenue to provide two left turn lanes and a shared thru-right turn lane for traffic exiting the hospital campus.
- Cameron Ave/Sunset Ave
    - Convert the outside lane on Sunset Avenue to a shared thru-right turn lane in both directions. This will require additional striping on the downstream side of the intersection in both directions and will require that parking be prohibited on Sunset Avenue in the improvement area.
- West Covina Pkwy/Sunset Ave
    - Restripe both approaches of West Covina Parkway to include two thru lanes and an exclusive right turn lane. This should only require restriping, but if needed, right-of-way is available.
- Merced Ave/Dalewood St/Garvey Ave
    - Restripe the eastbound approach to include one thru lane and one exclusive right turn lane.
    - Convert intersection to a two-way stop control, with free eastbound and westbound approaches.
- Merced Ave/California Ave
    - Restripe both approaches on Merced Avenue to include one exclusive left turn lane, one thru lane, and one shared thru-right turn lane.

- Cameron Ave/Orange Ave
    - Restripe both approaches on Orange Avenue to include one exclusive left turn lane and a shared thru-right turn lane.
- West Covina Pkwy/I-10 WB Ramps
    - Restripe the northwest-bound West Covina Parkway approach to include two left turn lanes, one thru lane, and a shared thru-right turn lane.

Table 16 shows the significant impact evaluation with the listed mitigation measures in place. As seen in the table, the mitigation measures reduce the project impact to a less than significant level for seven of the eight intersections. Because the Merced Avenue/Dalewood Street/Garvey Avenue intersection mitigation is to convert the intersection into a TWSC configuration, the highest lane delay, which occurs for left turns from Merced Avenue, is shown in Table 16.

Table 16. General Plan Buildout + Project Buildout Mitigated Impacts Analysis

	Intersection	Intersection Control	General Plan Buildout						General Plan Buildout Plus Project Buildout Traffic Volumes (2035) With Mitigation						Increase in Delay (E or F only)		Increase in V/C		Significant Impact?	
			AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour								
			Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	AM	PM	AM	PM	AM	PM
3	Merced Ave/Sunset Ave	Signalized		0.882	D		0.881	D		0.914	E		0.918	E			0.03	0.04	YES	YES
4	Vine Ave/Sunset Ave	Signalized		0.723	C		0.677	B		0.667	B		0.595	A			-0.06	-0.08	NO	NO
5	Cameron Ave/Sunset Ave	Signalized		0.987	E		0.899	D		0.954	E		0.880	D			-0.03	-0.02	NO	NO
6	West Covina Pkwy/Sunset Ave	Signalized		0.848	D		0.889	D		0.857	D		0.877	D			0.01	-0.01	NO	NO
8	Merced Ave/Dalewood St/Garvey Ave	Unsignalized	111.4		F	79.1		F	34.1**		D	19.8**		C	N/A	N/A			NO***	NO***
10	Merced Ave/California Ave	Signalized		1.192	F		1.186	F		0.784	C		0.803	D			-0.41	-0.38	NO	NO
12	Cameron Ave/Orange Ave	Signalized		1.046	F		1.046	F		1.012	F		1.028	F			-0.03	-0.02	NO	NO
14	West Covina Pkwy/I-10 WB Ramps*	Signalized	103.9		F	85.3		F	67.1		E	69.0		E	-36.8	-16.3			NO	NO

*Caltrans Intersection
**Highest lane delay at TWSC Intersection
***No significant impact because intersection delay is not defined for TWSC

6. FAIR SHARE CONTRIBUTION

It is anticipated that the project will contribute its fair share towards the cost of the mitigation measures listed in Sections 5.2.1, 5.3.1, and 5.4.1. The project fair share was calculated for each of the intersections requiring mitigation based on the Caltrans methodology for equitable mitigation measures, which indicates that the fair share percentage is equal to the percentage of total new trips which are generated by the project.

Table 17 shows the project fair share contribution; for instances where an intersection has impacts in both peak hours, the fair share is assumed to be an average of the two peak hour calculations. If the significant impact is only in one peak hour, the fair share contribution for the intersection is equal to the percentage calculated for the affected peak hour.

Table 17. Project Fair Share Contribution

Intersection		3 Merced Ave/ Sunset Ave*	4 Vine Ave/ Sunset Ave	5 Cameron Ave/ Sunset Ave	6 West Covina Pkwy/ Sunset Ave	8 Merced Ave/ Dalewood St/Garvey Ave	10 Merced Ave/ California Ave	12 Cameron Ave/ Orange Ave	14 West Covina Pkwy/ I-10 WB Ramps
2022 Cumulative Plus Project	AM Peak Hour	N/A	N/A	37%	N/A	43%	24%	16%	N/A
	PM Peak Hour			45%		N/A	27%	N/A	
	Fair Share	**N/A**	**N/A**	**41%**	**N/A**	**43%**	**25%**	**16%**	**N/A**
2026 Cumulative Plus Project	AM Peak Hour	N/A	N/A	26%	N/A	31%	15%	10%	N/A
	PM Peak Hour			31%		N/A	17%	3%	
	Fair Share	**N/A**	**N/A**	**28%**	**N/A**	**31%**	**16%**	**7%**	**N/A**
2035 Cumulative Plus Project	AM Peak Hour	11%	33%	21%	13%	26%	13%	9%	14%
	PM Peak Hour	12%	40%	26%	23%	13%	13%	3%	17%
	Fair Share	**11%**	**37%**	**23%**	**18%**	**19%**	**13%**	**6%**	**16%**

N/A - No impact during the listed time period and/or analysis year

*Intersection is assumed to be built out; fair share is provided for reference only

7. SUMMARY

This traffic study provided an evaluation of the potential traffic impacts from the anticipated expansion of the Queen of the Valley Hospital Campus. With input from the hospital and from the City of West Covina, 16 intersections were evaluated in this study along with seven segments of Caltrans facilities (I-10).

Under existing conditions, the following two intersections are operating at LOS E or worse in either the AM or PM peak hour:

- Merced Avenue/Dalewood Street/Garvey Avenue (AM peak hour)
- Merced Avenue/California Avenue (AM and PM peak hours)

After the conclusion of Phases 1A and 1B in the interim analysis year of 2022, the project is expected to generate 2,558 new daily trips, including 219 trips in the AM peak hour and 252 trips in the PM peak hour. After the conclusion of Phases 1A, 1B, and 2 in the interim analysis year of 2026, the project is expected to generate 2,905 new daily trips, including 265 trips in the AM peak hour and 275 trips in the PM peak hour. After project buildout in 2035, the project is expected to generate 5,050 new daily trips, including 472 trips in the AM peak hour and 480 trips in the PM peak hour.

Based on the anticipated project traffic and other cumulative traffic volume increases, the project is anticipated to have a significant impact at eight of the study intersections in one or both peak hours in at least one of the analysis years. Table 18 shows the mitigation measures at each of the intersections in each scenario. As seen in the table, the mitigation measure(s) listed under the existing plus project scenario would be effective in mitigating the impacts to a less-than-significant impact in the interim and buildout study years.

Many of the mitigation measures consist of relatively simple striping and/or traffic control changes at the intersection. Mitigation measures at the intersection of Merced Avenue/Dalewood Street/Garvey Avenue include converting the intersection to two-way stop control operations, and there will be some physical construction needed at the intersection of Vine Avenue and Sunset Avenue. At locations where a right turn lane is converted to a shared thru-right turn lane, striping may also be required on the downstream leg of the intersection.

Table 18. Summary of Mitigation Measures

Intersection		Mitigation Measures			
		Existing + Project	2022 + Project	2026 + Project	2035 + Project
3	Merced Ave/ Sunset Ave	Intersection is built out and no improvements are feasible due to ROW constraints			
4	Vine Ave/ Sunset Ave	N/A	N/A	N/A	Restripe EB/WB Sunset Ave to include 2 thru lanes and shared thru-right turn lane
		N/A	N/A	N/A	Widen the project driveway to include 2 left turn lanes and shared thru-right turn lane
5	Cameron Ave/ Sunset Ave	Restripe EB/WB Sunset Ave to include 2 thru lanes and shared thru-right turn lane	Same as Existing	Same as Existing	Same as Existing
6	West Covina Pkwy/Sunset Ave	Restripe NB/SB West Covina Pkwy to include 2 thru lanes and an exclusive right turn lane	N/A	N/A	Same as Existing
8	Merced Ave/Dalewood St/Garvey Ave	Restripe EB approach to include one thru lane and one right turn lane	Same as Existing	Same as Existing	Same as Existing
		Convert intersection to two-way stop control on Merced Ave	Same as Existing	Same as Existing	Same as Existing
10	Merced Ave/ California Ave	Restripe NB/SB Merced Ave to include 1 left turn lane, 1 thru lane, and 1 shared thru-right turn lane	Same as Existing	Same as Existing	Same as Existing
12	Cameron Ave/ Orange Ave	Restripe NB/SB Cameron Ave to include 1 left turn lane and 1 shared thru-right turn lane	Same as Existing	Same as Existing	Same as Existing
14	West Covina Pkwy/I-10 WB Ramps*	Restripe NB West Covina Pkwy to include 2 left turn lanes, 1 thru lane, and 1 shared thru-right turn lane	N/A	Same as Existing	Same as Existing

N/A - No impact during the listed time period and/or analysis year

No mitigation measures were proposed at the Merced Avenue/Sunset Avenue intersection, even if there are significant impacts, due to right-of-way constraints. No improvements are considered to be feasible at this intersection, this impact would be significant and unavoidable and a statement of overriding considerations is required.

8. REFERENCES

[1] *Traffic Impact Analysis Report Guidelines*. Los Angeles County, December 2013 (Draft Update).

[2] *Guide for the Preparation of Traffic Impact Studies.* State of California Department of Transportation, December 2002.

[3] *Transportation Impact Study Guidelines*. City of Los Angeles Department of Transportation (LADOT), 2016

[4] *City of West Covina Master Plan of Streets*. City of West Covina, http://www.westcovina.org/home/showdocument?id=426, accessed September 2018.

[5] Caltrans Traffic Volumes. http://www.dot.ca.gov/trafficops/census/, accessed October 2018.

[6] *West Covina General Plan*. City of West Covina, http://www.westcovina.org/home/showdocument?id=12214, accessed September 2018.

[7] *Trip Generation, 10th Edition*. Institute of Transportation Engineers (ITE). Washington, D.C., 2017.

Appendix A – Traffic Volume Data

National Data & Surveying Services

Intersection Turning Movement Count

Location: Sunset Ave & Francisquito Ave
City: West Covina
Control: Signalized

Project ID: 18-05364-001
Date: 5/23/2018

Total

NS/EW Streets:	Sunset Ave				Sunset Ave				Francisquito Ave				Francisquito Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	25	115	17	0	13	173	38	0	10	57	24	0	11	155	7	0	645
7:15 AM	35	148	20	0	20	198	36	0	14	101	27	0	31	181	14	0	825
7:30 AM	40	178	27	0	16	240	69	1	30	146	33	0	37	226	19	0	1062
7:45 AM	29	165	30	1	20	268	60	0	43	145	37	0	39	177	27	0	1041
8:00 AM	23	183	24	1	31	208	30	0	25	107	27	0	32	103	18	0	812
8:15 AM	23	150	17	0	13	160	30	0	23	90	26	0	16	112	20	0	680
8:30 AM	28	153	18	0	19	141	20	0	14	109	26	0	18	121	13	0	680
8:45 AM	32	133	22	1	7	138	30	0	9	116	24	0	29	94	15	0	650
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	235	1225	175	3	139	1526	313	1	168	871	224	0	213	1169	133	0	6395
APPROACH %'s :	14.35%	74.79%	10.68%	0.18%	7.02%	77.11%	15.82%	0.05%	13.30%	68.96%	17.74%	0.00%	14.06%	77.16%	8.78%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	127	674	101	2	87	914	195	1	112	499	124	0	139	687	78	0	3740
PEAK HR FACTOR :	0.794	0.921	0.842	0.500	0.702	0.853	0.707	0.250	0.651	0.854	0.838	0.000	0.891	0.760	0.722	0.000	0.880
	0.922				0.860				0.817				0.801				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	36	236	35	0	33	144	33	0	34	170	15	0	18	112	16	0	882
4:15 PM	22	227	55	0	31	180	22	0	28	172	16	0	30	93	21	0	897
4:30 PM	24	259	45	0	27	177	29	1	34	179	16	0	34	112	14	0	951
4:45 PM	19	255	50	0	35	175	18	1	27	181	16	0	22	99	13	0	911
5:00 PM	31	211	52	0	29	199	27	0	25	177	21	0	15	96	14	0	897
5:15 PM	41	227	37	0	41	170	19	0	42	178	26	0	17	105	15	0	918
5:30 PM	32	232	43	0	29	181	18	1	36	155	17	0	33	123	23	0	923
5:45 PM	30	249	54	1	30	153	26	0	28	214	13	0	14	98	28	0	938
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	235	1896	371	1	255	1379	192	3	254	1426	140	0	183	838	144	0	7317
APPROACH %'s :	9.39%	75.75%	14.82%	0.04%	13.94%	75.40%	10.50%	0.16%	13.96%	78.35%	7.69%	0.00%	15.71%	71.93%	12.36%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	115	952	184	0	132	721	93	2	128	715	79	0	88	412	56	0	3677
PEAK HR FACTOR :	0.701	0.919	0.885	0.000	0.805	0.906	0.802	0.500	0.762	0.988	0.760	0.000	0.647	0.920	0.933	0.000	0.967
	0.954				0.929				0.937				0.869				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Sunset Ave & Durness St
City: West Covina
Control: Signalized

Project ID: 18-05364-002
Date: 5/23/2018

Total

NS/EW Streets:	Sunset Ave				Sunset Ave				Durness St				Durness St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	9	146	1	0	1	179	8	0	12	3	9	0	8	16	4	0	396
7:15 AM	19	196	2	0	10	224	15	0	17	8	16	0	4	15	4	0	530
7:30 AM	25	243	7	0	7	256	18	0	34	17	34	0	12	40	8	0	701
7:45 AM	26	262	3	0	0	287	29	0	46	32	52	0	15	34	9	0	795
8:00 AM	3	180	2	0	4	201	6	0	20	13	24	0	3	10	5	0	471
8:15 AM	2	194	4	0	2	214	0	1	1	6	0	0	8	8	6	0	446
8:30 AM	2	174	2	0	0	178	1	1	6	4	2	0	4	5	4	0	383
8:45 AM	2	172	4	1	3	171	3	1	4	7	6	0	4	2	5	0	385
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	88	1567	25	1	27	1710	80	3	140	90	143	0	58	130	45	0	4107
APPROACH %'s :	5.23%	93.22%	1.49%	0.06%	1.48%	93.96%	4.40%	0.16%	37.53%	24.13%	38.34%	0.00%	24.89%	55.79%	19.31%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	73	881	14	0	21	968	68	0	117	70	126	0	34	99	26	0	2497
PEAK HR FACTOR :	0.702	0.841	0.500	0.000	0.525	0.843	0.586	0.000	0.636	0.547	0.606	0.000	0.567	0.619	0.722	0.000	0.785
	0.832				0.836				0.602				0.663				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	7	275	5	1	2	220	3	1	11	4	5	0	3	3	2	0	542
4:15 PM	6	277	3	2	3	185	6	0	2	2	7	0	1	7	2	0	503
4:30 PM	3	296	5	0	5	228	0	0	6	2	3	0	2	5	4	0	559
4:45 PM	7	268	3	0	4	238	2	1	7	5	9	0	4	2	2	0	552
5:00 PM	1	235	2	0	9	252	5	1	3	7	7	0	3	3	2	0	530
5:15 PM	0	291	2	0	2	225	4	0	3	7	4	0	3	3	1	0	545
5:30 PM	12	282	2	0	3	225	4	0	9	13	7	0	2	9	2	0	570
5:45 PM	9	296	3	1	4	229	4	0	12	3	8	0	3	4	1	0	577
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	45	2220	25	4	32	1802	28	3	53	43	50	0	21	36	16	0	4378
APPROACH %'s :	1.96%	96.77%	1.09%	0.17%	1.72%	96.62%	1.50%	0.16%	36.30%	29.45%	34.25%	0.00%	28.77%	49.32%	21.92%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	22	1104	9	1	18	931	17	1	27	30	26	0	11	19	6	0	2222
PEAK HR FACTOR :	0.458	0.932	0.750	0.250	0.500	0.924	0.850	0.250	0.563	0.577	0.813	0.000	0.917	0.528	0.750	0.000	0.963
	0.919				0.905				0.716				0.692				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Sunset Ave & Merced Ave
City: West Covina
Control: Signalized

Project ID: 18-05364-003
Date: 5/23/2018

Total

NS/EW Streets:	Sunset Ave				Sunset Ave				Merced Ave				Merced Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	14	124	9	0	22	160	29	4	16	64	11	0	36	79	24	0	592
7:15 AM	22	182	14	0	28	233	51	5	15	68	12	0	34	143	19	0	826
7:30 AM	21	203	35	1	27	238	46	7	24	118	13	0	53	175	39	0	1000
7:45 AM	22	238	36	1	27	286	44	8	35	112	28	0	39	128	37	0	1041
8:00 AM	19	191	22	0	30	174	22	9	29	68	17	0	48	97	28	0	754
8:15 AM	25	180	12	0	22	166	26	6	18	62	10	0	36	85	26	0	674
8:30 AM	18	158	20	1	20	151	25	10	20	46	14	0	22	78	25	0	608
8:45 AM	20	163	19	0	29	152	17	7	23	59	11	0	28	59	16	0	603
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	161	1439	167	3	205	1560	260	56	180	597	116	0	296	844	214	0	6098
APPROACH %'s :	9.10%	81.30%	9.44%	0.17%	9.85%	74.96%	12.49%	2.69%	20.16%	66.85%	12.99%	0.00%	21.86%	62.33%	15.81%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	84	814	107	2	112	931	163	29	103	366	70	0	174	543	123	0	3621
PEAK HR FACTOR :	0.955	0.855	0.743	0.500	0.933	0.814	0.799	0.806	0.736	0.775	0.625	0.000	0.821	0.776	0.788	0.000	0.870
	0.848				0.846				0.770				0.787				

NS/EW Streets:	Sunset Ave				Sunset Ave				Merced Ave				Merced Ave				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	12	245	26	2	37	173	24	14	32	106	14	0	17	50	16	0	768
4:15 PM	21	204	40	2	34	191	16	12	30	110	12	0	27	50	18	0	767
4:30 PM	16	264	26	0	29	188	25	8	43	124	16	0	23	65	20	0	847
4:45 PM	11	235	40	0	32	204	30	11	42	104	17	0	17	59	14	0	816
5:00 PM	16	212	33	2	33	213	35	12	28	130	19	0	22	58	24	0	837
5:15 PM	13	235	31	0	30	210	21	9	36	121	11	0	12	73	26	0	828
5:30 PM	20	254	37	1	28	201	35	5	27	134	16	0	24	83	15	0	880
5:45 PM	23	246	36	1	23	181	23	10	27	110	14	0	28	75	26	0	823
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	132	1895	269	8	246	1561	209	81	265	939	119	0	170	513	159	0	6566
APPROACH %'s :	5.73%	82.25%	11.68%	0.35%	11.73%	74.44%	9.97%	3.86%	20.03%	70.98%	8.99%	0.00%	20.19%	60.93%	18.88%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	72	947	137	4	114	805	114	36	118	495	60	0	86	289	91	0	3368
PEAK HR FACTOR :	0.783	0.932	0.926	0.500	0.864	0.945	0.814	0.750	0.819	0.924	0.789	0.000	0.768	0.870	0.875	0.000	0.957
	0.929				0.912				0.951				0.903				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Sunset Ave & Vine Ave
City: West Covina
Control: Signalized

Project ID: 18-05364-004
Date: 5/23/2018

Total

NS/EW Streets:	Sunset Ave				Sunset Ave				Vine Ave				Vine Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	6	140	2	2	2	211	32	0	6	0	6	0	1	1	7	0	416
7:15 AM	3	200	9	7	6	293	24	0	23	1	12	0	3	2	7	0	590
7:30 AM	5	234	12	2	6	319	27	0	19	1	14	0	16	3	16	0	674
7:45 AM	15	284	8	3	16	353	29	1	12	0	4	0	9	2	21	0	757
8:00 AM	11	237	6	9	4	242	21	1	9	0	11	0	7	0	19	0	577
8:15 AM	9	190	2	3	2	210	33	2	11	0	5	0	3	0	3	0	473
8:30 AM	11	194	2	6	1	208	18	2	9	0	6	0	3	1	10	0	471
8:45 AM	12	165	4	3	1	208	31	1	5	0	1	0	2	1	8	0	442
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	72	1644	45	35	38	2044	215	7	94	2	59	0	44	10	91	0	4400
APPROACH %'s :	4.01%	91.54%	2.51%	1.95%	1.65%	88.72%	9.33%	0.30%	60.65%	1.29%	38.06%	0.00%	30.34%	6.90%	62.76%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	34	955	35	21	32	1207	101	2	63	2	41	0	35	7	63	0	2598
PEAK HR FACTOR :	0.567	0.841	0.729	0.583	0.500	0.855	0.871	0.500	0.685	0.500	0.732	0.000	0.547	0.583	0.750	0.000	0.858
		0.843				0.841				0.736				0.750			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	8	272	6	1	5	204	25	3	41	3	16	0	1	1	6	0	592
4:15 PM	11	265	3	0	7	223	26	3	16	3	13	0	1	1	5	0	577
4:30 PM	10	309	2	0	7	219	14	5	32	3	14	1	0	1	6	0	623
4:45 PM	5	295	3	2	6	238	9	8	19	0	10	0	2	1	6	0	604
5:00 PM	9	251	9	1	7	255	13	6	39	4	18	0	0	1	6	0	619
5:15 PM	6	276	7	1	5	233	13	4	24	1	8	0	2	1	5	0	586
5:30 PM	9	261	6	0	8	253	17	2	26	0	10	0	1	0	9	0	602
5:45 PM	5	296	9	1	7	225	9	4	15	2	8	0	1	0	13	0	595
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	63	2225	45	6	52	1850	126	35	212	16	97	1	8	6	56	0	4798
APPROACH %'s :	2.69%	95.13%	1.92%	0.26%	2.52%	89.68%	6.11%	1.70%	65.03%	4.91%	29.75%	0.31%	11.43%	8.57%	80.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	30	1131	21	4	25	945	49	23	114	8	50	1	4	4	23	0	2432
PEAK HR FACTOR :	0.750	0.915	0.583	0.500	0.893	0.926	0.875	0.719	0.731	0.500	0.694	0.250	0.500	1.000	0.958	0.000	0.976
		0.924				0.927				0.709				0.861			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Sunset Ave & Cameron Ave
City: West Covina
Control: Signalized

Project ID: 18-05364-005
Date: 5/23/2018

Total

NS/EW Streets:	Sunset Ave				Sunset Ave				Cameron Ave				Cameron Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	37	122	14	1	5	149	16	0	10	39	27	0	61	157	10	0	648
7:15 AM	31	153	29	0	7	197	31	0	2	87	33	0	49	180	9	1	809
7:30 AM	56	233	47	0	6	235	23	1	17	116	38	0	62	194	8	1	1037
7:45 AM	48	219	31	0	10	277	15	0	27	94	38	0	63	184	15	0	1021
8:00 AM	52	181	19	0	9	186	22	2	23	85	32	0	48	166	10	0	835
8:15 AM	39	162	21	0	8	203	10	1	11	69	50	0	45	125	16	0	760
8:30 AM	40	126	22	0	8	166	13	1	19	76	40	0	39	111	11	0	672
8:45 AM	40	165	25	2	8	165	17	1	20	64	44	1	37	113	9	0	711
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	343	1361	208	3	61	1578	147	6	129	630	302	1	404	1230	88	2	6493
APPROACH %'s :	17.91%	71.07%	10.86%	0.16%	3.40%	88.06%	8.20%	0.33%	12.15%	59.32%	28.44%	0.09%	23.43%	71.35%	5.10%	0.12%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	187	786	126	0	32	895	91	3	69	382	141	0	222	724	42	2	3702
PEAK HR FACTOR :	0.835	0.843	0.670	0.000	0.800	0.808	0.734	0.375	0.639	0.823	0.928	0.000	0.881	0.933	0.700	0.500	0.892
	0.818				0.845				0.865				0.934				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	41	219	30	1	15	174	13	2	35	131	43	0	34	86	17	0	841
4:15 PM	37	230	47	1	9	166	8	1	33	137	49	0	24	76	10	0	828
4:30 PM	38	211	34	0	16	201	15	1	37	139	34	0	28	96	15	0	865
4:45 PM	42	246	42	1	19	175	21	0	50	138	38	0	31	91	9	0	903
5:00 PM	39	258	36	2	19	186	11	0	43	159	62	0	16	98	12	0	941
5:15 PM	45	260	32	0	18	212	12	0	31	130	33	0	23	109	14	0	919
5:30 PM	40	189	29	0	15	143	10	0	33	148	36	0	29	104	18	0	794
5:45 PM	36	222	36	1	12	195	17	1	35	155	36	0	30	115	8	0	899
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	318	1835	286	6	123	1452	107	5	297	1137	331	0	215	775	103	0	6990
APPROACH %'s :	13.01%	75.05%	11.70%	0.25%	7.29%	86.07%	6.34%	0.30%	16.83%	64.42%	18.75%	0.00%	19.67%	70.91%	9.42%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	164	975	144	3	72	774	59	1	161	566	167	0	98	394	50	0	3628
PEAK HR FACTOR :	0.911	0.938	0.857	0.375	0.947	0.913	0.702	0.250	0.805	0.890	0.673	0.000	0.790	0.904	0.833	0.000	0.964
	0.954				0.936				0.847				0.928				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Sunset Ave & West Covina Pkwy
City: West Covina
Control: Signalized

Project ID: 18-05364-006
Date: 5/23/2018

Total

NS/EW Streets:	Sunset Ave				Sunset Ave				West Covina Pkwy				West Covina Pkwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	23	106	26	1	10	144	30	1	9	21	13	0	34	98	14	0	530
7:15 AM	27	105	28	0	10	208	50	1	22	40	9	0	42	121	23	0	686
7:30 AM	33	179	46	1	14	234	66	0	28	42	16	0	28	119	21	0	827
7:45 AM	29	191	41	0	16	230	55	2	35	48	18	0	27	125	21	0	838
8:00 AM	25	130	51	1	14	167	40	1	36	57	17	0	22	114	32	0	707
8:15 AM	43	137	25	1	28	162	51	1	29	43	26	0	29	107	24	0	706
8:30 AM	30	105	18	1	14	134	46	0	27	42	31	0	27	122	25	0	622
8:45 AM	25	133	43	2	12	148	38	2	31	46	21	0	22	87	16	0	626
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	235	1086	278	7	118	1427	376	8	217	339	151	0	231	893	176	0	5542
APPROACH %'s :	14.63%	67.62%	17.31%	0.44%	6.12%	73.98%	19.49%	0.41%	30.69%	47.95%	21.36%	0.00%	17.77%	68.69%	13.54%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	130	637	163	3	72	793	212	4	128	190	77	0	106	465	98	0	3078
PEAK HR FACTOR :	0.756	0.834	0.799	0.750	0.643	0.847	0.803	0.500	0.889	0.833	0.740	0.000	0.914	0.930	0.766	0.000	0.918
	0.894				0.861				0.898				0.967				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	27	161	62	1	24	123	51	2	37	99	36	0	32	112	23	0	790
4:15 PM	25	155	69	1	36	123	37	1	39	97	32	0	36	118	11	0	780
4:30 PM	22	188	67	0	48	131	41	0	48	97	46	0	31	99	17	0	835
4:45 PM	24	201	60	0	26	156	32	0	41	106	31	0	34	110	21	0	842
5:00 PM	22	238	72	0	33	152	44	2	38	106	37	0	35	102	29	0	910
5:15 PM	34	208	60	0	33	148	45	1	53	103	40	0	43	118	27	0	913
5:30 PM	34	184	52	0	32	127	41	3	43	100	30	0	29	103	11	0	789
5:45 PM	16	178	64	1	35	159	48	0	48	111	29	0	30	126	28	0	873
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	204	1513	506	3	267	1119	339	9	347	819	281	0	270	888	167	0	6732
APPROACH %'s :	9.16%	67.97%	22.73%	0.13%	15.40%	64.53%	19.55%	0.52%	23.98%	56.60%	19.42%	0.00%	20.38%	67.02%	12.60%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	102	835	259	0	140	587	162	3	180	412	154	0	143	429	94	0	3500
PEAK HR FACTOR :	0.750	0.877	0.899	0.000	0.729	0.941	0.900	0.375	0.849	0.972	0.837	0.000	0.831	0.909	0.810	0.000	0.958
	0.901				0.965				0.952				0.886				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Dalewood St/Garvey Ave & I-10 EB Ramps
City: West Covina
Control: Signalized

Project ID: 18-05364-007
Date: 5/23/2018

Total

NS/EW Streets:	Dalewood St/Garvey Ave				Dalewood St/Garvey Ave				I-10 EB Ramps				I-10 EB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	103	32	0	0	0	44	53	0	28	0	17	0	0	0	0	0	277
7:15 AM	134	35	0	0	0	53	81	0	42	0	16	0	0	0	0	0	361
7:30 AM	160	55	0	0	0	77	80	0	63	0	31	0	0	0	0	0	466
7:45 AM	125	56	0	0	0	79	74	0	53	0	20	0	0	0	0	0	407
8:00 AM	93	36	0	0	0	69	48	0	36	0	21	0	0	0	0	0	303
8:15 AM	116	24	0	0	0	59	37	0	41	0	33	0	0	0	0	0	310
8:30 AM	106	25	0	0	0	36	46	0	19	0	17	0	0	0	0	0	249
8:45 AM	107	30	0	0	0	42	48	0	38	0	26	0	0	0	0	0	291
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	944	293	0	0	0	459	467	0	320	0	181	0	0	0	0	0	2664
APPROACH %'s :	76.31%	23.69%	0.00%	0.00%	0.00%	49.57%	50.43%	0.00%	63.87%	0.00%	36.13%	0.00%					
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	512	182	0	0	0	278	283	0	194	0	88	0	0	0	0	0	1537
PEAK HR FACTOR :	0.800	0.813	0.000	0.000	0.000	0.880	0.873	0.000	0.770	0.000	0.710	0.000	0.000	0.000	0.000	0.000	0.825
	0.807				0.893				0.750								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	169	104	0	0	0	35	23	0	27	0	12	0	0	0	0	0	370
4:15 PM	141	117	0	0	0	53	25	0	39	0	9	0	0	0	0	0	384
4:30 PM	148	119	0	0	0	49	28	0	30	0	19	0	0	0	0	0	393
4:45 PM	145	119	0	0	0	49	26	0	26	0	13	0	0	0	0	0	378
5:00 PM	152	128	0	0	0	52	26	0	31	0	11	0	0	0	0	0	400
5:15 PM	144	125	0	0	0	45	32	0	39	0	15	0	0	0	0	0	400
5:30 PM	136	113	0	0	0	48	22	0	47	0	15	0	0	0	0	0	381
5:45 PM	115	91	0	0	0	41	26	0	38	0	14	0	0	0	0	0	325
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1150	916	0	0	0	372	208	0	277	0	108	0	0	0	0	0	3031
APPROACH %'s :	55.66%	44.34%	0.00%	0.00%	0.00%	64.14%	35.86%	0.00%	71.95%	0.00%	28.05%	0.00%					
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	589	491	0	0	0	195	112	0	126	0	58	0	0	0	0	0	1571
PEAK HR FACTOR :	0.969	0.959	0.000	0.000	0.000	0.938	0.875	0.000	0.808	0.000	0.763	0.000	0.000	0.000	0.000	0.000	0.982
	0.964				0.984				0.852								

National Data & Surveying Services

Intersection Turning Movement Count

Location: Dalewood St/Garvey Ave & Merced Ave
City: West Covina
Control: 3-Way Stop (NB/SB/WB)

Project ID: 18-05364-008
Date: 5/23/2018

Total

NS/EW Streets:	Dalewood St/Garvey Ave				Dalewood St/Garvey Ave				Merced Ave				Merced Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	8	57	0	1	15	0	0	0	0	0	0	80	0	0	0	161
7:15 AM	0	8	75	0	2	18	0	0	0	0	0	0	116	0	0	0	219
7:30 AM	0	5	104	0	0	27	0	0	0	0	0	0	133	0	0	0	269
7:45 AM	0	17	98	0	1	23	0	0	0	0	0	0	134	0	0	0	273
8:00 AM	0	15	60	0	1	22	0	0	0	0	0	0	99	0	2	0	199
8:15 AM	0	4	57	0	1	17	0	0	0	0	0	0	81	0	0	0	160
8:30 AM	0	14	34	0	0	9	0	0	0	0	0	0	76	0	2	0	135
8:45 AM	0	12	52	0	0	11	0	0	0	0	0	0	80	0	0	0	155
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	83	537	0	6	142	0	0	0	0	0	0	799	0	4	0	1571
APPROACH %'s :	0.00%	13.39%	86.61%	0.00%	4.05%	95.95%	0.00%	0.00%					99.50%	0.00%	0.50%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	45	337	0	4	90	0	0	0	0	0	0	482	0	2	0	960
PEAK HR FACTOR :	0.000	0.662	0.810	0.000	0.500	0.833	0.000	0.000	0.000	0.000	0.000	0.000	0.899	0.000	0.250	0.000	0.879
		0.830				0.870								0.903			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	55	85	0	2	8	0	0	0	0	0	0	53	0	5	0	208
4:15 PM	0	67	82	0	0	11	0	0	0	0	0	0	65	0	5	0	230
4:30 PM	0	52	104	0	1	21	0	0	0	0	0	0	52	0	3	0	233
4:45 PM	0	55	90	0	1	15	0	0	0	0	0	0	64	0	3	0	228
5:00 PM	0	59	93	0	1	8	0	0	0	0	0	0	66	0	5	0	232
5:15 PM	0	66	98	0	2	15	0	0	0	0	0	0	55	0	0	0	236
5:30 PM	0	55	98	0	0	13	0	0	0	0	0	0	58	0	2	0	226
5:45 PM	0	41	98	0	3	13	0	0	0	0	0	0	52	0	1	0	208
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	450	748	0	10	104	0	0	0	0	0	0	465	0	24	0	1801
APPROACH %'s :	0.00%	37.56%	62.44%	0.00%	8.77%	91.23%	0.00%	0.00%					95.09%	0.00%	4.91%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	232	385	0	5	59	0	0	0	0	0	0	237	0	11	0	929
PEAK HR FACTOR :	0.000	0.879	0.925	0.000	0.625	0.702	0.000	0.000	0.000	0.000	0.000	0.000	0.898	0.000	0.550	0.000	0.984
		0.941				0.727								0.873			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Orange Ave & Merced Ave
City: West Covina
Control: Signalized

Project ID: 18-05364-009
Date: 5/23/2018

Total

NS/EW Streets:	Orange Ave				Orange Ave				Merced Ave				Merced Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	13	32	14	0	25	67	6	0	7	62	8	0	28	37	25	0	324
7:15 AM	16	68	23	0	18	129	2	0	18	87	17	0	52	67	34	0	531
7:30 AM	23	79	39	0	24	144	6	0	28	128	34	0	51	72	24	0	652
7:45 AM	35	97	55	0	33	92	10	0	44	149	26	0	20	57	27	0	645
8:00 AM	20	57	32	0	20	43	9	0	17	67	5	0	25	47	33	0	375
8:15 AM	11	35	13	0	19	44	3	0	14	58	4	0	17	50	27	0	295
8:30 AM	13	24	14	0	17	39	6	0	6	44	6	0	26	50	28	0	273
8:45 AM	6	34	20	0	21	24	4	0	10	64	4	0	9	29	30	0	255
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	137	426	210	0	177	582	46	0	144	659	104	0	228	409	228	0	3350
APPROACH %'s :	17.72%	55.11%	27.17%	0.00%	21.99%	72.30%	5.71%	0.00%	15.88%	72.66%	11.47%	0.00%	26.36%	47.28%	26.36%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	94	301	149	0	95	408	27	0	107	431	82	0	148	243	118	0	2203
PEAK HR FACTOR :	0.671	0.776	0.677	0.000	0.720	0.708	0.675	0.000	0.608	0.723	0.603	0.000	0.712	0.844	0.868	0.000	0.845
	0.727				0.761				0.708				0.832				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	9	64	16	0	19	52	9	0	17	75	1	0	12	41	34	0	349
4:15 PM	9	82	22	0	20	63	9	0	18	90	3	0	17	54	28	0	415
4:30 PM	5	72	19	0	25	58	10	0	20	101	8	0	17	48	56	0	439
4:45 PM	4	68	19	0	15	64	3	0	16	104	4	0	20	54	41	0	412
5:00 PM	9	79	13	0	27	79	9	0	21	96	9	0	14	66	49	0	471
5:15 PM	4	80	17	0	36	77	17	0	29	105	9	0	21	53	45	0	493
5:30 PM	12	78	16	0	36	90	10	0	19	112	6	0	14	53	49	0	495
5:45 PM	8	65	24	0	40	62	5	0	12	100	14	0	19	40	29	0	418
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	60	588	146	0	218	545	72	0	152	783	54	0	134	409	331	0	3492
APPROACH %'s :	7.56%	74.06%	18.39%	0.00%	26.11%	65.27%	8.62%	0.00%	15.37%	79.17%	5.46%	0.00%	15.33%	46.80%	37.87%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	33	302	70	0	139	308	41	0	81	413	38	0	68	212	172	0	1877
PEAK HR FACTOR :	0.688	0.944	0.729	0.000	0.869	0.856	0.603	0.000	0.698	0.922	0.679	0.000	0.810	0.803	0.878	0.000	0.948
	0.955				0.897				0.930				0.876				

National Data & Surveying Services

Intersection Turning Movement Count

Location: California Ave & Merced Ave
City: West Covina
Control: Signalized

Project ID: 18-05364-010
Date: 5/23/2018

Total

NS/EW Streets:	California Ave				California Ave				Merced Ave				Merced Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	4	28	9	0	5	26	13	0	5	59	10	0	9	113	5	0	286
7:15 AM	9	50	16	0	5	50	18	0	8	70	13	0	10	164	8	0	421
7:30 AM	3	69	23	0	15	67	23	0	24	122	12	0	27	197	7	0	589
7:45 AM	10	36	10	0	12	41	13	0	26	122	11	0	25	166	10	0	482
8:00 AM	5	23	11	0	10	27	13	0	8	97	6	0	12	126	12	0	350
8:15 AM	10	29	5	0	2	12	6	0	11	72	8	0	8	122	12	0	297
8:30 AM	5	17	6	0	5	15	9	0	5	66	6	0	4	93	3	0	234
8:45 AM	4	33	0	0	5	22	10	0	8	94	6	0	5	94	6	0	287
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	50	285	80	0	59	260	105	0	95	702	72	0	100	1075	63	0	2946
APPROACH %'s :	12.05%	68.67%	19.28%	0.00%	13.92%	61.32%	24.76%	0.00%	10.93%	80.78%	8.29%	0.00%	8.08%	86.83%	5.09%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	27	178	60	0	42	185	67	0	66	411	42	0	74	653	37	0	1842
PEAK HR FACTOR :	0.675	0.645	0.652	0.000	0.700	0.690	0.728	0.000	0.635	0.842	0.808	0.000	0.685	0.829	0.771	0.000	0.782
	0.697				0.700				0.816				0.827				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	2	58	13	0	11	48	10	0	17	135	13	0	7	59	7	0	380
4:15 PM	2	46	15	0	10	52	16	0	16	137	7	0	11	68	10	0	390
4:30 PM	7	65	12	0	7	44	9	0	16	141	14	0	12	89	8	0	424
4:45 PM	4	70	11	0	7	57	6	0	28	142	7	0	9	62	7	0	410
5:00 PM	8	51	12	0	10	47	6	0	9	156	9	0	16	76	11	0	411
5:15 PM	4	60	15	0	10	29	8	0	15	152	9	0	7	100	11	0	420
5:30 PM	7	58	12	0	10	71	13	0	26	165	4	0	12	90	7	0	475
5:45 PM	8	64	10	0	7	68	18	0	26	120	7	0	8	98	16	0	450
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	42	472	100	0	72	416	86	0	153	1148	70	0	82	642	77	0	3360
APPROACH %'s :	6.84%	76.87%	16.29%	0.00%	12.54%	72.47%	14.98%	0.00%	11.16%	83.73%	5.11%	0.00%	10.24%	80.15%	9.61%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	27	233	49	0	37	215	45	0	76	593	29	0	43	364	45	0	1756
PEAK HR FACTOR :	0.844	0.910	0.817	0.000	0.925	0.757	0.625	0.000	0.731	0.898	0.806	0.000	0.672	0.910	0.703	0.000	0.924
	0.942				0.790				0.895				0.926				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Glendora Ave & Merced Ave
City: West Covina
Control: Signalized

Project ID: 18-05364-011
Date: 5/23/2018

Total

NS/EW Streets:	Glendora Ave				Glendora Ave				Merced Ave				Merced Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	11	110	7	1	6	113	26	0	13	42	8	0	14	104	6	0	461
7:15 AM	13	156	9	2	5	157	46	0	13	72	14	0	18	115	8	0	628
7:30 AM	16	226	6	0	7	248	64	0	15	108	17	0	14	146	10	0	877
7:45 AM	14	178	20	1	8	195	47	0	16	126	15	0	14	159	15	0	808
8:00 AM	8	166	13	0	8	189	30	0	11	85	10	0	16	106	14	0	656
8:15 AM	23	183	11	1	4	140	20	3	18	61	12	0	7	99	11	0	593
8:30 AM	8	158	12	0	5	128	18	0	8	50	16	0	9	85	7	0	504
8:45 AM	13	152	8	2	9	123	19	1	22	51	22	0	16	70	8	0	516
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	106	1329	86	7	52	1293	270	4	116	595	114	0	108	884	79	0	5043
APPROACH %'s :	6.94%	86.98%	5.63%	0.46%	3.21%	79.86%	16.68%	0.25%	14.06%	72.12%	13.82%	0.00%	10.08%	82.54%	7.38%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	51	726	48	3	28	789	187	0	55	391	56	0	62	526	47	0	2969
PEAK HR FACTOR :	0.797	0.803	0.600	0.375	0.875	0.795	0.730	0.000	0.859	0.776	0.824	0.000	0.861	0.827	0.783	0.000	0.846
	0.835				0.787				0.799				0.844				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	21	238	16	0	14	177	20	3	39	97	18	1	13	54	11	0	722
4:15 PM	18	193	26	1	9	220	21	1	32	102	20	0	8	57	9	0	717
4:30 PM	16	206	14	1	18	207	36	1	34	108	21	0	15	44	10	0	731
4:45 PM	19	212	20	5	20	183	20	2	43	108	22	0	14	38	5	0	711
5:00 PM	11	227	22	3	16	201	28	1	31	112	23	0	8	66	13	0	762
5:15 PM	21	234	25	1	14	212	22	2	26	135	15	0	11	73	6	0	797
5:30 PM	18	228	29	4	12	193	41	0	27	150	23	0	6	64	9	0	804
5:45 PM	17	212	31	2	17	184	26	5	19	95	27	0	18	77	12	0	742
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	141	1750	183	17	120	1577	214	15	251	907	169	1	93	473	75	0	5986
APPROACH %'s :	6.74%	83.69%	8.75%	0.81%	6.23%	81.88%	11.11%	0.78%	18.90%	68.30%	12.73%	0.08%	14.51%	73.79%	11.70%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	67	901	107	10	59	790	117	8	103	492	88	0	43	280	40	0	3105
PEAK HR FACTOR :	0.798	0.963	0.863	0.625	0.868	0.932	0.713	0.400	0.831	0.820	0.815	0.000	0.597	0.909	0.769	0.000	0.965
	0.965				0.974				0.854				0.848				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Orange Ave & Cameron Ave
City: West Covina
Control: Signalized

Project ID: 18-05364-012
Date: 5/23/2018

Total

NS/EW Streets:	Orange Ave				Orange Ave				Cameron Ave				Cameron Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	66	4	25	0	18	8	7	0	2	51	60	0	51	131	0	0	423
7:15 AM	82	1	68	0	19	23	13	0	3	98	83	0	79	146	3	0	618
7:30 AM	61	2	93	0	23	35	11	0	2	104	108	0	113	169	2	0	723
7:45 AM	99	4	95	0	30	8	14	0	2	102	67	0	59	178	2	0	660
8:00 AM	96	7	68	0	28	10	15	0	1	106	45	0	59	141	2	0	578
8:15 AM	65	2	47	0	29	11	29	0	3	80	34	0	50	127	4	0	481
8:30 AM	40	4	35	0	37	10	17	0	2	73	37	0	41	99	6	0	401
8:45 AM	45	4	56	0	34	20	16	0	1	79	35	0	57	126	3	0	476
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	554	28	487	0	218	125	122	0	16	693	469	0	509	1117	22	0	4360
APPROACH %'s :	51.82%	2.62%	45.56%	0.00%	46.88%	26.88%	26.24%	0.00%	1.36%	58.83%	39.81%	0.00%	30.89%	67.78%	1.33%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	338	14	324	0	100	76	53	0	8	410	303	0	310	634	9	0	2579
PEAK HR FACTOR :	0.854	0.500	0.853	0.000	0.833	0.543	0.883	0.000	0.667	0.967	0.701	0.000	0.686	0.890	0.750	0.000	0.892
	0.854				0.830				0.842				0.839				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	76	5	117	0	14	15	14	0	5	106	50	0	73	106	2	0	583
4:15 PM	86	6	119	0	21	5	14	0	3	130	57	0	59	90	2	0	592
4:30 PM	99	3	118	0	11	19	20	0	1	115	46	0	74	103	1	0	610
4:45 PM	81	5	105	0	22	14	9	0	6	129	43	0	91	108	3	0	616
5:00 PM	83	1	104	0	20	14	18	0	2	115	65	0	86	138	1	0	647
5:15 PM	87	5	94	0	13	12	18	0	2	106	55	0	84	118	2	0	596
5:30 PM	74	4	119	0	12	10	10	0	2	127	54	0	70	132	1	0	615
5:45 PM	67	4	86	0	26	13	15	0	1	120	37	0	92	133	0	0	594
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	653	33	862	0	139	102	118	0	22	948	407	0	629	928	12	0	4853
APPROACH %'s :	42.18%	2.13%	55.68%	0.00%	38.72%	28.41%	32.87%	0.00%	1.60%	68.85%	29.56%	0.00%	40.09%	59.15%	0.76%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	325	15	422	0	67	50	55	0	12	477	217	0	331	496	7	0	2474
PEAK HR FACTOR :	0.934	0.750	0.887	0.000	0.761	0.893	0.764	0.000	0.500	0.924	0.835	0.000	0.909	0.899	0.583	0.000	0.956
	0.967				0.827				0.964				0.927				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Toluca Ave & Cameron Ave
City: West Covina
Control: 1-Way Stop (SB)

Project ID: 18-05364-013
Date: 5/23/2018

Total

NS/EW Streets:	Toluca Ave				Toluca Ave				Cameron Ave				Cameron Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	3	0	23	0	19	71	0	0	0	171	18	0	305
7:15 AM	0	0	0	0	1	1	31	0	38	139	0	0	0	214	17	1	442
7:30 AM	0	0	0	0	3	1	44	0	55	161	0	0	0	232	22	0	518
7:45 AM	0	0	0	0	2	0	37	0	58	157	3	0	3	201	20	0	481
8:00 AM	0	0	0	0	3	0	39	0	39	157	1	0	2	201	31	0	473
8:15 AM	0	0	0	0	14	0	38	0	30	111	4	0	0	136	23	0	356
8:30 AM	0	0	0	0	14	0	48	0	24	117	2	0	2	132	21	0	360
8:45 AM	0	0	0	0	17	1	46	0	32	133	5	0	2	138	24	0	398
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	57	3	306	0	295	1046	15	0	9	1425	176	1	3333
APPROACH %'s :					15.57%	0.82%	83.61%	0.00%	21.76%	77.14%	1.11%	0.00%	0.56%	88.45%	10.92%	0.06%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	0	0	0	9	2	151	0	190	614	4	0	5	848	90	1	1914
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.750	0.500	0.858	0.000	0.819	0.953	0.333	0.000	0.417	0.914	0.726	0.250	0.924
					0.844				0.927				0.929				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	19	2	60	0	74	185	2	0	2	119	25	0	488
4:15 PM	0	0	0	0	11	2	53	0	70	215	1	1	2	97	28	0	480
4:30 PM	0	0	1	0	8	0	67	0	63	194	3	0	5	124	32	0	497
4:45 PM	0	0	0	0	10	0	65	0	56	212	2	0	2	128	26	0	501
5:00 PM	0	0	0	0	10	0	79	0	60	197	0	0	1	137	41	2	527
5:15 PM	0	0	0	0	10	0	60	0	58	163	0	0	1	144	29	0	465
5:30 PM	0	0	0	0	10	0	65	0	73	202	1	0	1	140	22	0	514
5:45 PM	0	0	0	0	16	0	63	0	47	198	1	0	0	155	20	0	500
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	1	0	94	4	512	0	501	1566	10	1	14	1044	223	2	3972
APPROACH %'s :	0.00%	0.00%	100.00%	0.00%	15.41%	0.66%	83.93%	0.00%	24.11%	75.36%	0.48%	0.05%	1.09%	81.37%	17.38%	0.16%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	0	0	0	0	40	0	269	0	247	774	3	0	5	549	118	2	2007
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	1.000	0.000	0.851	0.000	0.846	0.913	0.375	0.000	0.625	0.953	0.720	0.250	0.952
					0.868				0.928				0.931				

National Data & Surveying Services

Intersection Turning Movement Count

Location: I-10 WB Ramps & West Covina Pkwy
City: West Covina
Control: Signalized

Project ID: 18-05364-014
Date: 5/23/2018

Total

NS/EW Streets:	I-10 WB Ramps				I-10 WB Ramps				West Covina Pkwy				West Covina Pkwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	15	3	15	0	8	100	2	0	2	96	139	0	87	36	13	1	517
7:15 AM	23	1	28	0	9	92	3	0	1	127	148	0	96	67	24	0	619
7:30 AM	27	2	33	0	12	90	5	0	8	125	143	0	92	57	29	0	623
7:45 AM	28	4	50	0	25	79	5	0	3	167	124	0	106	49	19	0	659
8:00 AM	34	6	75	0	18	84	5	0	1	107	110	0	93	37	42	0	612
8:15 AM	42	8	78	0	11	86	13	0	10	141	117	0	80	45	18	1	650
8:30 AM	27	3	72	0	20	81	6	0	2	97	88	0	86	33	25	0	540
8:45 AM	33	8	63	0	18	69	4	0	5	104	72	0	87	17	30	1	511
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	229	35	414	0	121	681	43	0	32	964	941	0	727	341	200	3	4731
APPROACH %'s :	33.78%	5.16%	61.06%	0.00%	14.32%	80.59%	5.09%	0.00%	1.65%	49.77%	48.58%	0.00%	57.20%	26.83%	15.74%	0.24%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	131	20	236	0	66	339	28	0	22	540	494	0	371	188	108	1	2544
PEAK HR FACTOR :	0.780	0.625	0.756	0.000	0.660	0.942	0.538	0.000	0.550	0.808	0.864	0.000	0.875	0.825	0.643	0.250	0.965
	0.756				0.984				0.898				0.938				

NS/EW Streets:	I-10 WB Ramps				I-10 WB Ramps				West Covina Pkwy				West Covina Pkwy				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	55	15	87	0	15	50	8	0	9	200	64	0	92	57	29	1	682
4:15 PM	54	5	88	0	16	66	6	0	8	219	52	0	88	73	26	1	702
4:30 PM	55	8	97	0	19	50	4	0	9	192	63	0	95	90	36	1	719
4:45 PM	50	12	92	0	19	57	6	0	7	180	80	0	96	77	33	0	709
5:00 PM	37	16	100	0	14	72	4	0	7	186	67	0	94	84	35	0	716
5:15 PM	52	7	105	0	11	90	7	0	12	174	106	0	92	91	28	1	776
5:30 PM	53	7	100	0	15	74	5	0	13	215	74	0	90	102	38	0	786
5:45 PM	48	18	92	0	28	62	3	0	14	215	62	0	88	74	41	0	745
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	404	88	761	0	137	521	43	0	79	1581	568	0	735	648	266	4	5835
APPROACH %'s :	32.24%	7.02%	60.73%	0.00%	19.54%	74.32%	6.13%	0.00%	3.55%	70.96%	25.49%	0.00%	44.46%	39.20%	16.09%	0.24%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	190	48	397	0	68	298	19	0	46	790	309	0	364	351	142	1	3023
PEAK HR FACTOR :	0.896	0.667	0.945	0.000	0.607	0.828	0.679	0.000	0.821	0.919	0.729	0.000	0.968	0.860	0.866	0.250	0.962
	0.968				0.891				0.948				0.933				

National Data & Surveying Services

Intersection Turning Movement Count

Location: I-10 EB Ramps & West Covina Pkwy
City: West Covina
Control: Signalized

Project ID: 18-05364-015
Date: 5/23/2018

Total

NS/EW Streets:	I-10 EB Ramps				I-10 EB Ramps				West Covina Pkwy				West Covina Pkwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	6	3	21	0	7	2	18	0	5	25	92	0	31	137	4	0	351
7:15 AM	25	7	27	0	4	2	22	0	1	51	110	0	39	122	1	0	411
7:30 AM	16	7	31	0	7	0	18	0	4	70	124	0	55	144	2	1	479
7:45 AM	22	11	44	0	5	4	18	0	10	95	126	0	44	118	7	1	505
8:00 AM	22	10	36	0	0	1	15	0	9	106	95	0	45	129	8	1	477
8:15 AM	14	8	29	0	5	1	8	0	15	99	89	0	19	130	9	0	426
8:30 AM	17	7	29	0	0	0	11	0	10	108	82	1	32	113	4	0	414
8:45 AM	16	19	30	0	1	3	12	0	15	95	61	0	27	105	6	0	390
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	138	72	247	0	29	13	122	0	69	649	779	1	292	998	41	3	3453
APPROACH %'s :	30.20%	15.75%	54.05%	0.00%	17.68%	7.93%	74.39%	0.00%	4.61%	43.32%	52.00%	0.07%	21.89%	74.81%	3.07%	0.22%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	74	36	140	0	17	6	59	0	38	370	434	0	163	521	26	3	1887
PEAK HR FACTOR :	0.841	0.818	0.795	0.000	0.607	0.375	0.819	0.000	0.633	0.873	0.861	0.000	0.741	0.905	0.722	0.750	0.934
	0.812				0.759				0.911				0.882				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	9	17	23	0	5	7	53	0	39	134	142	0	66	117	6	1	619
4:15 PM	6	6	18	0	10	4	45	0	43	146	132	1	47	126	6	0	590
4:30 PM	12	12	19	0	5	6	63	0	25	155	104	2	56	153	14	1	627
4:45 PM	5	7	25	0	7	9	56	0	36	154	121	0	66	128	7	0	621
5:00 PM	10	17	28	0	7	21	56	0	33	150	115	1	78	166	11	1	694
5:15 PM	11	7	32	0	5	5	54	0	35	160	122	0	47	153	9	1	641
5:30 PM	18	10	35	0	7	6	58	0	35	169	122	1	53	151	11	2	678
5:45 PM	16	18	38	0	7	3	53	0	47	164	107	0	31	143	10	0	637
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	87	94	218	0	53	61	438	0	293	1232	965	5	444	1137	74	6	5107
APPROACH %'s :	21.80%	23.56%	54.64%	0.00%	9.60%	11.05%	79.35%	0.00%	11.74%	49.38%	38.68%	0.20%	26.73%	68.45%	4.46%	0.36%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	55	52	133	0	26	35	221	0	150	643	466	2	209	613	41	4	2650
PEAK HR FACTOR :	0.764	0.722	0.875	0.000	0.929	0.417	0.953	0.000	0.798	0.951	0.955	0.500	0.670	0.923	0.932	0.500	0.955
	0.833				0.839				0.964				0.847				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Toluca Ave & West Covina Pkwy
City: West Covina
Control: Signalized

Project ID: 18-05364-016
Date: 5/23/2018

Total

NS/EW Streets:	Toluca Ave				Toluca Ave				West Covina Pkwy				West Covina Pkwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	22	0	5	0	0	0	0	0	0	28	12	0	21	111	0	0	199
7:15 AM	32	0	16	0	0	0	0	0	0	45	12	0	28	150	0	0	283
7:30 AM	44	0	29	0	0	0	0	0	0	63	19	0	40	187	0	0	382
7:45 AM	30	0	27	0	0	0	0	0	0	73	34	0	36	154	0	0	354
8:00 AM	39	0	21	0	0	0	0	0	0	91	38	0	24	137	0	0	350
8:15 AM	37	0	15	0	0	0	0	0	0	92	42	0	34	132	0	0	352
8:30 AM	24	0	20	0	0	0	0	0	0	88	42	0	34	144	0	0	352
8:45 AM	28	0	23	0	0	0	0	0	0	72	48	0	25	126	0	0	322
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	256	0	156	0	0	0	0	0	0	552	247	0	242	1141	0	0	2594
APPROACH %'s :	62.14%	0.00%	37.86%	0.00%					0.00%	69.09%	30.91%	0.00%	17.50%	82.50%	0.00%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	150	0	92	0	0	0	0	0	0	319	133	0	134	610	0	0	1438
PEAK HR FACTOR :	0.852	0.000	0.793	0.000	0.000	0.000	0.000	0.000	0.000	0.867	0.792	0.000	0.838	0.816	0.000	0.000	0.941
	0.829								0.843				0.819				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	60	0	35	0	0	0	0	0	0	118	63	0	31	150	0	0	457
4:15 PM	45	0	40	0	0	0	0	0	0	118	42	0	24	153	0	0	422
4:30 PM	72	0	44	0	0	0	0	0	0	124	44	0	30	133	0	0	447
4:45 PM	73	0	37	0	0	0	0	0	0	127	45	0	29	115	0	0	426
5:00 PM	97	0	45	0	0	0	0	0	0	114	47	0	28	147	0	0	478
5:15 PM	64	0	39	0	0	0	0	0	0	160	55	0	26	149	0	0	493
5:30 PM	81	0	31	0	0	0	0	0	0	122	45	0	26	146	0	0	451
5:45 PM	50	0	26	0	0	0	0	0	0	143	45	0	40	151	0	0	455
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	542	0	297	0	0	0	0	0	0	1026	386	0	234	1144	0	0	3629
APPROACH %'s :	64.60%	0.00%	35.40%	0.00%					0.00%	72.66%	27.34%	0.00%	16.98%	83.02%	0.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	292	0	141	0	0	0	0	0	0	539	192	0	120	593	0	0	1877
PEAK HR FACTOR :	0.753	0.000	0.783	0.000	0.000	0.000	0.000	0.000	0.000	0.842	0.873	0.000	0.750	0.982	0.000	0.000	0.952
	0.762								0.850				0.933				

Appendix B – ICU Spreadsheets and Synchro Reports – Existing Conditions

SE-NW Street: Francisquito Ave
NE-SW Street: Sunset Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Existing				Existing + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	112	1	1.00	0.07	112	1	1.00	0.07
Comb. L-T						0		
Southeast-bound Thru	499	1	1.60	0.19	499	1	1.60	0.19
Comb. T-R		1				1		
Southeast-bound Right	124		0.40	0.19	124	0	0.40	0.19
Comb. L-T-R						0		
Northwest-bound Left	139	1	1.00	0.09	139	1	1.00	0.09
Comb. L-T						0		
Northwest-bound Thru	687	2	2.00	0.21	687	2	2.00	0.21
Comb. T-R						0		
Northwest-bound Right	78	1	1.00	0.05	78	1	1.00	0.05
Comb. L-T-R						0		
Northeast-bound Left	129	1	1.00	0.08	129	1	1.00	0.08
Comb. L-T						0		
Northeast-bound Thru	674	2	2.00	0.21	732	2	2.00	0.23
Comb. T-R						0		
Northeast-bound Right	101	1	1.00	0.06	101	1	1.00	0.06
Comb. L-T-R						0		
Southwest-bound Left	88	1	1.00	0.06	88	1	1.00	0.06
Comb. L-T						0		
Southwest-bound Thru	914	2	2.00	0.29	934	2	2.00	0.29
Comb. T-R						0		
Southwest-bound Right	195	1	1.00	0.12	195	1	1.00	0.12
Comb. L-T-R						0		

Critical Volumes	E-W:	0.28	E-W:	0.28
	N-S:	0.37	N-S:	0.37
	Total:	0.65	Total:	0.66
Lost Time		0.10		0.10
V/C		0.751		0.757
Level of Service		C		C

SE-NW Street: Francisquito Ave
NE-SW Street: Sunset Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Existing				Existing + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	131	1	1.00	0.08	131	1	1.00	0.08
Comb. L-T		0				0		
Southeast-bound Thru	724	1	1.81	0.25	724	1	1.81	0.25
Comb. T-R		1				1		
Southeast-bound Right	77	0	0.19	0.25	77	0	0.19	0.25
Comb. L-T-R		0				0		
Northwest-bound Left	79	1	1.00	0.05	79	1	1.00	0.05
Comb. L-T		0				0		
Northwest-bound Thru	422	2	2.00	0.13	422	2	2.00	0.13
Comb. T-R		0				0		
Northwest-bound Right	80	1	1.00	0.05	80	1	1.00	0.05
Comb. L-T-R		0				0		
Northeast-bound Left	135	1	1.00	0.08	135	1	1.00	0.08
Comb. L-T		0				0		
Northeast-bound Thru	919	2	2.00	0.29	946	2	2.00	0.30
Comb. T-R		0				0		
Northeast-bound Right	186	1	1.00	0.12	186	1	1.00	0.12
Comb. L-T-R		0				0		
Southwest-bound Left	130	1	1.00	0.08	130	1	1.00	0.08
Comb. L-T		0				0		
Southwest-bound Thru	703	2	2.00	0.22	768	2	2.00	0.24
Comb. T-R		0				0		
Southwest-bound Right	90	1	1.00	0.06	90	1	1.00	0.06
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.30	E-W:	0.30
	N-S:	0.37	N-S:	0.38
	Total:	0.67	Total:	0.68

Lost Time	0.10	0.10

V/C	0.768	0.777
Level of Service	C	C

SE-NW Street: Durness St
NE-SW Street: Sunset Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Existing				Existing + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	117		0.63	0.12	117	0	0.63	0.12
Comb. L-T		1				1		
Southeast-bound Thru	70		0.37	0.12	70	0	0.37	0.12
Comb. T-R						0		
Southeast-bound Right	126	1	1.00	0.08	126	1	1.00	0.08
Comb. L-T-R						0		
Northwest-bound Left	34		0.26	0.08	34	0	0.26	0.08
Comb. L-T		1				1		
Northwest-bound Thru	99		0.74	0.08	99	0	0.74	0.08
Comb. T-R						0		
Northwest-bound Right	26	1	1.00	0.02	26	1	1.00	0.02
Comb. L-T-R						0		
Northeast-bound Left	73	1	1.00	0.05	73	1	1.00	0.05
Comb. L-T						0		
Northeast-bound Thru	881	2	2.00	0.28	939	2	2.00	0.29
Comb. T-R						0		
Northeast-bound Right	14	1	1.00	0.01	14	1	1.00	0.01
Comb. L-T-R						0		
Southwest-bound Left	21	1	1.00	0.01	21	1	1.00	0.01
Comb. L-T						0		
Southwest-bound Thru	968	2	2.00	0.30	988	2	2.00	0.31
Comb. T-R						0		
Southwest-bound Right	68	1	1.00	0.04	68	1	1.00	0.04
Comb. L-T-R						0		

Critical Volumes	E-W:	0.20	E-W:	0.20
	N-S:	0.35	N-S:	0.35
	Total:	0.55	Total:	0.55

Lost Time	0.10	0.10

V/C	0.648	0.654
Level of Service	B	B

SE-NW Street: Durness St
NE-SW Street: Sunset Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Existing				Existing + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	27	0	0.47	0.04	27	0	0.47	0.04
Comb. L-T		1				1		
Southeast-bound Thru	30	0	0.53	0.04	30	0	0.53	0.04
Comb. T-R		0				0		
Southeast-bound Right	26	1	1.00	0.02	26	1	1.00	0.02
Comb. L-T-R		0				0		
Northwest-bound Left	11	0	0.37	0.02	11	0	0.37	0.02
Comb. L-T		1				1		
Northwest-bound Thru	19	0	0.63	0.02	19	0	0.63	0.02
Comb. T-R		0				0		
Northwest-bound Right	6	1	1.00	0.00	6	1	1.00	0.00
Comb. L-T-R		0				0		
Northeast-bound Left	23	1	1.00	0.01	23	1	1.00	0.01
Comb. L-T		0				0		
Northeast-bound Thru	1104	2	2.00	0.35	1131	2	2.00	0.35
Comb. T-R		0				0		
Northeast-bound Right	9	1	1.00	0.01	9	1	1.00	0.01
Comb. L-T-R		0				0		
Southwest-bound Left	19	1	1.00	0.01	19	1	1.00	0.01
Comb. L-T		0				0		
Southwest-bound Thru	931	2	2.00	0.29	996	2	2.00	0.31
Comb. T-R		0				0		
Southwest-bound Right	17	1	1.00	0.01	17	1	1.00	0.01
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.05	E-W:	0.05
	N-S:	0.36	N-S:	0.37
	Total:	0.41	Total:	0.42

Lost Time	0.10	0.10

V/C	0.511	0.520
Level of Service	A	A

SE-NW Street: Merced Ave
NE-SW Street: Sunset Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Existing				Existing + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	103	1	1.00	0.06	103	1	1.00	0.06
Comb. L-T						0		
Southeast-bound Thru	366	1	1.68	0.14	366	1	1.68	0.14
Comb. T-R		1				1		
Southeast-bound Right	70		0.32	0.14	70	0	0.32	0.14
Comb. L-T-R						0		
Northwest-bound Left	174	1	1.00	0.11	174	1	1.00	0.11
Comb. L-T						0		
Northwest-bound Thru	543	1	1.63	0.21	572	1	1.52	0.24
Comb. T-R		1				1		
Northwest-bound Right	123		0.37	0.21	181	0	0.48	0.24
Comb. L-T-R						0		
Northeast-bound Left	86	1	1.00	0.05	115	1	1.00	0.07
Comb. L-T						0		
Northeast-bound Thru	814	2	2.00	0.25	843	2	2.00	0.26
Comb. T-R						0		
Northeast-bound Right	107	1	1.00	0.07	107	1	1.00	0.07
Comb. L-T-R						0		
Southwest-bound Left	141	1	1.00	0.09	171	1	1.00	0.11
Comb. L-T						0		
Southwest-bound Thru	931	2	2.00	0.29	951	2	2.00	0.30
Comb. T-R						0		
Southwest-bound Right	163	1	1.00	0.10	163	1	1.00	0.10
Comb. L-T-R						0		

Critical Volumes	E-W:	0.27	E-W:	0.30
	N-S:	0.34	N-S:	0.37
	Total:	0.62	Total:	0.67

Lost Time	0.10	0.10

V/C	0.717	0.770
Level of Service	C	C

SE-NW Street: Merced Ave
NE-SW Street: Sunset Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Existing				Existing + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	118	1	1.00	0.07	118	1	1.00	0.07
Comb. L-T		0				0		
Southeast-bound Thru	495	1	1.78	0.17	495	1	1.78	0.17
Comb. T-R		1				1		
Southeast-bound Right	60	0	0.22	0.17	60	0	0.22	0.17
Comb. L-T-R		0				0		
Northwest-bound Left	86	1	1.00	0.05	86	1	1.00	0.05
Comb. L-T		0				0		
Northwest-bound Thru	289	1	1.52	0.12	303	1	1.44	0.13
Comb. T-R		1				1		
Northwest-bound Right	91	0	0.48	0.12	118	0	0.56	0.13
Comb. L-T-R		0				0		
Northeast-bound Left	76	1	1.00	0.05	90	1	1.00	0.06
Comb. L-T		0				0		
Northeast-bound Thru	947	2	2.00	0.30	961	2	2.00	0.30
Comb. T-R		0				0		
Northeast-bound Right	137	1	1.00	0.09	137	1	1.00	0.09
Comb. L-T-R		0				0		
Southwest-bound Left	150	1	1.00	0.09	248	1	1.00	0.16
Comb. L-T		0				0		
Southwest-bound Thru	805	2	2.00	0.25	870	2	2.00	0.27
Comb. T-R		0				0		
Southwest-bound Right	114	1	1.00	0.07	114	1	1.00	0.07
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.23	E-W:	0.23
	N-S:	0.39	N-S:	0.46
	Total:	0.62	Total:	0.68

Lost Time	0.10	0.10

V/C	0.717	0.783
Level of Service	C	C

SE-NW Street: Vine Ave
NE-SW Street: Sunset Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Existing				Existing + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	63		0.97	0.04	206	0	0.99	0.13
Comb. L-T		1				1		
Southeast-bound Thru	2		0.03	0.04	2	0	0.01	0.13
Comb. T-R						0		
Southeast-bound Right	41	1	1.00	0.03	91	1	1.00	0.06
Comb. L-T-R						0		
Northwest-bound Left	35		0.83	0.03	35	0	0.83	0.03
Comb. L-T		1				1		
Northwest-bound Thru	7		0.17	0.03	7	0	0.17	0.03
Comb. T-R						0		
Northwest-bound Right	63	1	1.00	0.04	63	1	1.00	0.04
Comb. L-T-R						0		
Northeast-bound Left	55	1	1.00	0.03	142	1	1.00	0.09
Comb. L-T						0		
Northeast-bound Thru	955	2	2.00	0.30	955	2	2.00	0.30
Comb. T-R						0		
Northeast-bound Right	35	1	1.00	0.02	35	1	1.00	0.02
Comb. L-T-R						0		
Southwest-bound Left	34	1	1.00	0.02	34	1	1.00	0.02
Comb. L-T						0		
Southwest-bound Thru	1207	2	2.00	0.38	1207	2	2.00	0.38
Comb. T-R						0		
Southwest-bound Right	101	1	1.00	0.06	402	1	1.00	0.25
Comb. L-T-R						0		

Critical Volumes	E-W:	0.08	E-W:	0.17
	N-S:	0.41	N-S:	0.47
	Total:	0.49	Total:	0.64

Lost Time	0.10	0.10

V/C	0.592	0.735
Level of Service	A	C

SE-NW Street: Vine Ave
NE-SW Street: Sunset Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Existing				Existing + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	104	0	0.94	0.07	574	0	0.99	0.36
Comb. L-T		1				1		
Southeast-bound Thru	7	0	0.06	0.07	7	0	0.01	0.36
Comb. T-R		0				0		
Southeast-bound Right	44	1	1.00	0.03	207	1	1.00	0.13
Comb. L-T-R		0				0		
Northwest-bound Left	4	0	0.67	0.00	4	0	0.67	0.00
Comb. L-T		1				1		
Northwest-bound Thru	2	0	0.33	0.00	2	0	0.33	0.00
Comb. T-R		0				0		
Northwest-bound Right	33	1	1.00	0.02	33	1	1.00	0.02
Comb. L-T-R		0				0		
Northeast-bound Left	32	1	1.00	0.02	73	1	1.00	0.05
Comb. L-T		0				0		
Northeast-bound Thru	1084	2	2.00	0.34	1084	2	2.00	0.34
Comb. T-R		0				0		
Northeast-bound Right	31	1	1.00	0.02	31	1	1.00	0.02
Comb. L-T-R		0				0		
Southwest-bound Left	43	1	1.00	0.03	43	1	1.00	0.03
Comb. L-T		0				0		
Southwest-bound Thru	966	2	2.00	0.30	966	2	2.00	0.30
Comb. T-R		0				0		
Southwest-bound Right	52	1	1.00	0.03	193	1	1.00	0.12
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.09	E-W:	0.38
	N-S:	0.37	N-S:	0.37
	Total:	0.46	Total:	0.75

Lost Time	0.10	0.10

V/C	0.556	0.849
Level of Service	A	D

SE-NW Street: Cameron Ave
NE-SW Street: Sunset Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Existing				Existing + Project				Existing + Project With Mitigation			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	69	1	1.00	0.04	69	1	1.00	0.04	69	1	1.00	0.04
Comb. L-T						0				0		
Southeast-bound Thru	382	1	1.46	0.16	382	1	1.08	0.22	382	1	1.08	0.22
Comb. T-R		1				1				1		
Southeast-bound Right	141		0.54	0.16	326	0	0.92	0.22	326	0	0.92	0.22
Comb. L-T-R						0				0		
Northwest-bound Left	224	1	1.00	0.14	253	1	1.00	0.16	253	1	1.00	0.16
Comb. L-T						0				0		
Northwest-bound Thru	724	1	1.89	0.24	724	1	1.89	0.24	724	1	1.89	0.24
Comb. T-R		1				1				1		
Northwest-bound Right	42		0.11	0.24	42	0	0.11	0.24	42	0	0.11	0.24
Comb. L-T-R						0				0		
Northeast-bound Left	187	1	1.00	0.12	187	1	1.00	0.12	187	1	1.00	0.12
Comb. L-T						0				0		
Northeast-bound Thru	786	2	2.00	0.25	919	2	2.00	0.29	919	2	2.61	0.22
Comb. T-R						0				1		
Northeast-bound Right	126	1	1.00	0.08	136	1	1.00	0.09	136	0	0.39	0.22
Comb. L-T-R						0				0		
Southwest-bound Left	35	1	1.00	0.02	35	1	1.00	0.02	35	1	1.00	0.02
Comb. L-T						0				0		
Southwest-bound Thru	895	2	2.00	0.28	982	2	2.00	0.31	982	2	2.75	0.22
Comb. T-R						0				1		
Southwest-bound Right	91	1	1.00	0.06	91	1	1.00	0.06	91	0	0.25	0.22
Comb. L-T-R						0				0		

Critical Volumes			E-W:	0.30			E-W:	0.38			E-W:	0.38
			N-S:	0.40			N-S:	0.42			N-S:	0.34
			Total:	0.70			Total:	0.80			Total:	0.72
Lost Time				0.10				0.10				0.10
V/C				0.800				0.903				0.820
Level of Service				C				E				D

SE-NW Street: Cameron Ave
NE-SW Street: Sunset Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Existing				Existing + Project				Existing + Project With Mitigation			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	142	1	1.00	0.09	142	1	1.00	0.09	142	1	1.00	0.09
Comb. L-T		0				0				0		
Southeast-bound Thru	592	1	1.56	0.24	592	1	1.40	0.26	592	1	1.40	0.26
Comb. T-R		1				1				1		
Southeast-bound Right	167	0	0.44	0.24	254	0	0.60	0.26	254	0	0.60	0.26
Comb. L-T-R		0				0				0		
Northwest-bound Left	98	1	1.00	0.06	112	1	1.00	0.07	112	1	1.00	0.07
Comb. L-T		0				0				0		
Northwest-bound Thru	426	1	1.78	0.15	426	1	1.78	0.15	426	1	1.78	0.15
Comb. T-R		1				1				1		
Northwest-bound Right	52	0	0.22	0.15	52	0	0.22	0.15	52	0	0.22	0.15
Comb. L-T-R		0				0				0		
Northeast-bound Left	163	1	1.00	0.10	163	1	1.00	0.10	163	1	1.00	0.10
Comb. L-T		0				0				0		
Northeast-bound Thru	929	2	2.00	0.29	1366	2	2.00	0.43	1366	2	2.67	0.32
Comb. T-R		0				0				1		
Northeast-bound Right	133	1	1.00	0.08	166	1	1.00	0.10	166	0	0.33	0.32
Comb. L-T-R		0				0				0		
Southwest-bound Left	65	1	1.00	0.04	65	1	1.00	0.04	65	1	1.00	0.04
Comb. L-T		0				0				0		
Southwest-bound Thru	736	2	2.00	0.23	777	2	2.00	0.24	777	2	2.82	0.17
Comb. T-R		0				0				1		
Southwest-bound Right	50	1	1.00	0.03	50	1	1.00	0.03	50	0	0.18	0.17
Comb. L-T-R		0				0				0		

Critical Volumes			E-W:	0.30			E-W:	0.33			E-W:	0.33
			N-S:	0.33			N-S:	0.47			N-S:	0.36
			Total:	0.63			Total:	0.80			Total:	0.69

Lost Time				0.10				0.10				0.10

V/C				0.730				0.902				0.794
Level of Service				C				E				C

SE-NW Street: West Covina Pkwy
NE-SW Street: Sunset Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Existing				Existing + Project				Existing + Project With Mitigation			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	121	1	1.00	0.08	121	1	1.00	0.08	121	1	1.00	0.08
Comb. L-T						0				0		
Southeast-bound Thru	187	1	1.51	0.08	187	1	1.36	0.09	187	2	2.00	0.06
Comb. T-R		1				1				0		
Southeast-bound Right	60		0.49	0.08	89	0	0.64	0.09	89	1	1.00	0.06
Comb. L-T-R						0				0		
Northwest-bound Left	119	1	1.00	0.07	119	1	1.00	0.07	119	1	1.00	0.07
Comb. L-T						0				0		
Northwest-bound Thru	479	1	1.66	0.18	479	1	1.66	0.18	479	2	2.00	0.15
Comb. T-R		1				1				0		
Northwest-bound Right	97		0.34	0.18	97	0	0.34	0.18	97	1	1.00	0.06
Comb. L-T-R						0				0		
Northeast-bound Left	116	1	1.00	0.07	229	1	1.00	0.14	229	1	1.00	0.14
Comb. L-T						0				0		
Northeast-bound Thru	605	2	2.00	0.19	625	2	2.00	0.20	625	2	2.00	0.20
Comb. T-R						0				0		
Northeast-bound Right	166	1	1.00	0.10	166	1	1.00	0.10	166	1	1.00	0.10
Comb. L-T-R						0				0		
Southwest-bound Left	58	1	1.00	0.04	58	1	1.00	0.04	58	1	1.00	0.04
Comb. L-T						0				0		
Southwest-bound Thru	839	2	2.00	0.26	897	2	2.00	0.28	897	2	2.00	0.28
Comb. T-R						0				0		
Southwest-bound Right	211	1	1.00	0.13	211	1	1.00	0.13	211	1	1.00	0.13
Comb. L-T-R						0				0		

Critical Volumes			E-W:	0.26			E-W:	0.26			E-W:	0.23
			N-S:	0.33			N-S:	0.42			N-S:	0.42
			Total:	0.59			Total:	0.68			Total:	0.65

Lost Time				0.10				0.10				0.10

V/C				0.690				0.779				0.749
Level of Service				B				C				C

SE-NW Street: West Covina Pkwy
NE-SW Street: Sunset Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Existing				Existing + Project				Existing + Project With Mitigation			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	182	1	1.00	0.11	182	1	1.00	0.11	182	1	1.00	0.11
Comb. L-T		0				0				0		
Southeast-bound Thru	420	1	1.51	0.17	420	1	1.47	0.18	420	2	2.00	0.13
Comb. T-R		1				1				0		
Southeast-bound Right	136	0	0.49	0.17	150	0	0.53	0.18	150	1	1.00	0.09
Comb. L-T-R		0				0				0		
Northwest-bound Left	137	1	1.00	0.09	137	1	1.00	0.09	137	1	1.00	0.09
Comb. L-T		0				0				0		
Northwest-bound Thru	449	1	1.65	0.17	449	1	1.65	0.17	449	2	2.00	0.14
Comb. T-R		1				1				0		
Northwest-bound Right	95	0	0.35	0.17	95	0	0.35	0.17	95	1	1.00	0.06
Comb. L-T-R		0				0				0		
Northeast-bound Left	107	1	1.00	0.07	479	1	1.00	0.30	479	1	1.00	0.30
Comb. L-T		0				0				0		
Northeast-bound Thru	808	2	2.00	0.25	873	2	2.00	0.27	873	2	2.00	0.27
Comb. T-R		0				0				0		
Northeast-bound Right	248	1	1.00	0.16	248	1	1.00	0.16	248	1	1.00	0.16
Comb. L-T-R		0				0				0		
Southwest-bound Left	139	1	1.00	0.09	139	1	1.00	0.09	139	1	1.00	0.09
Comb. L-T		0				0				0		
Southwest-bound Thru	586	2	2.00	0.18	613	2	2.00	0.19	613	2	2.00	0.19
Comb. T-R		0				0				0		
Southwest-bound Right	178	1	1.00	0.11	178	1	1.00	0.11	178	1	1.00	0.11
Comb. L-T-R		0				0				0		

Critical Volumes			E-W:	0.28			E-W:	0.28			E-W:	0.25
			N-S:	0.34			N-S:	0.49			N-S:	0.49
			Total:	0.62			Total:	0.77			Total:	0.75

Lost Time	0.10	0.10	0.10

V/C	0.723	0.875	0.845
Level of Service	C	D	D

SE-NW Street: Merced Ave
NE-SW Street: Orange Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Existing				Existing + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	107	1	1.00	0.07	107	1	1.00	0.07
Comb. L-T						0		
Southeast-bound Thru	431	2	2.00	0.13	564	2	2.00	0.18
Comb. T-R						0		
Southeast-bound Right	82	1	1.00	0.05	82	1	1.00	0.05
Comb. L-T-R						0		
Northwest-bound Left	148	1	1.00	0.09	148	1	1.00	0.09
Comb. L-T						0		
Northwest-bound Thru	243	1	1.35	0.11	249	1	1.36	0.11
Comb. T-R		1				1		
Northwest-bound Right	118		0.65	0.11	118	0	0.64	0.11
Comb. L-T-R						0		
Northeast-bound Left	94	1	1.00	0.06	94	1	1.00	0.06
Comb. L-T						0		
Northeast-bound Thru	301	1	1.34	0.14	301	1	1.34	0.14
Comb. T-R		1				1		
Northeast-bound Right	149		0.66	0.14	149	0	0.66	0.14
Comb. L-T-R						0		
Southwest-bound Left	95	1	1.00	0.06	95	1	1.00	0.06
Comb. L-T						0		
Southwest-bound Thru	408	1	1.88	0.14	408	1	1.88	0.14
Comb. T-R		1				1		
Southwest-bound Right	27		0.12	0.14	27	0	0.12	0.14
Comb. L-T-R						0		

Critical Volumes	E-W:	0.23	E-W:	0.27
	N-S:	0.20	N-S:	0.20
	Total:	0.43	Total:	0.47
Lost Time		0.10		0.10
V/C		0.527		0.569
Level of Service		A		A

SE-NW Street: Merced Ave
NE-SW Street: Orange Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Existing				Existing + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	81	1	1.00	0.05	81	1	1.00	0.05
Comb. L-T		0				0		
Southeast-bound Thru	413	2	2.00	0.13	475	2	2.00	0.15
Comb. T-R		0				0		
Southeast-bound Right	38	1	1.00	0.02	38	1	1.00	0.02
Comb. L-T-R		0				0		
Northwest-bound Left	68	1	1.00	0.04	68	1	1.00	0.04
Comb. L-T		0				0		
Northwest-bound Thru	212	1	1.10	0.12	232	1	1.15	0.13
Comb. T-R		1				1		
Northwest-bound Right	172	0	0.90	0.12	172	0	0.85	0.13
Comb. L-T-R		0				0		
Northeast-bound Left	33	1	1.00	0.02	33	1	1.00	0.02
Comb. L-T		0				0		
Northeast-bound Thru	302	1	1.62	0.12	302	1	1.62	0.12
Comb. T-R		1				1		
Northeast-bound Right	70	0	0.38	0.12	70	0	0.38	0.12
Comb. L-T-R		0				0		
Southwest-bound Left	139	1	1.00	0.09	139	1	1.00	0.09
Comb. L-T		0				0		
Southwest-bound Thru	308	1	1.77	0.11	308	1	1.77	0.11
Comb. T-R		1				1		
Southwest-bound Right	41	0	0.23	0.11	41	0	0.23	0.11
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.17	E-W:	0.19
	N-S:	0.20	N-S:	0.20
	Total:	0.37	Total:	0.39

Lost Time	0.10	0.10

V/C	0.475	0.494
Level of Service	A	A

SE-NW Street: Merced Ave
NE-SW Street: California Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Existing				Existing + Project				Existing + Project With Mitigation			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	66		0.14	0.30	66	0	0.13	0.32	66	1	1.00	0.04
Comb. L-T		1				1				0		
Southeast-bound Thru	411	1	1.86	0.14	441	1	1.87	0.15	441	1	1.83	0.15
Comb. T-R						0				1		
Southeast-bound Right	42	1	1.00	0.03	42	1	1.00	0.03	42	0	0.17	0.15
Comb. L-T-R						0				0		
Northwest-bound Left	74		0.10	0.45	74	0	0.09	0.51	74	1	1.00	0.05
Comb. L-T		1				1				0		
Northwest-bound Thru	653	1	1.90	0.22	740	1	1.91	0.24	740	1	1.90	0.24
Comb. T-R						0				1		
Northwest-bound Right	37	1	1.00	0.02	37	1	1.00	0.02	37	0	0.10	0.24
Comb. L-T-R						0				0		
Northeast-bound Left	27		0.13	0.13	27	0	0.13	0.13	27	0	0.13	0.13
Comb. L-T		1				1				1		
Northeast-bound Thru	178		0.87	0.13	178	0	0.87	0.13	178	0	0.87	0.13
Comb. T-R						0				0		
Northeast-bound Right	60	1	1.00	0.04	60	1	1.00	0.04	60	1	1.00	0.04
Comb. L-T-R						0				0		
Southwest-bound Left	42		0.19	0.14	42	0	0.19	0.14	42	0	0.19	0.14
Comb. L-T		1				1				1		
Southwest-bound Thru	185		0.81	0.14	185	0	0.81	0.14	185	0	0.81	0.14
Comb. T-R						0				0		
Southwest-bound Right	67	1	1.00	0.04	67	1	1.00	0.04	67	1	1.00	0.04
Comb. L-T-R						0				0		

Critical Volumes			E-W:	0.59			E-W:	0.66			E-W:	0.28
			N-S:	0.27			N-S:	0.27			N-S:	0.27
			Total:	0.86			Total:	0.93			Total:	0.55

Lost Time				0.10				0.10				0.10

V/C				0.962				1.026				0.654
Level of Service				E				F				B

SE-NW Street: Merced Ave
NE-SW Street: California Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Existing				Existing + Project				Existing + Project With Mitigation			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	76	0	0.11	0.42	76	0	0.10	0.48	76	1	1.00	0.05
Comb. L-T		1				1				0		
Southeast-bound Thru	593	1	1.89	0.20	691	1	1.90	0.23	691	1	1.92	0.23
Comb. T-R		0				0				1		
Southeast-bound Right	29	1	1.00	0.02	29	1	1.00	0.02	29	0	0.08	0.23
Comb. L-T-R		0				0				0		
Northwest-bound Left	43	0	0.11	0.25	43	0	0.10	0.28	43	1	1.00	0.03
Comb. L-T		1				1				0		
Northwest-bound Thru	364	1	1.89	0.12	405	1	1.90	0.13	405	1	1.80	0.14
Comb. T-R		0				0				1		
Northwest-bound Right	45	1	1.00	0.03	45	1	1.00	0.03	45	0	0.20	0.14
Comb. L-T-R		0				0				0		
Northeast-bound Left	27	0	0.10	0.16	27	0	0.10	0.16	27	0	0.10	0.16
Comb. L-T		1				1				1		
Northeast-bound Thru	233	0	0.90	0.16	233	0	0.90	0.16	233	0	0.90	0.16
Comb. T-R		0				0				0		
Northeast-bound Right	49	1	1.00	0.03	49	1	1.00	0.03	49	1	1.00	0.03
Comb. L-T-R		0				0				0		
Southwest-bound Left	37	0	0.15	0.16	37	0	0.15	0.16	37	0	0.15	0.16
Comb. L-T		1				1				1		
Southwest-bound Thru	215	0	0.85	0.16	215	0	0.85	0.16	215	0	0.85	0.16
Comb. T-R		0				0				0		
Southwest-bound Right	45	1	1.00	0.03	45	1	1.00	0.03	45	1	1.00	0.03
Comb. L-T-R		0				0				0		

Critical Volumes			E-W:	0.54			E-W:	0.61			E-W:	0.25
			N-S:	0.32			N-S:	0.32			N-S:	0.32
			Total:	0.86			Total:	0.93			Total:	0.57
Lost Time				0.10				0.10				0.10
V/C				0.958				1.032				0.672
Level of Service				E				F				B

SE-NW Street: Merced Ave
NE-SW Street: Glendora Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Existing				Existing + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	55	1	1.00	0.03	55	1	1.00	0.03
Comb. L-T						0		
Southeast-bound Thru	391	1	1.75	0.14	401	1	1.68	0.15
Comb. T-R		1				1		
Southeast-bound Right	56		0.25	0.14	76	0	0.32	0.15
Comb. L-T-R						0		
Northwest-bound Left	62	1	1.00	0.04	62	1	1.00	0.04
Comb. L-T						0		
Northwest-bound Thru	526	1	1.84	0.18	555	1	1.84	0.19
Comb. T-R		1				1		
Northwest-bound Right	47		0.16	0.18	47	0	0.16	0.19
Comb. L-T-R						0		
Northeast-bound Left	54	1	1.00	0.03	112	1	1.00	0.07
Comb. L-T						0		
Northeast-bound Thru	726	2	2.00	0.23	726	2	2.00	0.23
Comb. T-R						0		
Northeast-bound Right	48	1	1.00	0.03	48	1	1.00	0.03
Comb. L-T-R						0		
Southwest-bound Left	28	1	1.00	0.02	28	1	1.00	0.02
Comb. L-T						0		
Southwest-bound Thru	789	2	2.00	0.25	789	2	2.00	0.25
Comb. T-R						0		
Southwest-bound Right	187	1	1.00	0.12	187	1	1.00	0.12
Comb. L-T-R						0		

Critical Volumes	E-W:	0.21	E-W:	0.22
	N-S:	0.28	N-S:	0.32
	Total:	0.49	Total:	0.54

Lost Time	0.10	0.10

V/C	0.594	0.639
Level of Service	A	B

SE-NW Street: Merced Ave
NE-SW Street: Glendora Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Existing				Existing + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	103	1	1.00	0.06	103	1	1.00	0.06
Comb. L-T		0				0		
Southeast-bound Thru	492	1	1.70	0.18	525	1	1.55	0.21
Comb. T-R		1				1		
Southeast-bound Right	88	0	0.30	0.18	153	0	0.45	0.21
Comb. L-T-R		0				0		
Northwest-bound Left	43	1	1.00	0.03	43	1	1.00	0.03
Comb. L-T		0				0		
Northwest-bound Thru	280	1	1.75	0.10	294	1	1.76	0.10
Comb. T-R		1				1		
Northwest-bound Right	40	0	0.25	0.10	40	0	0.24	0.10
Comb. L-T-R		0				0		
Northeast-bound Left	77	1	1.00	0.05	104	1	1.00	0.07
Comb. L-T		0				0		
Northeast-bound Thru	901	2	2.00	0.28	901	2	2.00	0.28
Comb. T-R		0				0		
Northeast-bound Right	107	1	1.00	0.07	107	1	1.00	0.07
Comb. L-T-R		0				0		
Southwest-bound Left	67	1	1.00	0.04	67	1	1.00	0.04
Comb. L-T		0				0		
Southwest-bound Thru	790	2	2.00	0.25	790	2	2.00	0.25
Comb. T-R		0				0		
Southwest-bound Right	117	1	1.00	0.07	117	1	1.00	0.07
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.21	E-W:	0.24
	N-S:	0.32	N-S:	0.32
	Total:	0.53	Total:	0.56

Lost Time	0.10	0.10

V/C	0.632	0.662
Level of Service	B	B

SE-NW Street: Cameron Ave
NE-SW Street: Orange Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Existing				Existing + Project				Existing + Project With Mitigation			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	8	1	1.00	0.01	8	1	1.00	0.01	8	1	1.00	0.01
Comb. L-T						0				0		
Southeast-bound Thru	410	1	1.15	0.22	422	1	1.16	0.23	422	1	1.16	0.23
Comb. T-R		1				1				1		
Southeast-bound Right	303		0.85	0.22	303	0	0.84	0.23	303	0	0.84	0.23
Comb. L-T-R						0				0		
Northwest-bound Left	310	1	1.00	0.19	310	1	1.00	0.19	310	1	1.00	0.19
Comb. L-T						0				0		
Northwest-bound Thru	634	1	1.97	0.20	634	1	1.97	0.20	634	1	1.97	0.20
Comb. T-R		1				1				1		
Northwest-bound Right	9		0.03	0.20	9	0	0.03	0.20	9	0	0.03	0.20
Comb. L-T-R						0				0		
Northeast-bound Left	338		0.96	0.22	338	0	0.96	0.22	338	1	1.00	0.21
Comb. L-T		1				1				0		
Northeast-bound Thru	14		0.04	0.22	14	0	0.04	0.22	14	0	0.04	0.21
Comb. T-R						0				1		
Northeast-bound Right	324	1	1.00	0.20	324	1	1.00	0.20	324	0	0.96	0.21
Comb. L-T-R						0				0		
Southwest-bound Left	100		0.57	0.11	187	0	0.71	0.16	187	1	1.00	0.12
Comb. L-T		1				1				0		
Southwest-bound Thru	76		0.43	0.11	76	0	0.29	0.16	76	0	0.59	0.08
Comb. T-R						0				1		
Southwest-bound Right	53	1	1.00	0.03	53	1	1.00	0.03	53	0	0.41	0.08
Comb. L-T-R						0				0		

Critical Volumes			E-W:	0.42			E-W:	0.42			E-W:	0.42
			N-S:	0.33			N-S:	0.38			N-S:	0.33
			Total:	0.75			Total:	0.80			Total:	0.75
Lost Time				0.10				0.10				0.10
V/C				0.847				0.905				0.848
Level of Service				D				E				D

SE-NW Street: Cameron Ave
NE-SW Street: Orange Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Existing				Existing + Project				Existing + Project With Mitigation			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	7	1	1.00	0.00	7	1	1.00	0.00	7	1	1.00	0.00
Comb. L-T		0				0				0		
Southeast-bound Thru	468	1	1.38	0.21	473	1	1.38	0.21	473	1	1.38	0.21
Comb. T-R		1				1				1		
Southeast-bound Right	211	0	0.62	0.21	211	0	0.62	0.21	211	0	0.62	0.21
Comb. L-T-R		0				0				0		
Northwest-bound Left	332	1	1.00	0.21	332	1	1.00	0.21	332	1	1.00	0.21
Comb. L-T		0				0				0		
Northwest-bound Thru	521	1	1.98	0.16	521	1	1.98	0.16	521	1	1.98	0.16
Comb. T-R		1				1				1		
Northwest-bound Right	4	0	0.02	0.16	4	0	0.02	0.16	4	0	0.02	0.16
Comb. L-T-R		0				0				0		
Northeast-bound Left	311	0	0.96	0.20	311	0	0.96	0.20	311	1	1.00	0.19
Comb. L-T		1				1				0		
Northeast-bound Thru	14	0	0.04	0.20	14	0	0.04	0.20	14	0	0.03	0.26
Comb. T-R		0				0				1		
Northeast-bound Right	403	1	1.00	0.25	403	1	1.00	0.25	403	0	0.97	0.26
Comb. L-T-R		0				0				0		
Southwest-bound Left	71	0	0.59	0.08	112	0	0.70	0.10	112	1	1.00	0.07
Comb. L-T		1				1				0		
Southwest-bound Thru	49	0	0.41	0.08	49	0	0.30	0.10	49	0	0.45	0.07
Comb. T-R		0				0				1		
Southwest-bound Right	61	1	1.00	0.04	61	1	1.00	0.04	61	0	0.55	0.07
Comb. L-T-R		0				0				0		

Critical Volumes			E-W:	0.42			E-W:	0.42			E-W:	0.42
			N-S:	0.33			N-S:	0.35			N-S:	0.33
			Total:	0.75			Total:	0.77			Total:	0.75

Lost Time	0.10	0.10	0.10

V/C	0.847	0.874	0.852
Level of Service	D	D	D

SE-NW Street: West Covina Pkwy
NE-SW Street: Toluca Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Existing				Existing + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	0		0.00	0.00	0	0	0.00	0.00
Comb. L-T						0		
Southeast-bound Thru	272	2	2.00	0.09	301	2	2.00	0.09
Comb. T-R						0		
Southeast-bound Right	103	1	1.00	0.06	190	1	1.00	0.12
Comb. L-T-R						0		
Northwest-bound Left	128	1	1.00	0.08	128	1	1.00	0.08
Comb. L-T						0		
Northwest-bound Thru	628	2	2.00	0.20	741	2	2.00	0.23
Comb. T-R						0		
Northwest-bound Right	0		0.00	0.00	0	0	0.00	0.00
Comb. L-T-R						0		
Northeast-bound Left	145	1	0.61	0.15	145	1	0.61	0.15
Comb. L-T						0		
Northeast-bound Thru	0		0.00	0.00	0	0	0.00	0.00
Comb. T-R						0		
Northeast-bound Right	93		0.39	0.15	93	0	0.39	0.15
Comb. L-R		1				1		
Southwest-bound Left	0		0.00	0.00	0	0	0.00	0.00
Comb. L-T						0		
Southwest-bound Thru	0		0.00	0.00	0	0	0.00	0.00
Comb. T-R						0		
Southwest-bound Right	0		0.00	0.00	0	0	0.00	0.00
Comb. L-T-R						0		

Critical Volumes	E-W:	0.20	E-W:	0.23
	N-S:	0.15	N-S:	0.15
	Total:	0.35	Total:	0.38

Lost Time	0.10	0.10

V/C	0.445	0.480
Level of Service	A	A

SE-NW Street: West Covina Pkwy
NE-SW Street: Toluca Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Existing				Existing + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	0	0	0.00	0.00	0	0	0.00	0.00
Comb. L-T		0				0		
Southeast-bound Thru	539	2	2.00	0.17	553	2	2.00	0.17
Comb. T-R		0				0		
Southeast-bound Right	192	1	1.00	0.12	233	1	1.00	0.15
Comb. L-T-R		0				0		
Northwest-bound Left	120	1	1.00	0.08	120	1	1.00	0.08
Comb. L-T		0				0		
Northwest-bound Thru	593	2	2.00	0.19	965	2	2.00	0.30
Comb. T-R		0				0		
Northwest-bound Right	0	0	0.00		0	0	0.00	
Comb. L-T-R		0				0		
Northeast-bound Left	292	1	0.67	0.27	292	1	0.67	0.27
Comb. L-T		0				0		
Northeast-bound Thru	0	0	0.00	0.00	0	0	0.00	0.00
Comb. T-R		0				0		
Northeast-bound Right	141	0	0.33	0.27	141	0	0.33	0.27
Comb. L-R		1				1		
Southwest-bound Left	0	0	0.00	0.00	0	0	0.00	0.00
Comb. L-T		0				0		
Southwest-bound Thru	0	0	0.00	0.00	0	0	0.00	0.00
Comb. T-R		0				0		
Southwest-bound Right	0	0	0.00	0.00	0	0	0.00	0.00
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.24	E-W:	0.30
	N-S:	0.27	N-S:	0.27
	Total:	0.51	Total:	0.57

Lost Time	0.10	0.10

V/C	0.614	0.672
Level of Service	B	B

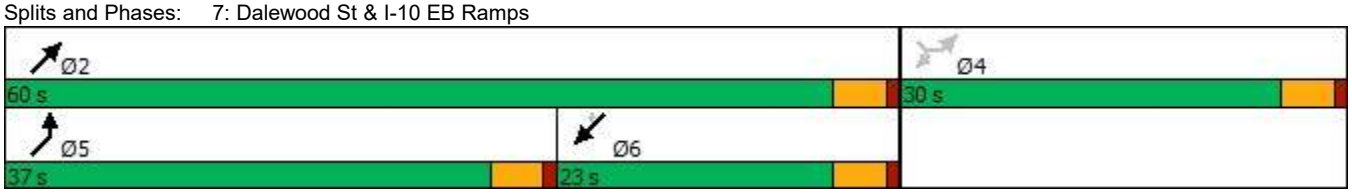
Timings
7: Dalewood St & I-10 EB Ramps

11/05/2018

Lane Group	SEL	SER	NEL	NET	SWT	SWR2
Lane Configurations						
Traffic Volume (vph)	194	88	512	182	278	283
Future Volume (vph)	194	88	512	182	278	283
Turn Type	Perm	Perm	Prot	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	30.0	30.0	10.0	22.0	22.0	22.0
Total Split (s)	30.0	30.0	37.0	60.0	23.0	23.0
Total Split (%)	33.3%	33.3%	41.1%	66.7%	25.6%	25.6%
Yellow Time (s)	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
Lost Time Adjust (s)	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
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None	None	Min	Min	Min
Act Effct Green (s)	10.8	10.8	32.0	53.3	16.8	16.8
Actuated g/C Ratio	0.15	0.15	0.44	0.73	0.23	0.23
v/c Ratio	0.51	0.35	0.82	0.09	0.73	0.52
Control Delay	33.0	9.4	29.9	3.2	38.0	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.0	9.4	29.9	3.2	38.0	6.7
LOS	C	A	C	A	D	A
Approach Delay	25.6			22.9	22.2	
Approach LOS	C			C	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 73.2	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 23.2	Intersection LOS: C
Intersection Capacity Utilization 59.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: Dalewood St & I-10 EB Ramps



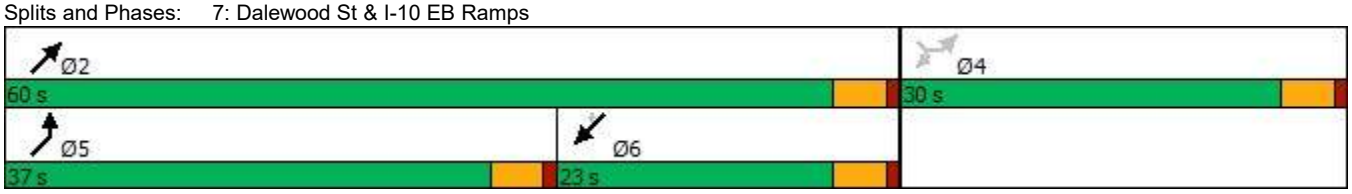
Timings
7: Dalewood St & I-10 EB Ramps

11/05/2018

Lane Group	SEL	SER	NEL	NET	SWT	SWR2
Lane Configurations						
Traffic Volume (vph)	310	88	512	199	284	283
Future Volume (vph)	310	88	512	199	284	283
Turn Type	Perm	Perm	Prot	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	30.0	30.0	10.0	22.0	22.0	22.0
Total Split (s)	30.0	30.0	37.0	60.0	23.0	23.0
Total Split (%)	33.3%	33.3%	41.1%	66.7%	25.6%	25.6%
Yellow Time (s)	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
Lost Time Adjust (s)	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
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None	None	Min	Min	Min
Act Effct Green (s)	14.7	14.7	32.2	53.9	17.2	17.2
Actuated g/C Ratio	0.19	0.19	0.41	0.69	0.22	0.22
v/c Ratio	0.64	0.30	0.86	0.10	0.77	0.53
Control Delay	34.0	7.8	36.2	4.4	43.7	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.0	7.8	36.2	4.4	43.7	7.1
LOS	C	A	D	A	D	A
Approach Delay	28.2			27.3	25.4	
Approach LOS	C			C	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 77.7	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 27.0	Intersection LOS: C
Intersection Capacity Utilization 63.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: Dalewood St & I-10 EB Ramps



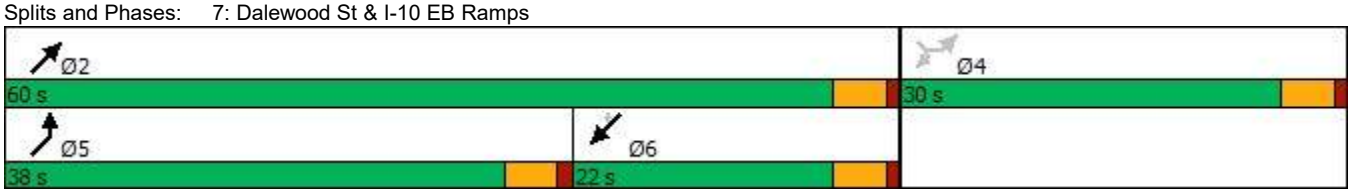
Timings
7: Dalewood St & I-10 EB Ramps

11/05/2018

Lane Group	SEL	SER	NEL	NET	SWT	SWR2
Lane Configurations						
Traffic Volume (vph)	155	55	547	457	186	106
Future Volume (vph)	155	55	547	457	186	106
Turn Type	Perm	Perm	Prot	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	30.0	30.0	10.0	22.0	22.0	22.0
Total Split (s)	30.0	30.0	38.0	60.0	22.0	22.0
Total Split (%)	33.3%	33.3%	42.2%	66.7%	24.4%	24.4%
Yellow Time (s)	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
Lost Time Adjust (s)	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
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None	None	Min	Min	Min
Act Effct Green (s)	9.0	9.0	28.4	45.4	12.3	12.3
Actuated g/C Ratio	0.14	0.14	0.45	0.71	0.19	0.19
v/c Ratio	0.37	0.23	0.77	0.20	0.55	0.28
Control Delay	29.3	9.1	23.8	3.3	30.9	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.3	9.1	23.8	3.3	30.9	7.7
LOS	C	A	C	A	C	A
Approach Delay	23.9			14.4	22.5	
Approach LOS	C			B	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 63.7	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 17.3	Intersection LOS: B
Intersection Capacity Utilization 55.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: Dalewood St & I-10 EB Ramps



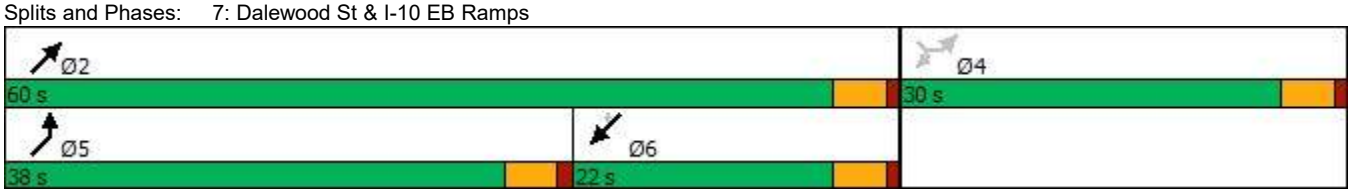
Timings
7: Dalewood St & I-10 EB Ramps

11/05/2018

Lane Group	SEL	SER	NEL	NET	SWT	SWR2
Lane Configurations						
Traffic Volume (vph)	209	55	547	465	206	106
Future Volume (vph)	209	55	547	465	206	106
Turn Type	Perm	Perm	Prot	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	30.0	30.0	10.0	22.0	22.0	22.0
Total Split (s)	30.0	30.0	38.0	60.0	22.0	22.0
Total Split (%)	33.3%	33.3%	42.2%	66.7%	24.4%	24.4%
Yellow Time (s)	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
Lost Time Adjust (s)	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
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None	None	Min	Min	Min
Act Effct Green (s)	10.4	10.4	29.0	46.7	13.1	13.1
Actuated g/C Ratio	0.16	0.16	0.44	0.70	0.20	0.20
v/c Ratio	0.46	0.21	0.79	0.21	0.60	0.28
Control Delay	30.0	8.5	26.0	3.7	33.1	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.0	8.5	26.0	3.7	33.1	7.8
LOS	C	A	C	A	C	A
Approach Delay	25.5			15.7	24.5	
Approach LOS	C			B	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 66.4	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 19.1	Intersection LOS: B
Intersection Capacity Utilization 58.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: Dalewood St & I-10 EB Ramps



Intersection	
Intersection Delay, s/veh	40
Intersection LOS	E

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	482	2	45	337	4	90
Future Vol, veh/h	482	2	45	337	4	90
Peak Hour Factor	0.90	0.90	0.83	0.83	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	536	2	54	406	5	103
Number of Lanes	1	1	1	0	0	1

Approach	NW	NE	SW
Opposing Approach		SW	NE
Opposing Lanes	0	1	1
Conflicting Approach Left	NE		NW
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SW	NW	
Conflicting Lanes Right	1	2	0
HCM Control Delay	62.2	20.7	11.5
HCM LOS	F	C	B

Lane	NELn1	NWLn1	NWLn2	SWLn1
Vol Left, %	0%	100%	0%	4%
Vol Thru, %	12%	0%	0%	96%
Vol Right, %	88%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	382	482	2	94
LT Vol	0	482	0	4
Through Vol	45	0	0	90
RT Vol	337	0	2	0
Lane Flow Rate	460	536	2	108
Geometry Grp	2	7	7	2
Degree of Util (X)	0.702	0.992	0.003	0.203
Departure Headway (Hd)	5.493	6.667	5.451	6.776
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	649	546	654	533
Service Time	3.588	4.42	3.203	4.776
HCM Lane V/C Ratio	0.709	0.982	0.003	0.203
HCM Control Delay	20.7	62.4	8.2	11.5
HCM Lane LOS	C	F	A	B
HCM 95th-tile Q	5.7	13.9	0	0.8

Intersection	
Intersection Delay, s/veh	60.8
Intersection LOS	F

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	488	2	45	470	4	90
Future Vol, veh/h	488	2	45	470	4	90
Peak Hour Factor	0.90	0.90	0.83	0.83	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	542	2	54	566	5	103
Number of Lanes	1	1	1	0	0	1

Approach	NW	NE	SW
Opposing Approach		SW	NE
Opposing Lanes	0	1	1
Conflicting Approach Left	NE		NW
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SW	NW	
Conflicting Lanes Right	1	2	0
HCM Control Delay	87.9	45.4	12.2
HCM LOS	F	E	B

Lane	NELn1	NWLn1	NWLn2	SWLn1
Vol Left, %	0%	100%	0%	4%
Vol Thru, %	9%	0%	0%	96%
Vol Right, %	91%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	515	488	2	94
LT Vol	0	488	0	4
Through Vol	45	0	0	90
RT Vol	470	0	2	0
Lane Flow Rate	620	542	2	108
Geometry Grp	2	7	7	2
Degree of Util (X)	0.935	1.076	0.004	0.209
Departure Headway (Hd)	5.747	7.146	5.924	7.274
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	633	510	607	497
Service Time	3.747	4.855	3.634	5.274
HCM Lane V/C Ratio	0.979	1.063	0.003	0.217
HCM Control Delay	45.4	88.2	8.7	12.2
HCM Lane LOS	E	F	A	B
HCM 95th-tile Q	12.5	16.8	0	0.8

Intersection	
Intersection Delay, s/veh	23.8
Intersection LOS	C

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	231	8	221	387	6	49
Future Vol, veh/h	231	8	221	387	6	49
Peak Hour Factor	0.84	0.84	0.93	0.93	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	275	10	238	416	7	60
Number of Lanes	1	1	1	0	0	1

Approach	NW	NE	SW
Opposing Approach		SW	NE
Opposing Lanes	0	1	1
Conflicting Approach Left	NE		NW
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SW	NW	
Conflicting Lanes Right	1	2	0
HCM Control Delay	16.5	28.4	9.6
HCM LOS	C	D	A

Lane	NELn1	NWLn1	NWLn2	SWLn1
Vol Left, %	0%	100%	0%	11%
Vol Thru, %	36%	0%	0%	89%
Vol Right, %	64%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	608	231	8	55
LT Vol	0	231	0	6
Through Vol	221	0	0	49
RT Vol	387	0	8	0
Lane Flow Rate	654	275	10	68
Geometry Grp	2	7	7	2
Degree of Util (X)	0.853	0.522	0.015	0.11
Departure Headway (Hd)	4.697	6.828	5.61	5.847
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	778	528	637	611
Service Time	2.697	4.568	3.35	3.903
HCM Lane V/C Ratio	0.841	0.521	0.016	0.111
HCM Control Delay	28.4	16.8	8.4	9.6
HCM Lane LOS	D	C	A	A
HCM 95th-tile Q	10.1	3	0	0.4

Intersection	
Intersection Delay, s/veh	35.8
Intersection LOS	E

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	251	8	221	449	6	49
Future Vol, veh/h	251	8	221	449	6	49
Peak Hour Factor	0.84	0.84	0.93	0.93	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	299	10	238	483	7	60
Number of Lanes	1	1	1	0	0	1

Approach	NW	NE	SW
Opposing Approach		SW	NE
Opposing Lanes	0	1	1
Conflicting Approach Left	NE		NW
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SW	NW	
Conflicting Lanes Right	1	2	0
HCM Control Delay	18.9	45.4	10
HCM LOS	C	E	A

Lane	NELn1	NWLn1	NWLn2	SWLn1
Vol Left, %	0%	100%	0%	11%
Vol Thru, %	33%	0%	0%	89%
Vol Right, %	67%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	670	251	8	55
LT Vol	0	251	0	6
Through Vol	221	0	0	49
RT Vol	449	0	8	0
Lane Flow Rate	720	299	10	68
Geometry Grp	2	7	7	2
Degree of Util (X)	0.961	0.583	0.015	0.115
Departure Headway (Hd)	4.802	7.027	5.807	6.09
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	764	514	615	585
Service Time	2.802	4.779	3.559	4.162
HCM Lane V/C Ratio	0.942	0.582	0.016	0.116
HCM Control Delay	45.4	19.2	8.6	10
HCM Lane LOS	E	C	A	A
HCM 95th-tile Q	14.7	3.7	0	0.4

HCM 6th TWSC
8: Dalewood St/Garvey Ave & Merced Ave

11/05/2018

Intersection	
Int Delay, s/veh	7.6

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	488	2	45	470	4	90
Future Vol, veh/h	488	2	45	470	4	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	0	-	0	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	83	83	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	542	2	54	566	5	103

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	167	54	0	0	620	0
Stage 1	54	-	-	-	-	-
Stage 2	113	-	-	-	-	-
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	823	1013	-	-	960	-
Stage 1	969	-	-	-	-	-
Stage 2	912	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	818	1013	-	-	960	-
Mov Cap-2 Maneuver	818	-	-	-	-	-
Stage 1	963	-	-	-	-	-
Stage 2	912	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	17.6	0	0.4
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	-	818	1013	960	-
HCM Lane V/C Ratio	-	-	0.663	0.002	0.005	-
HCM Control Delay (s)	-	-	17.6	8.6	8.8	0
HCM Lane LOS	-	-	C	A	A	A
HCM 95th %tile Q(veh)	-	-	5.1	0	0	-

HCM 6th TWSC
8: Dalewood St/Garvey Ave & Merced Ave

11/05/2018

Intersection	
Int Delay, s/veh	4.1

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	251	8	221	449	6	49
Future Vol, veh/h	251	8	221	449	6	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	0	-	0	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	93	93	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	299	10	238	483	7	60

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	312	238	0	0	721	0
Stage 1	238	-	-	-	-	-
Stage 2	74	-	-	-	-	-
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	681	801	-	-	881	-
Stage 1	802	-	-	-	-	-
Stage 2	949	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	676	801	-	-	881	-
Mov Cap-2 Maneuver	676	-	-	-	-	-
Stage 1	796	-	-	-	-	-
Stage 2	949	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	14.3	0	1
HCM LOS	B		

Minor Lane/Major Mvmt	NET	NER	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	-	676	801	881	-
HCM Lane V/C Ratio	-	-	0.442	0.012	0.008	-
HCM Control Delay (s)	-	-	14.5	9.5	9.1	0
HCM Lane LOS	-	-	B	A	A	A
HCM 95th %tile Q(veh)	-	-	2.3	0	0	-

Intersection	
Int Delay, s/veh	3.2

Movement	SEL	SET	SER	NWU	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Vol, veh/h	190	614	4	1	5	848	90	0	0	0	9	2	151
Future Vol, veh/h	190	614	4	1	5	848	90	0	0	0	9	2	151
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	-	60	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	-	0	-	-	22350	-	-	0	-
Grade, %	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	92	92	92	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	204	660	4	1	5	912	97	0	0	0	11	2	180

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	1009	0	0	665	664	0	0			1711	2045	505
Stage 1	-	-	-	-	-	-	-			973	973	-
Stage 2	-	-	-	-	-	-	-			738	1072	-
Critical Hdwy	4.14	-	-	6.44	4.14	-	-			6.84	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-			5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-			5.84	5.54	-
Follow-up Hdwy	2.22	-	-	2.52	2.22	-	-			3.52	4.02	3.32
Pot Cap-1 Maneuver	683	-	-	544	921	-	-			82	55	512
Stage 1	-	-	-	-	-	-	-			327	329	-
Stage 2	-	-	-	-	-	-	-			434	295	-
Platoon blocked, %		-	-			-	-					
Mov Cap-1 Maneuver	683	-	-	826	826	-	-			57	0	512
Mov Cap-2 Maneuver	-	-	-	-	-	-	-			57	0	-
Stage 1	-	-	-	-	-	-	-			228	0	-
Stage 2	-	-	-	-	-	-	-			434	0	-

Approach	SE	NW	SW
HCM Control Delay, s	2.9	0.1	20.6
HCM LOS			C

Minor Lane/Major Mvmt	NWL	NWT	NWR	SEL	SET	SER	SWLn1	SWLn2
Capacity (veh/h)	826	-	-	683	-	-	57	512
HCM Lane V/C Ratio	0.008	-	-	0.299	-	-	0.23	0.351
HCM Control Delay (s)	9.4	-	-	12.5	-	-	86.1	15.8
HCM Lane LOS	A	-	-	B	-	-	F	C
HCM 95th %tile Q(veh)	0	-	-	1.3	-	-	0.8	1.6

Intersection	
Int Delay, s/veh	40.1

Movement	SEL	SET	SER	NWU	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Vol, veh/h	190	712	4	1	5	848	90	0	0	0	96	2	151
Future Vol, veh/h	190	712	4	1	5	848	90	0	0	0	96	2	151
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	-	60	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	-	0	-	-	22350	-	-	0	-
Grade, %	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	92	92	92	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	204	766	4	1	5	912	97	0	0	0	114	2	180

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	1009	0	0	770	770	0	0			1764	2151	505
Stage 1	-	-	-	-	-	-	-			973	973	-
Stage 2	-	-	-	-	-	-	-			791	1178	-
Critical Hdwy	4.14	-	-	6.44	4.14	-	-			6.84	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-			5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-			5.84	5.54	-
Follow-up Hdwy	2.22	-	-	2.52	2.22	-	-			3.52	4.02	3.32
Pot Cap-1 Maneuver	683	-	-	466	840	-	-			~ 75	48	512
Stage 1	-	-	-	-	-	-	-			327	329	-
Stage 2	-	-	-	-	-	-	-			407	263	-
Platoon blocked, %		-	-			-	-					
Mov Cap-1 Maneuver	683	-	-	741	741	-	-			~ 52	0	512
Mov Cap-2 Maneuver	-	-	-	-	-	-	-			~ 52	0	-
Stage 1	-	-	-	-	-	-	-			227	0	-
Stage 2	-	-	-	-	-	-	-			407	0	-

Approach	SE	NW	SW
HCM Control Delay, s	2.6	0.1	$ 300.4
HCM LOS			F

Minor Lane/Major Mvmt	NWL	NWT	NWR	SEL	SET	SER	SWLn1	SWLn2
Capacity (veh/h)	741	-	-	683	-	-	52	512
HCM Lane V/C Ratio	0.009	-	-	0.299	-	-	2.244	0.351
HCM Control Delay (s)	9.9	-	-	12.5	-	-	$ 739	15.8
HCM Lane LOS	A	-	-	B	-	-	F	C
HCM 95th %tile Q(veh)	0	-	-	1.3	-	-	11.8	1.6

Notes

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

Intersection	
Int Delay, s/veh	7.4

Movement	SEL	SET	SER	NWU	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Vol, veh/h	238	760	2	2	3	576	112	0	0	0	46	0	267
Future Vol, veh/h	238	760	2	2	3	576	112	0	0	0	46	0	267
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	-	60	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	-	0	-	-	22350	-	-	0	-
Grade, %	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	96	96	96	96	92	92	92	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	262	835	2	2	3	600	117	0	0	0	52	0	303

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	717	0	0	837	837	0	0			1611	2030	359
Stage 1	-	-	-	-	-	-	-			669	669	-
Stage 2	-	-	-	-	-	-	-			942	1361	-
Critical Hdwy	4.14	-	-	6.44	4.14	-	-			6.84	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-			5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-			5.84	5.54	-
Follow-up Hdwy	2.22	-	-	2.52	2.22	-	-			3.52	4.02	3.32
Pot Cap-1 Maneuver	880	-	-	422	793	-	-			95	57	638
Stage 1	-	-	-	-	-	-	-			471	454	-
Stage 2	-	-	-	-	-	-	-			340	215	-
Platoon blocked, %		-	-			-	-					
Mov Cap-1 Maneuver	880	-	-	587	587	-	-			66	0	638
Mov Cap-2 Maneuver	-	-	-	-	-	-	-			66	0	-
Stage 1	-	-	-	-	-	-	-			328	0	-
Stage 2	-	-	-	-	-	-	-			340	0	-

Approach	SE	NW	SW
HCM Control Delay, s	2.6	0.1	36.9
HCM LOS			E

Minor Lane/Major Mvmt	NWL	NWT	NWR	SEL	SET	SER	SWLn1	SWLn2
Capacity (veh/h)	587	-	-	880	-	-	66	638
HCM Lane V/C Ratio	0.009	-	-	0.297	-	-	0.792	0.476
HCM Control Delay (s)	11.2	-	-	10.8	-	-	159.8	15.7
HCM Lane LOS	B	-	-	B	-	-	F	C
HCM 95th %tile Q(veh)	0	-	-	1.2	-	-	3.7	2.6

Intersection	
Int Delay, s/veh	21.5

Movement	SEL	SET	SER	NWU	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Vol, veh/h	238	806	2	2	3	576	112	0	0	0	87	0	267
Future Vol, veh/h	238	806	2	2	3	576	112	0	0	0	87	0	267
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	-	60	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	-	0	-	-	22350	-	-	0	-
Grade, %	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	96	96	96	96	92	92	92	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	262	886	2	2	3	600	117	0	0	0	99	0	303

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	717	0	0	888	888	0	0			1636	2081	359
Stage 1	-	-	-	-	-	-	-			669	669	-
Stage 2	-	-	-	-	-	-	-			967	1412	-
Critical Hdwy	4.14	-	-	6.44	4.14	-	-			6.84	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-			5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-			5.84	5.54	-
Follow-up Hdwy	2.22	-	-	2.52	2.22	-	-			3.52	4.02	3.32
Pot Cap-1 Maneuver	880	-	-	392	758	-	-			~ 92	53	638
Stage 1	-	-	-	-	-	-	-			471	454	-
Stage 2	-	-	-	-	-	-	-			329	203	-
Platoon blocked, %		-	-			-	-					
Mov Cap-1 Maneuver	880	-	-	552	552	-	-			~ 64	0	638
Mov Cap-2 Maneuver	-	-	-	-	-	-	-			~ 64	0	-
Stage 1	-	-	-	-	-	-	-			328	0	-
Stage 2	-	-	-	-	-	-	-			329	0	-

Approach	SE	NW	SW
HCM Control Delay, s	2.5	0.1	114.2
HCM LOS			F

Minor Lane/Major Mvmt	NWL	NWT	NWR	SEL	SET	SER	SWLn1	SWLn2
Capacity (veh/h)	552	-	-	880	-	-	64	638
HCM Lane V/C Ratio	0.009	-	-	0.297	-	-	1.545	0.476
HCM Control Delay (s)	11.6	-	-	10.8	-	-	-$ 416.5	15.7
HCM Lane LOS	B	-	-	B	-	-	F	C
HCM 95th %tile Q(veh)	0	-	-	1.2	-	-	8.6	2.6

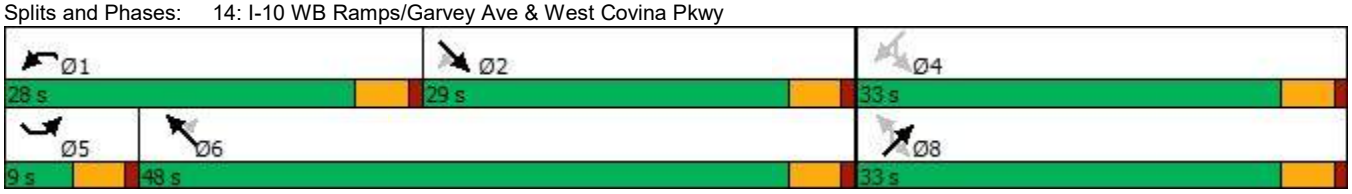
Notes

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

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT
Lane Configurations											
Traffic Volume (vph)	13	526	525	387	210	114	112	13	186	64	345
Future Volume (vph)	13	526	525	387	210	114	112	13	186	64	345
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	custom	NA
Protected Phases	5	2		1	6			8			
Permitted Phases			2			6	8		8	4	4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4
Switch Phase											
Minimum Initial (s)	1.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	32.5	32.5	9.5	28.5	28.5	32.5	32.5	32.5	32.5	32.5
Total Split (s)	9.0	29.0	29.0	28.0	48.0	48.0	33.0	33.0	33.0	33.0	33.0
Total Split (%)	10.0%	32.2%	32.2%	31.1%	53.3%	53.3%	36.7%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.5	3.5	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	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	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?											
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	4.5	24.6	24.6	22.3	49.6	49.6		27.0	27.0		27.0
Actuated g/C Ratio	0.05	0.28	0.28	0.26	0.57	0.57		0.31	0.31		0.31
v/c Ratio	0.15	0.58	0.97	0.90	0.11	0.13		0.99	0.40		0.82
Control Delay	44.9	30.5	52.2	57.1	9.8	2.7		97.3	5.0		42.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	44.9	30.5	52.2	57.1	9.8	2.7		97.3	5.0		42.7
LOS	D	C	D	E	A	A		F	A		D
Approach Delay		41.4			34.4			42.1			42.7
Approach LOS		D			C			D			D

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 87.4	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay: 39.8	Intersection LOS: D
Intersection Capacity Utilization 88.0%	ICU Level of Service E
Analysis Period (min) 15	

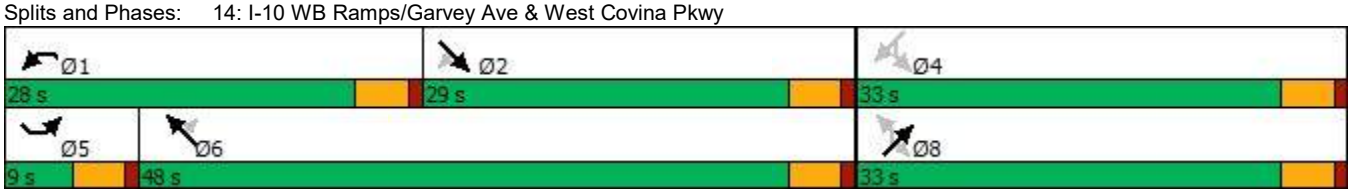
Splits and Phases: 14: I-10 WB Ramps/Garvey Ave & West Covina Pkwy



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT
Lane Configurations											
Traffic Volume (vph)	13	526	525	456	214	114	112	13	302	64	345
Future Volume (vph)	13	526	525	456	214	114	112	13	302	64	345
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	custom	NA
Protected Phases	5	2		1	6			8			
Permitted Phases			2			6	8		8	4	4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4
Switch Phase											
Minimum Initial (s)	1.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	32.5	32.5	9.5	28.5	28.5	32.5	32.5	32.5	32.5	32.5
Total Split (s)	9.0	29.0	29.0	28.0	48.0	48.0	33.0	33.0	33.0	33.0	33.0
Total Split (%)	10.0%	32.2%	32.2%	31.1%	53.3%	53.3%	36.7%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.5	3.5	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	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	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?											
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	4.5	24.5	24.5	23.5	50.8	50.8		27.1	27.1		27.1
Actuated g/C Ratio	0.05	0.28	0.28	0.26	0.57	0.57		0.31	0.31		0.31
v/c Ratio	0.16	0.59	1.00	1.02	0.11	0.13		1.01	0.56		0.83
Control Delay	45.1	31.0	61.7	82.2	9.8	2.7		104.3	5.5		43.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	45.1	31.0	61.7	82.2	9.8	2.7		104.3	5.5		43.7
LOS	D	C	E	F	A	A		F	A		D
Approach Delay		46.3			50.9			34.4			43.7
Approach LOS		D			D			C			D

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 88.7	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 44.7	Intersection LOS: D
Intersection Capacity Utilization 91.8%	ICU Level of Service F
Analysis Period (min) 15	

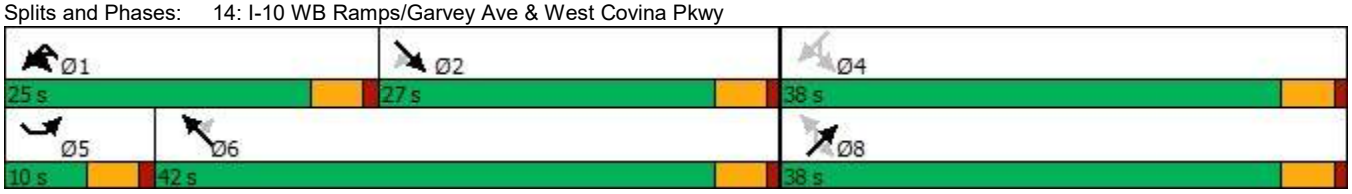
Splits and Phases: 14: I-10 WB Ramps/Garvey Ave & West Covina Pkwy



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT
Lane Configurations											
Traffic Volume (vph)	46	790	309	364	351	142	190	48	397	68	298
Future Volume (vph)	46	790	309	364	351	142	190	48	397	68	298
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	custom	NA
Protected Phases	5	2		1	6			8			
Permitted Phases			2			6	8		8	4	4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4
Switch Phase											
Minimum Initial (s)	1.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	32.5	32.5	9.5	28.5	28.5	32.5	32.5	32.5	32.5	32.5
Total Split (s)	10.0	27.0	27.0	25.0	42.0	42.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	11.1%	30.0%	30.0%	27.8%	46.7%	46.7%	42.2%	42.2%	42.2%	42.2%	42.2%
Yellow Time (s)	3.5	3.5	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	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	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?											
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	5.5	22.4	22.4	20.6	41.7	41.7		30.1	30.1		30.1
Actuated g/C Ratio	0.06	0.26	0.26	0.24	0.48	0.48		0.35	0.35		0.35
v/c Ratio	0.42	0.91	0.64	0.93	0.22	0.18		0.95	0.50		0.77
Control Delay	52.7	47.6	24.5	65.3	15.4	3.5		74.0	4.5		35.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	52.7	47.6	24.5	65.3	15.4	3.5		74.0	4.5		35.1
LOS	D	D	C	E	B	A		E	A		D
Approach Delay		41.6			34.6			30.5			35.1
Approach LOS		D			C			C			D

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 86.6	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 36.5	Intersection LOS: D
Intersection Capacity Utilization 102.2%	ICU Level of Service G
Analysis Period (min) 15	

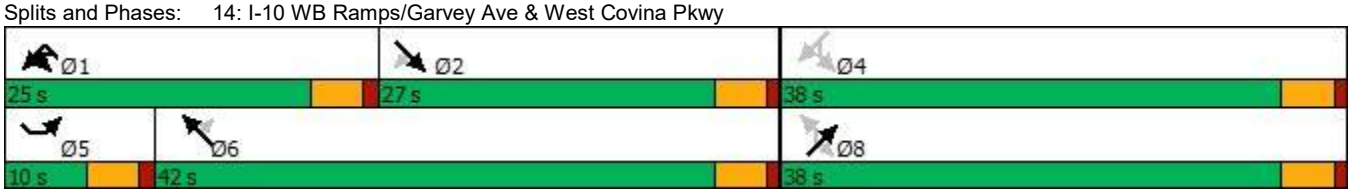
Splits and Phases: 14: I-10 WB Ramps/Garvey Ave & West Covina Pkwy



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT
Lane Configurations											
Traffic Volume (vph)	46	790	309	593	364	142	190	48	451	68	298
Future Volume (vph)	46	790	309	593	364	142	190	48	451	68	298
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	custom	NA
Protected Phases	5	2		1	6			8			
Permitted Phases			2			6	8		8	4	4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4
Switch Phase											
Minimum Initial (s)	1.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	32.5	32.5	9.5	28.5	28.5	32.5	32.5	32.5	32.5	32.5
Total Split (s)	10.0	27.0	27.0	25.0	42.0	42.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	11.1%	30.0%	30.0%	27.8%	46.7%	46.7%	42.2%	42.2%	42.2%	42.2%	42.2%
Yellow Time (s)	3.5	3.5	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	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	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?											
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	5.5	22.4	22.4	20.6	41.7	41.7		30.3	30.3		30.3
Actuated g/C Ratio	0.06	0.26	0.26	0.24	0.48	0.48		0.35	0.35		0.35
v/c Ratio	0.43	0.91	0.65	1.53	0.23	0.18		0.94	0.55		0.76
Control Delay	52.8	47.8	24.5	276.1	15.5	3.5		72.2	4.9		34.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	52.8	47.8	24.5	276.1	15.5	3.5		72.2	4.9		34.7
LOS	D	D	C	F	B	A		E	A		C
Approach Delay		41.7			154.7			28.1			34.7
Approach LOS		D			F			C			C

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 86.9	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.53	
Intersection Signal Delay: 76.0	Intersection LOS: E
Intersection Capacity Utilization 118.3%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 14: I-10 WB Ramps/Garvey Ave & West Covina Pkwy



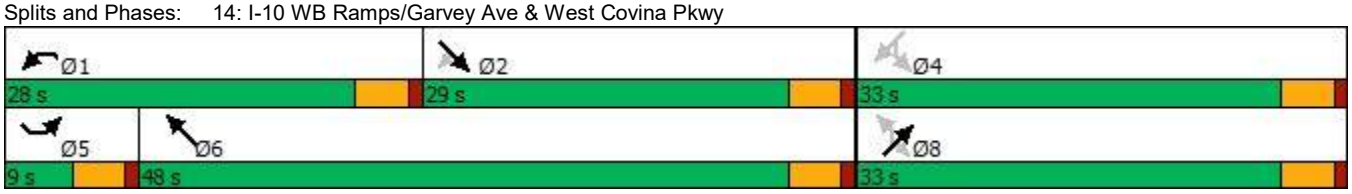
Timings
14: I-10 WB Ramps/Garvey Ave & West Covina Pkwy

11/05/2018

Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	NER	SWL	SWT
Lane Configurations										
Traffic Volume (vph)	13	526	525	456	214	112	13	302	64	345
Future Volume (vph)	13	526	525	456	214	112	13	302	64	345
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	custom	NA
Protected Phases	5	2		1	6		8			
Permitted Phases			2			8		8	4	4
Detector Phase	5	2	2	1	6	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	1.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	32.5	32.5	9.5	28.5	32.5	32.5	32.5	32.5	32.5
Total Split (s)	9.0	29.0	29.0	28.0	48.0	33.0	33.0	33.0	33.0	33.0
Total Split (%)	10.0%	32.2%	32.2%	31.1%	53.3%	36.7%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.5	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	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	Lag	Lead	Lag					
Lead-Lag Optimize?										
Recall Mode	None	Min	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	4.5	24.7	24.7	16.5	44.1		26.8	26.8		26.8
Actuated g/C Ratio	0.06	0.30	0.30	0.20	0.54		0.33	0.33		0.33
v/c Ratio	0.14	0.54	0.94	0.69	0.18		0.87	0.54		0.77
Control Delay	42.6	27.1	46.3	36.0	7.1		66.0	5.1		36.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	42.6	27.1	46.3	36.0	7.1		66.0	5.1		36.0
LOS	D	C	D	D	A		E	A		D
Approach Delay		36.8			23.9		23.0			36.0
Approach LOS		D			C		C			D

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 81.6	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 30.3	Intersection LOS: C
Intersection Capacity Utilization 79.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 14: I-10 WB Ramps/Garvey Ave & West Covina Pkwy



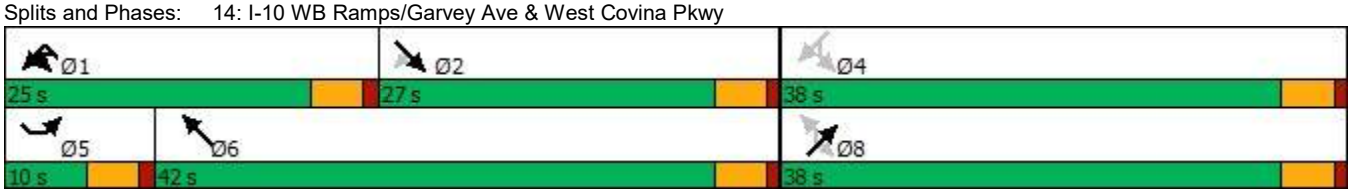
Timings
14: I-10 WB Ramps/Garvey Ave & West Covina Pkwy

11/05/2018

Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	NER	SWL	SWT
Lane Configurations										
Traffic Volume (vph)	46	790	309	593	364	190	48	451	68	298
Future Volume (vph)	46	790	309	593	364	190	48	451	68	298
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	custom	NA
Protected Phases	5	2		1	6		8			
Permitted Phases			2			8		8	4	4
Detector Phase	5	2	2	1	6	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	1.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	32.5	32.5	9.5	28.5	32.5	32.5	32.5	32.5	32.5
Total Split (s)	10.0	27.0	27.0	25.0	42.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	11.1%	30.0%	30.0%	27.8%	46.7%	42.2%	42.2%	42.2%	42.2%	42.2%
Yellow Time (s)	3.5	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	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	Lag	Lead	Lag					
Lead-Lag Optimize?										
Recall Mode	None	Min	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	5.6	22.4	22.4	19.0	40.3		30.1	30.1		30.1
Actuated g/C Ratio	0.07	0.26	0.26	0.22	0.47		0.35	0.35		0.35
v/c Ratio	0.42	0.90	0.64	0.83	0.33		0.92	0.54		0.75
Control Delay	51.9	45.5	24.1	43.0	14.0		67.5	4.9		33.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	51.9	45.5	24.1	43.0	14.0		67.5	4.9		33.2
LOS	D	D	C	D	B		E	A		C
Approach Delay		40.0			29.7		26.5			33.2
Approach LOS		D			C		C			C

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 85.1	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 33.0	Intersection LOS: C
Intersection Capacity Utilization 102.3%	ICU Level of Service G
Analysis Period (min) 15	

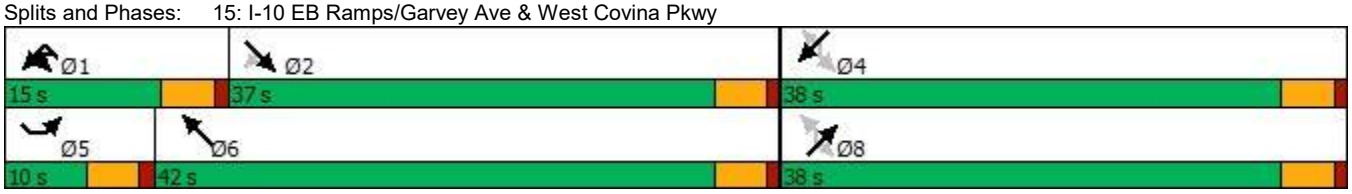
Splits and Phases: 14: I-10 WB Ramps/Garvey Ave & West Covina Pkwy



Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations											
Traffic Volume (vph)	24	322	455	183	513	85	35	138	16	7	73
Future Volume (vph)	24	322	455	183	513	85	35	138	16	7	73
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6		8			4	
Permitted Phases			2			8		8	4		4
Detector Phase	5	2	2	1	6	8	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	9.5	9.5	9.5	29.5	37.5	37.5	37.5	37.5	37.5	37.5
Total Split (s)	10.0	37.0	37.0	15.0	42.0	38.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	11.1%	41.1%	41.1%	16.7%	46.7%	42.2%	42.2%	42.2%	42.2%	42.2%	42.2%
Yellow Time (s)	3.5	3.5	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	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	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	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag						
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	Min	None	None	None	None	None	None
Act Effct Green (s)	5.7	13.1	13.1	8.3	24.6	9.4	9.4	9.4	9.4	9.4	9.4
Actuated g/C Ratio	0.13	0.29	0.29	0.19	0.55	0.21	0.21	0.21	0.21	0.21	0.21
v/c Ratio	0.12	0.36	0.63	0.33	0.31	0.34	0.11	0.36	0.07	0.02	0.20
Control Delay	23.2	14.0	5.5	19.3	7.2	20.1	16.5	6.2	16.5	15.9	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.2	14.0	5.5	19.3	7.2	20.1	16.5	6.2	16.5	15.9	3.0
LOS	C	B	A	B	A	C	B	A	B	B	A
Approach Delay		9.5			10.3		12.2			6.2	
Approach LOS		A			B		B			A	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 44.8	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 10.0	Intersection LOS: B
Intersection Capacity Utilization 48.9%	ICU Level of Service A
Analysis Period (min) 15	

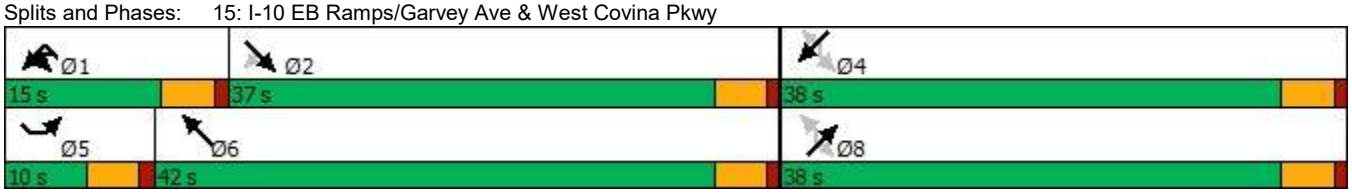
Splits and Phases: 15: I-10 EB Ramps/Garvey Ave & West Covina Pkwy



Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations											
Traffic Volume (vph)	24	438	455	223	586	85	35	138	16	7	73
Future Volume (vph)	24	438	455	223	586	85	35	138	16	7	73
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6		8			4	
Permitted Phases			2			8		8	4		4
Detector Phase	5	2	2	1	6	8	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	9.5	9.5	9.5	29.5	37.5	37.5	37.5	37.5	37.5	37.5
Total Split (s)	10.0	37.0	37.0	15.0	42.0	38.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	11.1%	41.1%	41.1%	16.7%	46.7%	42.2%	42.2%	42.2%	42.2%	42.2%	42.2%
Yellow Time (s)	3.5	3.5	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	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	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	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag						
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	Min	None	None	None	None	None	None
Act Effct Green (s)	5.7	15.7	15.7	9.0	27.9	9.7	9.7	9.7	9.7	9.7	9.7
Actuated g/C Ratio	0.12	0.32	0.32	0.19	0.58	0.20	0.20	0.20	0.20	0.20	0.20
v/c Ratio	0.13	0.44	0.60	0.40	0.33	0.36	0.11	0.37	0.07	0.02	0.20
Control Delay	25.5	14.6	5.0	21.4	7.1	22.2	18.2	6.6	18.2	17.6	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.5	14.6	5.0	21.4	7.1	22.2	18.2	6.6	18.2	17.6	3.2
LOS	C	B	A	C	A	C	B	A	B	B	A
Approach Delay		10.1			11.0		13.3			6.7	
Approach LOS		B			B		B			A	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 48.5	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 10.7	Intersection LOS: B
Intersection Capacity Utilization 50.0%	ICU Level of Service A
Analysis Period (min) 15	

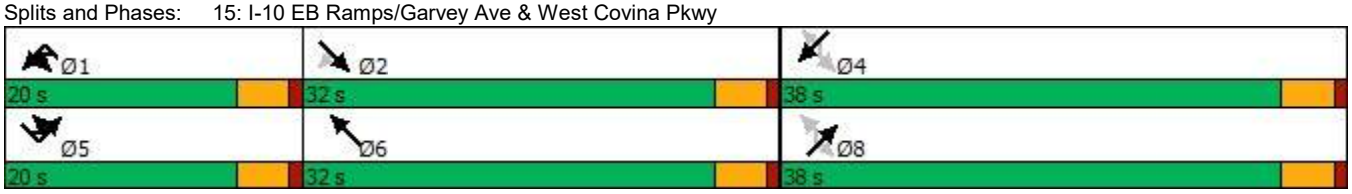
Splits and Phases: 15: I-10 EB Ramps/Garvey Ave & West Covina Pkwy



Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations											
Traffic Volume (vph)	150	643	466	209	613	55	52	133	26	35	221
Future Volume (vph)	150	643	466	209	613	55	52	133	26	35	221
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6		8			4	
Permitted Phases			2			8		8	4		4
Detector Phase	5	2	2	1	6	8	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	9.5	9.5	9.5	29.5	37.5	37.5	37.5	37.5	37.5	37.5
Total Split (s)	20.0	32.0	32.0	20.0	32.0	38.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	22.2%	35.6%	35.6%	22.2%	35.6%	42.2%	42.2%	42.2%	42.2%	42.2%	42.2%
Yellow Time (s)	3.5	3.5	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	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	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	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag						
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	Min	None	None	None	None	None	None
Act Effct Green (s)	10.5	19.5	19.5	9.6	21.8	8.6	8.6	8.6	8.6	8.6	8.6
Actuated g/C Ratio	0.20	0.38	0.38	0.18	0.42	0.17	0.17	0.17	0.17	0.17	0.17
v/c Ratio	0.44	0.50	0.54	0.39	0.52	0.29	0.20	0.40	0.14	0.14	0.55
Control Delay	24.6	14.1	4.0	22.7	14.7	25.1	22.8	8.2	22.8	22.1	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.6	14.1	4.0	22.7	14.7	25.1	22.8	8.2	22.8	22.1	8.5
LOS	C	B	A	C	B	C	C	A	C	C	A
Approach Delay		11.6			16.6		15.3			11.5	
Approach LOS		B			B		B			B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 51.9	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 13.7	Intersection LOS: B
Intersection Capacity Utilization 59.5%	ICU Level of Service B
Analysis Period (min) 15	

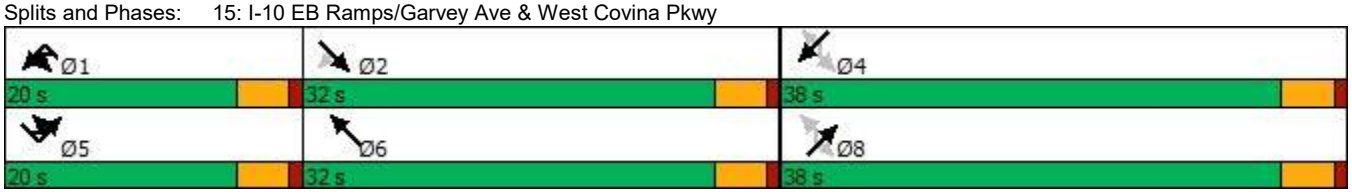
Splits and Phases: 15: I-10 EB Ramps/Garvey Ave & West Covina Pkwy



Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations											
Traffic Volume (vph)	150	697	466	340	855	55	52	133	26	35	221
Future Volume (vph)	150	697	466	340	855	55	52	133	26	35	221
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6		8			4	
Permitted Phases			2			8		8	4		4
Detector Phase	5	2	2	1	6	8	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	9.5	9.5	9.5	29.5	37.5	37.5	37.5	37.5	37.5	37.5
Total Split (s)	20.0	32.0	32.0	20.0	32.0	38.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	22.2%	35.6%	35.6%	22.2%	35.6%	42.2%	42.2%	42.2%	42.2%	42.2%	42.2%
Yellow Time (s)	3.5	3.5	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	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	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	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag						
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	Min	None	None	None	None	None	None
Act Effct Green (s)	10.7	24.8	24.8	12.2	26.2	8.7	8.7	8.7	8.7	8.7	8.7
Actuated g/C Ratio	0.18	0.42	0.42	0.21	0.44	0.15	0.15	0.15	0.15	0.15	0.15
v/c Ratio	0.50	0.49	0.51	0.58	0.68	0.33	0.23	0.43	0.16	0.15	0.58
Control Delay	28.7	14.8	3.8	25.7	16.8	28.7	25.7	8.9	25.3	24.6	9.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.7	14.8	3.8	25.7	16.8	28.7	25.7	8.9	25.3	24.6	9.4
LOS	C	B	A	C	B	C	C	A	C	C	A
Approach Delay		12.5			19.3		17.1			12.7	
Approach LOS		B			B		B			B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 59.4	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 15.8	Intersection LOS: B
Intersection Capacity Utilization 66.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 15: I-10 EB Ramps/Garvey Ave & West Covina Pkwy



Appendix C – ICU Spreadsheets and Synchro Reports – Phases 1A and 1B

SE-NW Street: Francisquito Ave
NE-SW Street: Sunset Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase I No Project				Phase I + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	118	1	1.00	0.07	118	1	1.00	0.07
Comb. L-T		0				0		
Southeast-bound Thru	528	1	1.60	0.21	528	1	1.60	0.21
Comb. T-R		1				1		
Southeast-bound Right	131	0	0.40	0.21	131	0	0.40	0.21
Comb. L-T-R		0				0		
Northwest-bound Left	147	1	1.00	0.09	147	1	1.00	0.09
Comb. L-T		0				0		
Northwest-bound Thru	726	2	2.00	0.23	726	2	2.00	0.23
Comb. T-R		0				0		
Northwest-bound Right	82	1	1.00	0.05	82	1	1.00	0.05
Comb. L-T-R		0				0		
Northeast-bound Left	136	1	1.00	0.09	136	1	1.00	0.09
Comb. L-T		0				0		
Northeast-bound Thru	713	2	2.00	0.22	730	2	2.00	0.23
Comb. T-R		0				0		
Northeast-bound Right	107	1	1.00	0.07	107	1	1.00	0.07
Comb. L-T-R		0				0		
Southwest-bound Left	93	1	1.00	0.06	93	1	1.00	0.06
Comb. L-T		0				0		
Southwest-bound Thru	966	2	2.00	0.30	971	2	2.00	0.30
Comb. T-R		0				0		
Southwest-bound Right	206	1	1.00	0.13	206	1	1.00	0.13
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.30	E-W:	0.30
	N-S:	0.39	N-S:	0.39
	Total:	0.69	Total:	0.69
Lost Time		0.10		0.10
V/C		0.788		0.789
Level of Service		C		C

SE-NW Street: Francisquito Ave
NE-SW Street: Sunset Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase I No Project				Phase I + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	138	1	1.00	0.09	138	1	1.00	0.09
Comb. L-T		0				0		
Southeast-bound Thru	765	1	1.81	0.26	765	1	1.81	0.26
Comb. T-R		1				1		
Southeast-bound Right	81	0	0.19	0.26	81	0	0.19	0.26
Comb. L-T-R		0				0		
Northwest-bound Left	84	1	1.00	0.05	84	1	1.00	0.05
Comb. L-T		0				0		
Northwest-bound Thru	446	2	2.00	0.14	446	2	2.00	0.14
Comb. T-R		0				0		
Northwest-bound Right	85	1	1.00	0.05	85	1	1.00	0.05
Comb. L-T-R		0				0		
Northeast-bound Left	143	1	1.00	0.09	143	1	1.00	0.09
Comb. L-T		0				0		
Northeast-bound Thru	972	2	2.00	0.30	978	2	2.00	0.31
Comb. T-R		0				0		
Northeast-bound Right	197	1	1.00	0.12	197	1	1.00	0.12
Comb. L-T-R		0				0		
Southwest-bound Left	137	1	1.00	0.09	137	1	1.00	0.09
Comb. L-T		0				0		
Southwest-bound Thru	743	2	2.00	0.23	762	2	2.00	0.24
Comb. T-R		0				0		
Southwest-bound Right	95	1	1.00	0.06	95	1	1.00	0.06
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.32	E-W:	0.32
	N-S:	0.39	N-S:	0.39
	Total:	0.71	Total:	0.71
Lost Time		0.10		0.10
V/C		0.806		0.808
Level of Service		D		D

SE-NW Street: Durness St
NE-SW Street: Sunset Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase I No Project				Phase I + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	124	0	0.63	0.12	124	0	0.63	0.12
Comb. L-T		1				1		
Southeast-bound Thru	74	0	0.37	0.12	74	0	0.37	0.12
Comb. T-R		0				0		
Southeast-bound Right	133	1	1.00	0.08	133	1	1.00	0.08
Comb. L-T-R		0				0		
Northwest-bound Left	36	0	0.26	0.09	36	0	0.26	0.09
Comb. L-T		1				1		
Northwest-bound Thru	105	0	0.74	0.09	105	0	0.74	0.09
Comb. T-R		0				0		
Northwest-bound Right	27	1	1.00	0.02	27	1	1.00	0.02
Comb. L-T-R		0				0		
Northeast-bound Left	77	1	1.00	0.05	77	1	1.00	0.05
Comb. L-T		0				0		
Northeast-bound Thru	931	2	2.00	0.29	948	2	2.00	0.30
Comb. T-R		0				0		
Northeast-bound Right	15	1	1.00	0.01	15	1	1.00	0.01
Comb. L-T-R		0				0		
Southwest-bound Left	22	1	1.00	0.01	22	1	1.00	0.01
Comb. L-T		0				0		
Southwest-bound Thru	1023	2	2.00	0.32	1028	2	2.00	0.32
Comb. T-R		0				0		
Southwest-bound Right	72	1	1.00	0.05	72	1	1.00	0.05
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.21	E-W:	0.21
	N-S:	0.37	N-S:	0.37
	Total:	0.58	Total:	0.58
Lost Time		0.10		0.10
V/C		0.680		0.681
Level of Service		B		B

SE-NW Street: Durness St
NE-SW Street: Sunset Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase I No Project				Phase I + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	29	0	0.48	0.04	29	0	0.48	0.04
Comb. L-T		1				1		
Southeast-bound Thru	32	0	0.52	0.04	32	0	0.52	0.04
Comb. T-R		0				0		
Southeast-bound Right	27	1	1.00	0.02	27	1	1.00	0.02
Comb. L-T-R		0				0		
Northwest-bound Left	12	0	0.38	0.02	12	0	0.38	0.02
Comb. L-T		1				1		
Northwest-bound Thru	20	0	0.63	0.02	20	0	0.63	0.02
Comb. T-R		0				0		
Northwest-bound Right	6	1	1.00	0.00	6	1	1.00	0.00
Comb. L-T-R		0				0		
Northeast-bound Left	24	1	1.00	0.02	24	1	1.00	0.02
Comb. L-T		0				0		
Northeast-bound Thru	1167	2	2.00	0.36	1173	2	2.00	0.37
Comb. T-R		0				0		
Northeast-bound Right	10	1	1.00	0.01	10	1	1.00	0.01
Comb. L-T-R		0				0		
Southwest-bound Left	20	1	1.00	0.01	20	1	1.00	0.01
Comb. L-T		0				0		
Southwest-bound Thru	984	2	2.00	0.31	1003	2	2.00	0.31
Comb. T-R		0				0		
Southwest-bound Right	18	1	1.00	0.01	18	1	1.00	0.01
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.06	E-W:	0.06
	N-S:	0.38	N-S:	0.38
	Total:	0.44	Total:	0.44
Lost Time		0.10		0.10
V/C		0.535		0.537
Level of Service		A		A

SE-NW Street: Merced Ave
NE-SW Street: Sunset Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase I No Project				Phase I + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	109	1	1.00	0.07	109	1	1.00	0.07
Comb. L-T		0				0		
Southeast-bound Thru	387	1	1.68	0.14	387	1	1.68	0.14
Comb. T-R		1				1		
Southeast-bound Right	74	0	0.32	0.14	74	0	0.32	0.14
Comb. L-T-R		0				0		
Northwest-bound Left	184	1	1.00	0.12	184	1	1.00	0.12
Comb. L-T		0				0		
Northwest-bound Thru	574	1	1.63	0.22	583	1	1.60	0.23
Comb. T-R		1				1		
Northwest-bound Right	130	0	0.37	0.22	147	0	0.40	0.23
Comb. L-T-R		0				0		
Northeast-bound Left	91	1	1.00	0.06	100	1	1.00	0.06
Comb. L-T		0				0		
Northeast-bound Thru	861	2	2.00	0.27	870	2	2.00	0.27
Comb. T-R		0				0		
Northeast-bound Right	113	1	1.00	0.07	113	1	1.00	0.07
Comb. L-T-R		0				0		
Southwest-bound Left	149	1	1.00	0.09	156	1	1.00	0.10
Comb. L-T		0				0		
Southwest-bound Thru	984	2	2.00	0.31	989	2	2.00	0.31
Comb. T-R		0				0		
Southwest-bound Right	172	1	1.00	0.11	172	1	1.00	0.11
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.29	E-W:	0.30
	N-S:	0.36	N-S:	0.37
	Total:	0.65	Total:	0.67

Lost Time	0.10	0.10

V/C	0.753	0.768
Level of Service	C	C

SE-NW Street: Merced Ave
NE-SW Street: Sunset Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase I No Project				Phase I + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	125	1	1.00	0.08	125	1	1.00	0.08
Comb. L-T		0				0		
Southeast-bound Thru	523	1	1.78	0.18	523	1	1.78	0.18
Comb. T-R		1				1		
Southeast-bound Right	63	0	0.22	0.18	63	0	0.22	0.18
Comb. L-T-R		0				0		
Northwest-bound Left	91	1	1.00	0.06	91	1	1.00	0.06
Comb. L-T		0				0		
Northwest-bound Thru	306	1	1.52	0.13	309	1	1.50	0.13
Comb. T-R		1				1		
Northwest-bound Right	96	0	0.48	0.13	102	0	0.50	0.13
Comb. L-T-R		0				0		
Northeast-bound Left	80	1	1.00	0.05	83	1	1.00	0.05
Comb. L-T		0				0		
Northeast-bound Thru	1001	2	2.00	0.31	1004	2	2.00	0.31
Comb. T-R		0				0		
Northeast-bound Right	145	1	1.00	0.09	145	1	1.00	0.09
Comb. L-T-R		0				0		
Southwest-bound Left	159	1	1.00	0.10	187	1	1.00	0.12
Comb. L-T		0				0		
Southwest-bound Thru	851	2	2.00	0.27	870	2	2.00	0.27
Comb. T-R		0				0		
Southwest-bound Right	121	1	1.00	0.08	121	1	1.00	0.08
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.24	E-W:	0.24
	N-S:	0.41	N-S:	0.43
	Total:	0.65	Total:	0.67
Lost Time		0.10		0.10
V/C		0.752		0.771
Level of Service		C		C

SE-NW Street: Vine Ave
NE-SW Street: Sunset Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase I No Project				Phase I + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	67	0	0.97	0.04	99	0	0.98	0.06
Comb. L-T		1				1		
Southeast-bound Thru	2	0	0.03	0.04	2	0	0.02	0.06
Comb. T-R		0				0		
Southeast-bound Right	43	1	1.00	0.03	54	1	1.00	0.03
Comb. L-T-R		0				0		
Northwest-bound Left	37	0	0.84	0.03	37	0	0.84	0.03
Comb. L-T		1				1		
Northwest-bound Thru	7	0	0.16	0.03	7	0	0.16	0.03
Comb. T-R		0				0		
Northwest-bound Right	67	1	1.00	0.04	67	1	1.00	0.04
Comb. L-T-R		0				0		
Northeast-bound Left	58	1	1.00	0.04	84	1	1.00	0.05
Comb. L-T		0				0		
Northeast-bound Thru	1010	2	2.00	0.32	1010	2	2.00	0.32
Comb. T-R		0				0		
Northeast-bound Right	37	1	1.00	0.02	37	1	1.00	0.02
Comb. L-T-R		0				0		
Southwest-bound Left	36	1	1.00	0.02	36	1	1.00	0.02
Comb. L-T		0				0		
Southwest-bound Thru	1276	2	2.00	0.40	1276	2	2.00	0.40
Comb. T-R		0				0		
Southwest-bound Right	107	1	1.00	0.07	198	1	1.00	0.12
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.09	E-W:	0.11
	N-S:	0.44	N-S:	0.45
	Total:	0.52	Total:	0.56

Lost Time	0.10	0.10

V/C	0.620	0.656
Level of Service	B	B

SE-NW Street: Vine Ave
NE-SW Street: Sunset Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase I No Project				Phase I + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	110	0	0.94	0.07	247	0	0.97	0.16
Comb. L-T		1				1		
Southeast-bound Thru	7	0	0.06	0.07	7	0	0.03	0.16
Comb. T-R		0				0		
Southeast-bound Right	47	1	1.00	0.03	95	1	1.00	0.06
Comb. L-T-R		0				0		
Northwest-bound Left	4	0	0.67	0.00	4	0	0.67	0.00
Comb. L-T		1				1		
Northwest-bound Thru	2	0	0.33	0.00	2	0	0.33	0.00
Comb. T-R		0				0		
Northwest-bound Right	35	1	1.00	0.02	35	1	1.00	0.02
Comb. L-T-R		0				0		
Northeast-bound Left	34	1	1.00	0.02	43	1	1.00	0.03
Comb. L-T		0				0		
Northeast-bound Thru	1146	2	2.00	0.36	1146	2	2.00	0.36
Comb. T-R		0				0		
Northeast-bound Right	33	1	1.00	0.02	33	1	1.00	0.02
Comb. L-T-R		0				0		
Southwest-bound Left	46	1	1.00	0.03	46	1	1.00	0.03
Comb. L-T		0				0		
Southwest-bound Thru	1021	2	2.00	0.32	1021	2	2.00	0.32
Comb. T-R		0				0		
Southwest-bound Right	55	1	1.00	0.03	87	1	1.00	0.05
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.10	E-W:	0.18
	N-S:	0.39	N-S:	0.39
	Total:	0.48	Total:	0.57
Lost Time		0.10		0.10
V/C		0.582		0.668
Level of Service		A		B

SE-NW Street: Cameron Ave
NE-SW Street: Sunset Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase I No Project				Phase I + Project				Phase I + Project With Mitigation			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	73	1	1.00	0.05	73	1	1.00	0.05	73	1	1.00	0.05
Comb. L-T		0				0				0		
Southeast-bound Thru	404	1	1.46	0.17	404	1	1.33	0.19	404	1	1.33	0.19
Comb. T-R		1				1				1		
Southeast-bound Right	149	0	0.54	0.17	204	0	0.67	0.19	204	0	0.67	0.19
Comb. L-T-R		0				0				0		
Northwest-bound Left	237	1	1.00	0.15	246	1	1.00	0.15	246	1	1.00	0.15
Comb. L-T		0				0				0		
Northwest-bound Thru	765	1	1.89	0.25	765	1	1.89	0.25	765	1	1.89	0.25
Comb. T-R		1				1				1		
Northwest-bound Right	44	0	0.11	0.25	44	0	0.11	0.25	44	0	0.11	0.25
Comb. L-T-R		0				0				0		
Northeast-bound Left	198	1	1.00	0.12	198	1	1.00	0.12	198	1	1.00	0.12
Comb. L-T		0				0				0		
Northeast-bound Thru	831	2	2.00	0.26	861	2	2.00	0.27	861	2	2.59	0.21
Comb. T-R		0				0				1		
Northeast-bound Right	133	1	1.00	0.08	135	1	1.00	0.08	135	0	0.41	0.21
Comb. L-T-R		0				0				0		
Southwest-bound Left	37	1	1.00	0.02	37	1	1.00	0.02	37	1	1.00	0.02
Comb. L-T		0				0				0		
Southwest-bound Thru	946	2	2.00	0.30	972	2	2.00	0.30	972	2	2.73	0.22
Comb. T-R		0				0				1		
Southwest-bound Right	96	1	1.00	0.06	96	1	1.00	0.06	96	0	0.27	0.22
Comb. L-T-R		0				0				0		

Critical Volumes			E-W:	0.32			E-W:	0.34			E-W:	0.34
			N-S:	0.42			N-S:	0.43			N-S:	0.35
			Total:	0.74			Total:	0.77			Total:	0.69

Lost Time				0.10				0.10				0.10

V/C				0.840				0.871				0.790
Level of Service				D				D				C

SE-NW Street: Cameron Ave
NE-SW Street: Sunset Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase I No Project				Phase I + Project				Phase I + Project With Mitigation			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	150	1	1.00	0.09	150	1	1.00	0.09	150	1	1.00	0.09
Comb. L-T		0				0				0		
Southeast-bound Thru	626	1	1.56	0.25	626	1	1.52	0.26	626	1	1.52	0.26
Comb. T-R		1				1				1		
Southeast-bound Right	177	0	0.44	0.25	196	0	0.48	0.26	196	0	0.48	0.26
Comb. L-T-R		0				0				0		
Northwest-bound Left	104	1	1.00	0.07	107	1	1.00	0.07	107	1	1.00	0.07
Comb. L-T		0				0				0		
Northwest-bound Thru	450	1	1.78	0.16	450	1	1.78	0.16	450	1	1.78	0.16
Comb. T-R		1				1				1		
Northwest-bound Right	55	0	0.22	0.16	55	0	0.22	0.16	55	0	0.22	0.16
Comb. L-T-R		0				0				0		
Northeast-bound Left	172	1	1.00	0.11	172	1	1.00	0.11	172	1	1.00	0.11
Comb. L-T		0				0				0		
Northeast-bound Thru	982	2	2.00	0.31	1110	2	2.00	0.35	1110	2	2.64	0.26
Comb. T-R		0				0				1		
Northeast-bound Right	141	1	1.00	0.09	151	1	1.00	0.09	151	0	0.36	0.26
Comb. L-T-R		0				0				0		
Southwest-bound Left	69	1	1.00	0.04	69	1	1.00	0.04	69	1	1.00	0.04
Comb. L-T		0				0				0		
Southwest-bound Thru	778	2	2.00	0.24	787	2	2.00	0.25	787	2	2.81	0.18
Comb. T-R		0				0				1		
Southwest-bound Right	53	1	1.00	0.03	53	1	1.00	0.03	53	0	0.19	0.18
Comb. L-T-R		0				0				0		

Critical Volumes			E-W:	0.32			E-W:	0.32			E-W:	0.32
			N-S:	0.35			N-S:	0.39			N-S:	0.31
			Total:	0.67			Total:	0.71			Total:	0.63
Lost Time				0.10				0.10				0.10
V/C				0.767				0.814				0.730
Level of Service				C				D				C

SE-NW Street: West Covina Pkwy
NE-SW Street: Sunset Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase I No Project				Phase I + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	128	1	1.00	0.08	128	1	1.00	0.08
Comb. L-T		0				0		
Southeast-bound Thru	198	1	1.52	0.08	198	1	1.47	0.08
Comb. T-R		1				1		
Southeast-bound Right	63	0	0.48	0.08	72	0	0.53	0.08
Comb. L-T-R		0				0		
Northwest-bound Left	126	1	1.00	0.08	126	1	1.00	0.08
Comb. L-T		0				0		
Northwest-bound Thru	506	1	1.66	0.19	506	1	1.66	0.19
Comb. T-R		1				1		
Northwest-bound Right	103	0	0.34	0.19	103	0	0.34	0.19
Comb. L-T-R		0				0		
Northeast-bound Left	123	1	1.00	0.08	149	1	1.00	0.09
Comb. L-T		0				0		
Northeast-bound Thru	640	2	2.00	0.20	645	2	2.00	0.20
Comb. T-R		0				0		
Northeast-bound Right	175	1	1.00	0.11	175	1	1.00	0.11
Comb. L-T-R		0				0		
Southwest-bound Left	61	1	1.00	0.04	61	1	1.00	0.04
Comb. L-T		0				0		
Southwest-bound Thru	887	2	2.00	0.28	904	2	2.00	0.28
Comb. T-R		0				0		
Southwest-bound Right	223	1	1.00	0.14	223	1	1.00	0.14
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.27	E-W:	0.27
	N-S:	0.35	N-S:	0.38
	Total:	0.62	Total:	0.65
Lost Time		0.10		0.10
V/C		0.724		0.746
Level of Service		C		C

SE-NW Street: West Covina Pkwy
NE-SW Street: Sunset Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase I No Project				Phase I + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	192	1	1.00	0.12	192	1	1.00	0.12
Comb. L-T		0				0		
Southeast-bound Thru	444	1	1.51	0.18	444	1	1.50	0.18
Comb. T-R		1				1		
Southeast-bound Right	144	0	0.49	0.18	147	0	0.50	0.18
Comb. L-T-R		0				0		
Northwest-bound Left	145	1	1.00	0.09	145	1	1.00	0.09
Comb. L-T		0				0		
Northwest-bound Thru	475	1	1.65	0.18	475	1	1.65	0.18
Comb. T-R		1				1		
Northwest-bound Right	100	0	0.35	0.18	100	0	0.35	0.18
Comb. L-T-R		0				0		
Northeast-bound Left	113	1	1.00	0.07	221	1	1.00	0.14
Comb. L-T		0				0		
Northeast-bound Thru	854	2	2.00	0.27	873	2	2.00	0.27
Comb. T-R		0				0		
Northeast-bound Right	262	1	1.00	0.16	262	1	1.00	0.16
Comb. L-T-R		0				0		
Southwest-bound Left	147	1	1.00	0.09	147	1	1.00	0.09
Comb. L-T		0				0		
Southwest-bound Thru	620	2	2.00	0.19	626	2	2.00	0.20
Comb. T-R		0				0		
Southwest-bound Right	188	1	1.00	0.12	188	1	1.00	0.12
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.30	E-W:	0.30
	N-S:	0.36	N-S:	0.36
	Total:	0.66	Total:	0.66
Lost Time		0.10		0.10
V/C		0.758		0.764
Level of Service		C		C

SE-NW Street: Merced Ave
NE-SW Street: Orange Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase I No Project				Phase I + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	113	1	1.00	0.07	113	1	1.00	0.07
Comb. L-T		0				0		
Southeast-bound Thru	456	2	2.00	0.14	496	2	2.00	0.16
Comb. T-R		0				0		
Southeast-bound Right	87	1	1.00	0.05	87	1	1.00	0.05
Comb. L-T-R		0				0		
Northwest-bound Left	156	1	1.00	0.10	156	1	1.00	0.10
Comb. L-T		0				0		
Northwest-bound Thru	257	1	1.35	0.12	258	1	1.35	0.12
Comb. T-R		1				1		
Northwest-bound Right	125	0	0.65	0.12	125	0	0.65	0.12
Comb. L-T-R		0				0		
Northeast-bound Left	99	1	1.00	0.06	99	1	1.00	0.06
Comb. L-T		0				0		
Northeast-bound Thru	318	1	1.34	0.15	318	1	1.34	0.15
Comb. T-R		1				1		
Northeast-bound Right	158	0	0.66	0.15	158	0	0.66	0.15
Comb. L-T-R		0				0		
Southwest-bound Left	100	1	1.00	0.06	100	1	1.00	0.06
Comb. L-T		0				0		
Southwest-bound Thru	431	1	1.87	0.14	431	1	1.87	0.14
Comb. T-R		1				1		
Southwest-bound Right	29	0	0.13	0.14	29	0	0.13	0.14
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.24	E-W:	0.25
	N-S:	0.21	N-S:	0.21
	Total:	0.45	Total:	0.46
Lost Time		0.10		0.10
V/C		0.551		0.564
Level of Service		A		A

SE-NW Street: Merced Ave
NE-SW Street: Orange Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase I No Project				Phase I + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	86	1	1.00	0.05	86	1	1.00	0.05
Comb. L-T		0				0		
Southeast-bound Thru	437	2	2.00	0.14	451	2	2.00	0.14
Comb. T-R		0				0		
Southeast-bound Right	40	1	1.00	0.03	40	1	1.00	0.03
Comb. L-T-R		0				0		
Northwest-bound Left	72	1	1.00	0.05	72	1	1.00	0.05
Comb. L-T		0				0		
Northwest-bound Thru	224	1	1.10	0.13	230	1	1.12	0.13
Comb. T-R		1				1		
Northwest-bound Right	182	0	0.90	0.13	182	0	0.88	0.13
Comb. L-T-R		0				0		
Northeast-bound Left	35	1	1.00	0.02	35	1	1.00	0.02
Comb. L-T		0				0		
Northeast-bound Thru	319	1	1.62	0.12	319	1	1.62	0.12
Comb. T-R		1				1		
Northeast-bound Right	74	0	0.38	0.12	74	0	0.38	0.12
Comb. L-T-R		0				0		
Southwest-bound Left	147	1	1.00	0.09	147	1	1.00	0.09
Comb. L-T		0				0		
Southwest-bound Thru	326	1	1.77	0.12	326	1	1.77	0.12
Comb. T-R		1				1		
Southwest-bound Right	43	0	0.23	0.12	43	0	0.23	0.12
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.18	E-W:	0.19
	N-S:	0.21	N-S:	0.21
	Total:	0.40	Total:	0.40
Lost Time		0.10		0.10
V/C		0.496		0.501
Level of Service		A		A

SE-NW Street: Merced Ave
NE-SW Street: California Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase I No Project				Phase I + Project				Phase I + Project With Mitigation			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	70	0	0.14	0.32	70	0	0.14	0.32	70	1	1.00	0.04
Comb. L-T		1				1				0		
Southeast-bound Thru	435	1	1.86	0.15	442	1	1.86	0.15	442	1	1.82	0.15
Comb. T-R		0				0				1		
Southeast-bound Right	44	1	1.00	0.03	44	1	1.00	0.03	44	0	0.18	0.15
Comb. L-T-R		0				0				0		
Northwest-bound Left	78	0	0.10	0.48	78	0	0.10	0.50	78	1	1.00	0.05
Comb. L-T		1				1				0		
Northwest-bound Thru	690	1	1.90	0.23	716	1	1.90	0.24	716	1	1.90	0.24
Comb. T-R		0				0				1		
Northwest-bound Right	39	1	1.00	0.02	39	1	1.00	0.02	39	0	0.10	0.24
Comb. L-T-R		0				0				0		
Northeast-bound Left	29	0	0.13	0.14	29	0	0.13	0.14	29	0	0.13	0.14
Comb. L-T		1				1				1		
Northeast-bound Thru	188	0	0.87	0.14	188	0	0.87	0.14	188	0	0.87	0.14
Comb. T-R		0				0				0		
Northeast-bound Right	63	1	1.00	0.04	63	1	1.00	0.04	63	1	1.00	0.04
Comb. L-T-R		0				0				0		
Southwest-bound Left	44	0	0.18	0.15	44	0	0.18	0.15	44	0	0.18	0.15
Comb. L-T		1				1				1		
Southwest-bound Thru	196	0	0.82	0.15	196	0	0.82	0.15	196	0	0.82	0.15
Comb. T-R		0				0				0		
Southwest-bound Right	71	1	1.00	0.04	71	1	1.00	0.04	71	1	1.00	0.04
Comb. L-T-R		0				0				0		

Critical Volumes			E-W:	0.63			E-W:	0.64			E-W:	0.28
			N-S:	0.29			N-S:	0.29			N-S:	0.29
			Total:	0.91			Total:	0.93			Total:	0.57
Lost Time				0.10				0.10				0.10
V/C				1.012				1.030				0.665
Level of Service				F				F				B

SE-NW Street: Merced Ave
NE-SW Street: California Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase I No Project				Phase I + Project				Phase I + Project With Mitigation			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	80	0	0.11	0.44	80	0	0.11	0.46	80	1	1.00	0.05
Comb. L-T		1				1				0		
Southeast-bound Thru	627	1	1.89	0.21	655	1	1.89	0.22	655	1	1.91	0.21
Comb. T-R		0				0				1		
Southeast-bound Right	31	1	1.00	0.02	31	1	1.00	0.02	31	0	0.09	0.21
Comb. L-T-R		0				0				0		
Northwest-bound Left	45	0	0.10	0.27	45	0	0.10	0.27	45	1	1.00	0.03
Comb. L-T		1				1				0		
Northwest-bound Thru	385	1	1.90	0.13	394	1	1.90	0.13	394	1	1.78	0.14
Comb. T-R		0				0				1		
Northwest-bound Right	48	1	1.00	0.03	48	1	1.00	0.03	48	0	0.22	0.14
Comb. L-T-R		0				0				0		
Northeast-bound Left	29	0	0.11	0.17	29	0	0.11	0.17	29	0	0.11	0.17
Comb. L-T		1				1				1		
Northeast-bound Thru	246	0	0.89	0.17	246	0	0.89	0.17	246	0	0.89	0.17
Comb. T-R		0				0				0		
Northeast-bound Right	52	1	1.00	0.03	52	1	1.00	0.03	52	1	1.00	0.03
Comb. L-T-R		0				0				0		
Southwest-bound Left	39	0	0.15	0.17	39	0	0.15	0.17	39	0	0.15	0.17
Comb. L-T		1				1				1		
Southwest-bound Thru	227	0	0.85	0.17	227	0	0.85	0.17	227	0	0.85	0.17
Comb. T-R		0				0				0		
Southwest-bound Right	48	1	1.00	0.03	48	1	1.00	0.03	48	1	1.00	0.03
Comb. L-T-R		0				0				0		

Critical Volumes			E-W:	0.57			E-W:	0.59			E-W:	0.24
			N-S:	0.34			N-S:	0.34			N-S:	0.34
			Total:	0.91			Total:	0.93			Total:	0.58
Lost Time				0.10				0.10				0.10
V/C				1.007				1.027				0.681
Level of Service				F				F				B

SE-NW Street: Merced Ave
NE-SW Street: Glendora Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase I No Project				Phase I + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	58	1	1.00	0.04	58	1	1.00	0.04
Comb. L-T		0				0		
Southeast-bound Thru	413	1	1.75	0.15	415	1	1.73	0.15
Comb. T-R		1				1		
Southeast-bound Right	59	0	0.25	0.15	64	0	0.27	0.15
Comb. L-T-R		0				0		
Northwest-bound Left	66	1	1.00	0.04	66	1	1.00	0.04
Comb. L-T		0				0		
Northwest-bound Thru	556	1	1.83	0.19	565	1	1.84	0.19
Comb. T-R		1				1		
Northwest-bound Right	50	0	0.17	0.19	50	0	0.16	0.19
Comb. L-T-R		0				0		
Northeast-bound Left	57	1	1.00	0.04	74	1	1.00	0.05
Comb. L-T		0				0		
Northeast-bound Thru	768	2	2.00	0.24	768	2	2.00	0.24
Comb. T-R		0				0		
Northeast-bound Right	51	1	1.00	0.03	51	1	1.00	0.03
Comb. L-T-R		0				0		
Southwest-bound Left	30	1	1.00	0.02	30	1	1.00	0.02
Comb. L-T		0				0		
Southwest-bound Thru	834	2	2.00	0.26	834	2	2.00	0.26
Comb. T-R		0				0		
Southwest-bound Right	198	1	1.00	0.12	198	1	1.00	0.12
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.23	E-W:	0.23
	N-S:	0.30	N-S:	0.31
	Total:	0.52	Total:	0.54
Lost Time		0.10		0.10
V/C		0.622		0.635
Level of Service		B		B

SE-NW Street: Merced Ave
NE-SW Street: Glendora Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase I No Project				Phase I + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	109	1	1.00	0.07	109	1	1.00	0.07
Comb. L-T		0				0		
Southeast-bound Thru	520	1	1.70	0.19	530	1	1.65	0.20
Comb. T-R		1				1		
Southeast-bound Right	93	0	0.30	0.19	112	0	0.35	0.20
Comb. L-T-R		0				0		
Northwest-bound Left	45	1	1.00	0.03	45	1	1.00	0.03
Comb. L-T		0				0		
Northwest-bound Thru	296	1	1.75	0.11	299	1	1.75	0.11
Comb. T-R		1				1		
Northwest-bound Right	42	0	0.25	0.11	42	0	0.25	0.11
Comb. L-T-R		0				0		
Northeast-bound Left	82	1	1.00	0.05	88	1	1.00	0.06
Comb. L-T		0				0		
Northeast-bound Thru	953	2	2.00	0.30	953	2	2.00	0.30
Comb. T-R		0				0		
Northeast-bound Right	113	1	1.00	0.07	113	1	1.00	0.07
Comb. L-T-R		0				0		
Southwest-bound Left	70	1	1.00	0.04	70	1	1.00	0.04
Comb. L-T		0				0		
Southwest-bound Thru	835	2	2.00	0.26	835	2	2.00	0.26
Comb. T-R		0				0		
Southwest-bound Right	124	1	1.00	0.08	124	1	1.00	0.08
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.22	E-W:	0.23
	N-S:	0.34	N-S:	0.34
	Total:	0.56	Total:	0.57
Lost Time		0.10		0.10
V/C		0.661		0.670
Level of Service		B		B

SE-NW Street: Cameron Ave
NE-SW Street: Orange Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase I No Project				Phase I + Project				Phase I + Project With Mitigation			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	8	1	1.00	0.01	8	1	1.00	0.01	8	1	1.00	0.01
Comb. L-T		0				0				0		
Southeast-bound Thru	433	1	1.15	0.24	436	1	1.15	0.24	436	1	1.15	0.24
Comb. T-R		1				1				1		
Southeast-bound Right	320	0	0.85	0.24	320	0	0.85	0.24	320	0	0.85	0.24
Comb. L-T-R		0				0				0		
Northwest-bound Left	328	1	1.00	0.21	328	1	1.00	0.21	328	1	1.00	0.21
Comb. L-T		0				0				0		
Northwest-bound Thru	670	1	1.97	0.21	670	1	1.97	0.21	670	1	1.97	0.21
Comb. T-R		1				1				1		
Northwest-bound Right	10	0	0.03	0.21	10	0	0.03	0.21	10	0	0.03	0.21
Comb. L-T-R		0				0				0		
Northeast-bound Left	357	0	0.96	0.23	357	0	0.96	0.23	357	1	1.00	0.22
Comb. L-T		1				1				0		
Northeast-bound Thru	15	0	0.04	0.23	15	0	0.04	0.23	15	0	0.04	0.22
Comb. T-R		0				0				1		
Northeast-bound Right	343	1	1.00	0.21	343	1	1.00	0.21	343	0	0.96	0.22
Comb. L-T-R		0				0				0		
Southwest-bound Left	106	0	0.57	0.12	132	0	0.62	0.13	132	1	1.00	0.08
Comb. L-T		1				1				0		
Southwest-bound Thru	80	0	0.43	0.12	80	0	0.38	0.13	80	0	0.59	0.09
Comb. T-R		0				0				1		
Southwest-bound Right	56	1	1.00	0.04	56	1	1.00	0.04	56	0	0.41	0.09
Comb. L-T-R		0				0				0		

Critical Volumes			E-W:	0.44			E-W:	0.44			E-W:	0.44
			N-S:	0.35			N-S:	0.37			N-S:	0.31
			Total:	0.79			Total:	0.81			Total:	0.75
Lost Time				0.10				0.10				0.10
V/C				0.889				0.906				0.849
Level of Service				D				E				D

SE-NW Street: Cameron Ave
NE-SW Street: Orange Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase I No Project				Phase I + Project				Phase I + Project With Mitigation			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	7	1	1.00	0.00	7	1	1.00	0.00	7	1	1.00	0.00
Comb. L-T		0				0				0		
Southeast-bound Thru	495	1	1.38	0.22	496	1	1.38	0.22	496	1	1.38	0.22
Comb. T-R		1				1				1		
Southeast-bound Right	223	0	0.62	0.22	223	0	0.62	0.22	223	0	0.62	0.22
Comb. L-T-R		0				0				0		
Northwest-bound Left	351	1	1.00	0.22	351	1	1.00	0.22	351	1	1.00	0.22
Comb. L-T		0				0				0		
Northwest-bound Thru	551	1	1.99	0.17	551	1	1.99	0.17	551	1	1.99	0.17
Comb. T-R		1				1				1		
Northwest-bound Right	4	0	0.01	0.17	4	0	0.01	0.17	4	0	0.01	0.17
Comb. L-T-R		0				0				0		
Northeast-bound Left	329	0	0.96	0.22	329	0	0.96	0.22	329	1	1.00	0.21
Comb. L-T		1				1				0		
Northeast-bound Thru	15	0	0.04	0.22	15	0	0.04	0.22	15	0	0.03	0.28
Comb. T-R		0				0				1		
Northeast-bound Right	426	1	1.00	0.27	426	1	1.00	0.27	426	0	0.97	0.28
Comb. L-T-R		0				0				0		
Southwest-bound Left	75	0	0.59	0.08	84	0	0.62	0.09	84	1	1.00	0.05
Comb. L-T		1				1				0		
Southwest-bound Thru	52	0	0.41	0.08	52	0	0.38	0.09	52	0	0.45	0.07
Comb. T-R		0				0				1		
Southwest-bound Right	64	1	1.00	0.04	64	1	1.00	0.04	64	0	0.55	0.07
Comb. L-T-R		0				0				0		

Critical Volumes			E-W:	0.44			E-W:	0.44			E-W:	0.44
			N-S:	0.35			N-S:	0.35			N-S:	0.33
			Total:	0.79			Total:	0.80			Total:	0.77
Lost Time				0.10				0.10				0.10
V/C				0.889				0.895				0.872
Level of Service				D				D				D

SE-NW Street: West Covina Pkwy
NE-SW Street: Toluca Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase I No Project				Phase I + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	0	0	0.00	0.00	0	0	0.00	0.00
Comb. L-T		0				0		
Southeast-bound Thru	288	2	2.00	0.09	297	2	2.00	0.09
Comb. T-R		0				0		
Southeast-bound Right	109	1	1.00	0.07	135	1	1.00	0.08
Comb. L-T-R		0				0		
Northwest-bound Left	135	1	1.00	0.08	135	1	1.00	0.08
Comb. L-T		0				0		
Northwest-bound Thru	664	2	2.00	0.21	690	2	2.00	0.22
Comb. T-R		0				0		
Northwest-bound Right	0	0	0.00	0.00	0	0	0.00	0.00
Comb. L-T-R		0				0		
Northeast-bound Left	153	1	0.61	0.16	153	1	0.61	0.16
Comb. L-T		0				0		
Northeast-bound Thru	0	0	0.00	0.00	0	0	0.00	0.00
Comb. T-R		0				0		
Northeast-bound Right	98	0	0.39	0.16	98	0	0.39	0.16
Comb. L-R		1				1		
Southwest-bound Left	0	0	0.00	0.00	0	0	0.00	0.00
Comb. L-T		0				0		
Southwest-bound Thru	0	0	0.00	0.00	0	0	0.00	0.00
Comb. T-R		0				0		
Southwest-bound Right	0	0	0.00	0.00	0	0	0.00	0.00
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.21	E-W:	0.22
	N-S:	0.16	N-S:	0.16
	Total:	0.36	Total:	0.37

Lost Time	0.10	0.10

V/C	0.464	0.473
Level of Service	A	A

SE-NW Street: West Covina Pkwy
NE-SW Street: Toluca Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase I No Project				Phase I + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	0	0	0.00	0.00	0	0	0.00	0.00
Comb. L-T		0				0		
Southeast-bound Thru	570	2	2.00	0.18	573	2	2.00	0.18
Comb. T-R		0				0		
Southeast-bound Right	203	1	1.00	0.13	212	1	1.00	0.13
Comb. L-T-R		0				0		
Northwest-bound Left	127	1	1.00	0.08	127	1	1.00	0.08
Comb. L-T		0				0		
Northwest-bound Thru	627	2	2.00	0.20	735	2	2.00	0.23
Comb. T-R		0				0		
Northwest-bound Right	0	0	0.00		0	0	0.00	
Comb. L-T-R		0				0		
Northeast-bound Left	309	1	0.67	0.29	309	1	0.67	0.29
Comb. L-T		0				0		
Northeast-bound Thru	0	0	0.00	0.00	0	0	0.00	0.00
Comb. T-R		0				0		
Northeast-bound Right	149	0	0.33	0.29	149	0	0.33	0.29
Comb. L-R		1				1		
Southwest-bound Left	0	0	0.00	0.00	0	0	0.00	0.00
Comb. L-T		0				0		
Southwest-bound Thru	0	0	0.00	0.00	0	0	0.00	0.00
Comb. T-R		0				0		
Southwest-bound Right	0	0	0.00	0.00	0	0	0.00	0.00
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.26	E-W:	0.26
	N-S:	0.29	N-S:	0.29
	Total:	0.54	Total:	0.54
Lost Time		0.10		0.10
V/C		0.644		0.645
Level of Service		B		B

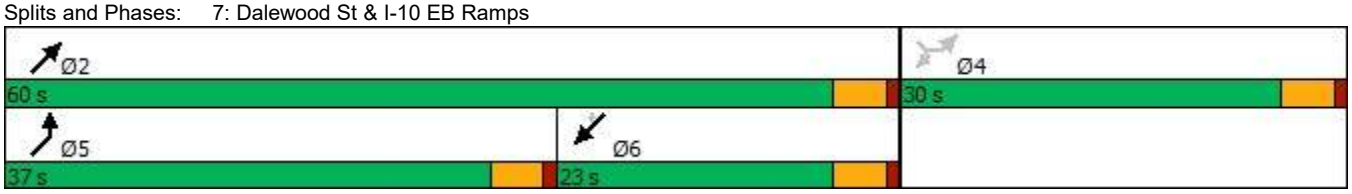
Timings
7: Dalewood St & I-10 EB Ramps

11/05/2018

Lane Group	SEL	SER	NEL	NET	SWT	SWR2
Lane Configurations						
Traffic Volume (vph)	205	93	541	192	294	299
Future Volume (vph)	205	93	541	192	294	299
Turn Type	Perm	Perm	Prot	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	30.0	30.0	10.0	22.0	22.0	22.0
Total Split (s)	30.0	30.0	37.0	60.0	23.0	23.0
Total Split (%)	33.3%	33.3%	41.1%	66.7%	25.6%	25.6%
Yellow Time (s)	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
Lost Time Adjust (s)	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
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None	None	Min	Min	Min
Act Effct Green (s)	11.2	11.2	32.6	54.5	17.4	17.4
Actuated g/C Ratio	0.15	0.15	0.44	0.73	0.23	0.23
v/c Ratio	0.53	0.36	0.87	0.09	0.76	0.54
Control Delay	33.5	9.2	34.3	3.3	40.2	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.5	9.2	34.3	3.3	40.2	7.3
LOS	C	A	C	A	D	A
Approach Delay	25.9			26.2	23.6	
Approach LOS	C			C	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 74.7	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 25.3	Intersection LOS: C
Intersection Capacity Utilization 62.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: Dalewood St & I-10 EB Ramps



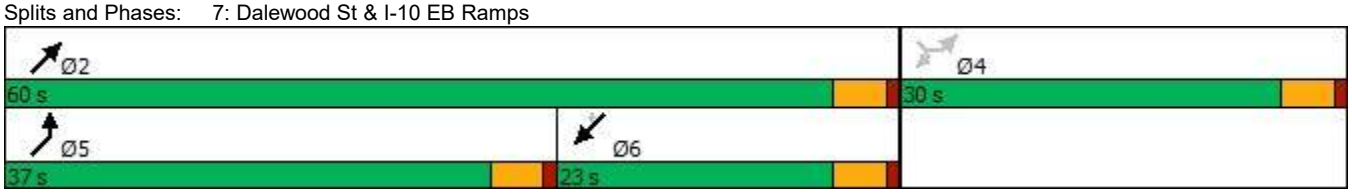
Timings
7: Dalewood St & I-10 EB Ramps

11/05/2018

Lane Group	SEL	SER	NEL	NET	SWT	SWR2
Lane Configurations						
Traffic Volume (vph)	236	93	541	197	295	299
Future Volume (vph)	236	93	541	197	295	299
Turn Type	Perm	Perm	Prot	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	30.0	30.0	10.0	22.0	22.0	22.0
Total Split (s)	30.0	30.0	37.0	60.0	23.0	23.0
Total Split (%)	33.3%	33.3%	41.1%	66.7%	25.6%	25.6%
Yellow Time (s)	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
Lost Time Adjust (s)	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
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None	None	Min	Min	Min
Act Effct Green (s)	12.3	12.3	32.6	54.6	17.5	17.5
Actuated g/C Ratio	0.16	0.16	0.43	0.72	0.23	0.23
v/c Ratio	0.57	0.34	0.88	0.10	0.77	0.55
Control Delay	33.6	8.6	36.6	3.6	41.9	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.6	8.6	36.6	3.6	41.9	7.5
LOS	C	A	D	A	D	A
Approach Delay	26.6			27.8	24.6	
Approach LOS	C			C	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 76	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 26.5	Intersection LOS: C
Intersection Capacity Utilization 63.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: Dalewood St & I-10 EB Ramps



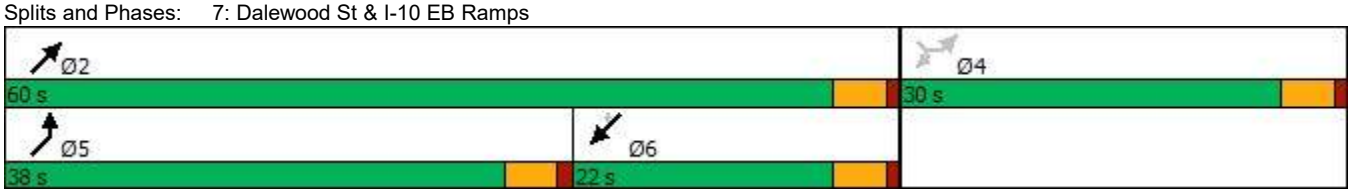
Timings
7: Dalewood St & I-10 EB Ramps

11/05/2018

Lane Group	SEL	SER	NEL	NET	SWT	SWR2
Lane Configurations						
Traffic Volume (vph)	164	58	578	483	197	112
Future Volume (vph)	164	58	578	483	197	112
Turn Type	Perm	Perm	Prot	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	30.0	30.0	10.0	22.0	22.0	22.0
Total Split (s)	30.0	30.0	38.0	60.0	22.0	22.0
Total Split (%)	33.3%	33.3%	42.2%	66.7%	24.4%	24.4%
Yellow Time (s)	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
Lost Time Adjust (s)	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
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None	None	Min	Min	Min
Act Effct Green (s)	9.3	9.3	31.6	49.0	12.8	12.8
Actuated g/C Ratio	0.14	0.14	0.47	0.73	0.19	0.19
v/c Ratio	0.41	0.24	0.77	0.21	0.59	0.30
Control Delay	30.5	9.6	24.3	3.3	33.2	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.5	9.6	24.3	3.3	33.2	7.6
LOS	C	A	C	A	C	A
Approach Delay	25.1			14.7	24.0	
Approach LOS	C			B	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 67.4	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 18.0	Intersection LOS: B
Intersection Capacity Utilization 58.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: Dalewood St & I-10 EB Ramps



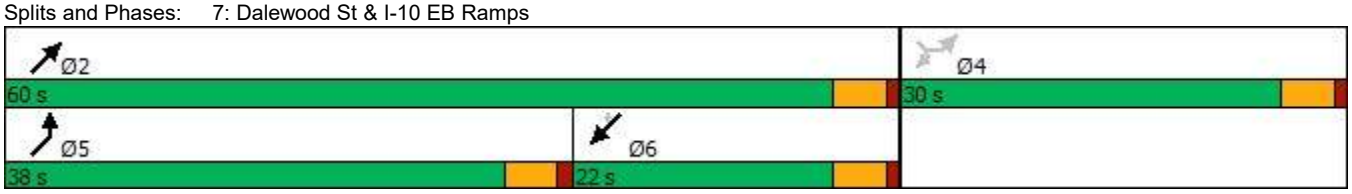
Timings
7: Dalewood St & I-10 EB Ramps

11/05/2018

Lane Group	SEL	SER	NEL	NET	SWT	SWR2
Lane Configurations						
Traffic Volume (vph)	172	58	578	484	202	112
Future Volume (vph)	172	58	578	484	202	112
Turn Type	Perm	Perm	Prot	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	30.0	30.0	10.0	22.0	22.0	22.0
Total Split (s)	30.0	30.0	38.0	60.0	22.0	22.0
Total Split (%)	33.3%	33.3%	42.2%	66.7%	24.4%	24.4%
Yellow Time (s)	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
Lost Time Adjust (s)	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
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None	None	Min	Min	Min
Act Effct Green (s)	9.5	9.5	31.7	49.2	13.0	13.0
Actuated g/C Ratio	0.14	0.14	0.47	0.73	0.19	0.19
v/c Ratio	0.42	0.24	0.78	0.21	0.61	0.30
Control Delay	30.7	9.5	24.6	3.3	33.6	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.7	9.5	24.6	3.3	33.6	7.6
LOS	C	A	C	A	C	A
Approach Delay	25.3			14.9	24.4	
Approach LOS	C			B	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 67.8	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 18.3	Intersection LOS: B
Intersection Capacity Utilization 58.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: Dalewood St & I-10 EB Ramps



Intersection	
Intersection Delay, s/veh	51.9
Intersection LOS	F

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	510	2	48	356	4	95
Future Vol, veh/h	510	2	48	356	4	95
Peak Hour Factor	0.90	0.90	0.83	0.83	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	567	2	58	429	5	109
Number of Lanes	1	1	1	0	0	1

Approach	NW	NE	SW
Opposing Approach		SW	NE
Opposing Lanes	0	1	1
Conflicting Approach Left	NE		NW
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SW	NW	
Conflicting Lanes Right	1	2	0
HCM Control Delay	84.3	23.3	11.9
HCM LOS	F	C	B

Lane	NELn1	NWLn1	NWLn2	SWLn1
Vol Left, %	0%	100%	0%	4%
Vol Thru, %	12%	0%	0%	96%
Vol Right, %	88%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	404	510	2	99
LT Vol	0	510	0	4
Through Vol	48	0	0	95
RT Vol	356	0	2	0
Lane Flow Rate	487	567	2	114
Geometry Grp	2	7	7	2
Degree of Util (X)	0.739	1.07	0.003	0.213
Departure Headway (Hd)	5.759	6.795	5.578	7.001
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	633	538	645	515
Service Time	3.759	4.503	3.285	5.001
HCM Lane V/C Ratio	0.769	1.054	0.003	0.221
HCM Control Delay	23.3	84.6	8.3	11.9
HCM Lane LOS	C	F	A	B
HCM 95th-tile Q	6.5	17.1	0	0.8

Intersection	
Intersection Delay, s/veh	56.6
Intersection LOS	F

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	511	2	48	390	4	95
Future Vol, veh/h	511	2	48	390	4	95
Peak Hour Factor	0.90	0.90	0.83	0.83	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	568	2	58	470	5	109
Number of Lanes	1	1	1	0	0	1

Approach	NW	NE	SW
Opposing Approach		SW	NE
Opposing Lanes	0	1	1
Conflicting Approach Left	NE		NW
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SW	NW	
Conflicting Lanes Right	1	2	0
HCM Control Delay	91.6	28.4	12.1
HCM LOS	F	D	B

Lane	NELn1	NWLn1	NWLn2	SWLn1
Vol Left, %	0%	100%	0%	4%
Vol Thru, %	11%	0%	0%	96%
Vol Right, %	89%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	438	511	2	99
LT Vol	0	511	0	4
Through Vol	48	0	0	95
RT Vol	390	0	2	0
Lane Flow Rate	528	568	2	114
Geometry Grp	2	7	7	2
Degree of Util (X)	0.805	1.091	0.004	0.215
Departure Headway (Hd)	5.799	6.92	5.701	7.136
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	628	528	631	506
Service Time	3.799	4.626	3.407	5.136
HCM Lane V/C Ratio	0.841	1.076	0.003	0.225
HCM Control Delay	28.4	91.9	8.4	12.1
HCM Lane LOS	D	F	A	B
HCM 95th-tile Q	8.1	17.8	0	0.8

Intersection	
Intersection Delay, s/veh	30.2
Intersection LOS	D

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	244	8	234	409	6	52
Future Vol, veh/h	244	8	234	409	6	52
Peak Hour Factor	0.84	0.84	0.93	0.93	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	290	10	252	440	7	64
Number of Lanes	1	1	1	0	0	1

Approach	NW	NE	SW
Opposing Approach		SW	NE
Opposing Lanes	0	1	1
Conflicting Approach Left	NE		NW
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SW	NW	
Conflicting Lanes Right	1	2	0
HCM Control Delay	18	37.6	9.9
HCM LOS	C	E	A

Lane	NELn1	NWLn1	NWLn2	SWLn1
Vol Left, %	0%	100%	0%	10%
Vol Thru, %	36%	0%	0%	90%
Vol Right, %	64%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	643	244	8	58
LT Vol	0	244	0	6
Through Vol	234	0	0	52
RT Vol	409	0	8	0
Lane Flow Rate	691	290	10	72
Geometry Grp	2	7	7	2
Degree of Util (X)	0.919	0.561	0.015	0.119
Departure Headway (Hd)	4.784	6.957	5.738	5.999
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	761	517	622	595
Service Time	2.784	4.705	3.486	4.063
HCM Lane V/C Ratio	0.908	0.561	0.016	0.121
HCM Control Delay	37.6	18.3	8.6	9.9
HCM Lane LOS	E	C	A	A
HCM 95th-tile Q	12.7	3.4	0	0.4

Intersection	
Intersection Delay, s/veh	32.5
Intersection LOS	D

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	249	8	234	418	6	52
Future Vol, veh/h	249	8	234	418	6	52
Peak Hour Factor	0.84	0.84	0.93	0.93	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	296	10	252	449	7	64
Number of Lanes	1	1	1	0	0	1

Approach	NW	NE	SW
Opposing Approach		SW	NE
Opposing Lanes	0	1	1
Conflicting Approach Left	NE		NW
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SW	NW	
Conflicting Lanes Right	1	2	0
HCM Control Delay	18.6	40.9	10
HCM LOS	C	E	A

Lane	NELn1	NWLn1	NWLn2	SWLn1
Vol Left, %	0%	100%	0%	10%
Vol Thru, %	36%	0%	0%	90%
Vol Right, %	64%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	652	249	8	58
LT Vol	0	249	0	6
Through Vol	234	0	0	52
RT Vol	418	0	8	0
Lane Flow Rate	701	296	10	72
Geometry Grp	2	7	7	2
Degree of Util (X)	0.937	0.576	0.015	0.12
Departure Headway (Hd)	4.811	6.99	5.77	6.047
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	757	516	619	589
Service Time	2.811	4.74	3.52	4.118
HCM Lane V/C Ratio	0.926	0.574	0.016	0.122
HCM Control Delay	40.9	18.9	8.6	10
HCM Lane LOS	E	C	A	A
HCM 95th-tile Q	13.5	3.6	0	0.4

HCM 6th TWSC
8: Dalewood St/Garvey Ave & Merced Ave

11/05/2018

Intersection	
Int Delay, s/veh	9.1

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	511	2	48	390	4	95
Future Vol, veh/h	511	2	48	390	4	95
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	0	-	0	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	83	83	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	568	2	58	470	5	109

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	177	58	0	0	528	0
Stage 1	58	-	-	-	-	-
Stage 2	119	-	-	-	-	-
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	813	1008	-	-	1039	-
Stage 1	965	-	-	-	-	-
Stage 2	906	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	809	1008	-	-	1039	-
Mov Cap-2 Maneuver	809	-	-	-	-	-
Stage 1	960	-	-	-	-	-
Stage 2	906	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	19.2	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	-	809	1008	1039	-
HCM Lane V/C Ratio	-	-	0.702	0.002	0.004	-
HCM Control Delay (s)	-	-	19.2	8.6	8.5	0
HCM Lane LOS	-	-	C	A	A	A
HCM 95th %tile Q(veh)	-	-	5.9	0	0	-

HCM 6th TWSC
8: Dalewood St/Garvey Ave & Merced Ave

11/05/2018

Intersection	
Int Delay, s/veh	4.2

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	249	8	234	418	6	52
Future Vol, veh/h	249	8	234	418	6	52
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	0	-	0	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	93	93	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	296	10	252	449	7	64

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	330	252	0	0	701	0
Stage 1	252	-	-	-	-	-
Stage 2	78	-	-	-	-	-
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	665	787	-	-	896	-
Stage 1	790	-	-	-	-	-
Stage 2	945	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	660	787	-	-	896	-
Mov Cap-2 Maneuver	660	-	-	-	-	-
Stage 1	784	-	-	-	-	-
Stage 2	945	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	14.6	0	0.9
HCM LOS	B		

Minor Lane/Major Mvmt	NET	NER	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	-	660	787	896	-
HCM Lane V/C Ratio	-	-	0.449	0.012	0.008	-
HCM Control Delay (s)	-	-	14.8	9.6	9.1	0
HCM Lane LOS	-	-	B	A	A	A
HCM 95th %tile Q(veh)	-	-	2.3	0	0	-

Intersection	
Int Delay, s/veh	3.6

Movement	SEL	SET	SER	NWU	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Vol, veh/h	201	649	4	1	5	896	95	0	0	0	10	2	160
Future Vol, veh/h	201	649	4	1	5	896	95	0	0	0	10	2	160
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	-	60	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	-	0	-	-	22350	-	-	0	-
Grade, %	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	92	92	92	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	216	698	4	1	5	963	102	0	0	0	12	2	190

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	1065	0	0	702	702	0	0			1807	2160	533
Stage 1	-	-	-	-	-	-	-			1026	1026	-
Stage 2	-	-	-	-	-	-	-			781	1134	-
Critical Hdwy	4.14	-	-	6.44	4.14	-	-			6.84	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-			5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-			5.84	5.54	-
Follow-up Hdwy	2.22	-	-	2.52	2.22	-	-			3.52	4.02	3.32
Pot Cap-1 Maneuver	650	-	-	515	891	-	-			70	47	491
Stage 1	-	-	-	-	-	-	-			307	310	-
Stage 2	-	-	-	-	-	-	-			412	276	-
Platoon blocked, %		-	-			-	-					
Mov Cap-1 Maneuver	650	-	-	794	794	-	-			46	0	491
Mov Cap-2 Maneuver	-	-	-	-	-	-	-			46	0	-
Stage 1	-	-	-	-	-	-	-			204	0	-
Stage 2	-	-	-	-	-	-	-			412	0	-

Approach	SE	NW	SW
HCM Control Delay, s	3.1	0.1	23.8
HCM LOS			C

Minor Lane/Major Mvmt	NWL	NWT	NWR	SEL	SET	SER	SWLn1	SWLn2
Capacity (veh/h)	794	-	-	650	-	-	46	491
HCM Lane V/C Ratio	0.008	-	-	0.333	-	-	0.311	0.388
HCM Control Delay (s)	9.6	-	-	13.3	-	-	115.2	16.9
HCM Lane LOS	A	-	-	B	-	-	F	C
HCM 95th %tile Q(veh)	0	-	-	1.5	-	-	1.1	1.8

Intersection	
Int Delay, s/veh	7.2

Movement	SEL	SET	SER	NWU	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Vol, veh/h	201	675	4	1	5	896	95	0	0	0	33	2	160
Future Vol, veh/h	201	675	4	1	5	896	95	0	0	0	33	2	160
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	-	60	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	-	0	-	-	22350	-	-	0	-
Grade, %	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	92	92	92	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	216	726	4	1	5	963	102	0	0	0	39	2	190

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	1065	0	0	730	730	0	0			1821	2188	533
Stage 1	-	-	-	-	-	-	-			1026	1026	-
Stage 2	-	-	-	-	-	-	-			795	1162	-
Critical Hdwy	4.14	-	-	6.44	4.14	-	-			6.84	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-			5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-			5.84	5.54	-
Follow-up Hdwy	2.22	-	-	2.52	2.22	-	-			3.52	4.02	3.32
Pot Cap-1 Maneuver	650	-	-	494	870	-	-			69	45	491
Stage 1	-	-	-	-	-	-	-			307	310	-
Stage 2	-	-	-	-	-	-	-			405	267	-
Platoon blocked, %		-	-			-	-					
Mov Cap-1 Maneuver	650	-	-	772	772	-	-			46	0	491
Mov Cap-2 Maneuver	-	-	-	-	-	-	-			46	0	-
Stage 1	-	-	-	-	-	-	-			204	0	-
Stage 2	-	-	-	-	-	-	-			405	0	-

Approach	SE	NW	SW
HCM Control Delay, s	3	0.1	57.3
HCM LOS			F

Minor Lane/Major Mvmt	NWL	NWT	NWR	SEL	SET	SER	SWLn1	SWLn2
Capacity (veh/h)	772	-	-	650	-	-	46	491
HCM Lane V/C Ratio	0.008	-	-	0.333	-	-	0.906	0.388
HCM Control Delay (s)	9.7	-	-	13.3	-	-	241.9	16.9
HCM Lane LOS	A	-	-	B	-	-	F	C
HCM 95th %tile Q(veh)	0	-	-	1.5	-	-	3.7	1.8

Intersection	
Int Delay, s/veh	9.7

Movement	SEL	SET	SER	NWU	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Vol, veh/h	252	803	2	2	3	609	118	0	0	0	49	0	282
Future Vol, veh/h	252	803	2	2	3	609	118	0	0	0	49	0	282
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	-	60	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	-	0	-	-	22350	-	-	0	-
Grade, %	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	96	96	96	96	92	92	92	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	277	882	2	2	3	634	123	0	0	0	56	0	320

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	757	0	0	885	884	0	0			1701	2144	379
Stage 1	-	-	-	-	-	-	-			706	706	-
Stage 2	-	-	-	-	-	-	-			995	1438	-
Critical Hdwy	4.14	-	-	6.44	4.14	-	-			6.84	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-			5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-			5.84	5.54	-
Follow-up Hdwy	2.22	-	-	2.52	2.22	-	-			3.52	4.02	3.32
Pot Cap-1 Maneuver	850	-	-	393	761	-	-			83	48	619
Stage 1	-	-	-	-	-	-	-			450	437	-
Stage 2	-	-	-	-	-	-	-			318	197	-
Platoon blocked, %		-	-			-	-					
Mov Cap-1 Maneuver	850	-	-	554	554	-	-			~ 55	0	619
Mov Cap-2 Maneuver	-	-	-	-	-	-	-			~ 55	0	-
Stage 1	-	-	-	-	-	-	-			301	0	-
Stage 2	-	-	-	-	-	-	-			318	0	-

Approach	SE	NW	SW
HCM Control Delay, s	2.7	0.1	50.8
HCM LOS			F

Minor Lane/Major Mvmt	NWL	NWT	NWR	SEL	SET	SER	SWLn1	SWLn2
Capacity (veh/h)	554	-	-	850	-	-	55	619
HCM Lane V/C Ratio	0.009	-	-	0.326	-	-	1.012	0.518
HCM Control Delay (s)	11.6	-	-	11.3	-	-	246	16.9
HCM Lane LOS	B	-	-	B	-	-	F	C
HCM 95th %tile Q(veh)	0	-	-	1.4	-	-	4.6	3

Notes

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

Intersection	
Int Delay, s/veh	11.5

Movement	SEL	SET	SER	NWU	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Vol, veh/h	252	810	2	2	3	609	118	0	0	0	55	0	282
Future Vol, veh/h	252	810	2	2	3	609	118	0	0	0	55	0	282
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	-	60	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	-	0	-	-	22350	-	-	0	-
Grade, %	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	96	96	96	96	92	92	92	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	277	890	2	2	3	634	123	0	0	0	63	0	320

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	757	0	0	892	892	0	0			1705	2152	379
Stage 1	-	-	-	-	-	-	-			706	706	-
Stage 2	-	-	-	-	-	-	-			999	1446	-
Critical Hdwy	4.14	-	-	6.44	4.14	-	-			6.84	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-			5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-			5.84	5.54	-
Follow-up Hdwy	2.22	-	-	2.52	2.22	-	-			3.52	4.02	3.32
Pot Cap-1 Maneuver	850	-	-	389	756	-	-			82	47	619
Stage 1	-	-	-	-	-	-	-			450	437	-
Stage 2	-	-	-	-	-	-	-			317	195	-
Platoon blocked, %		-	-			-	-					
Mov Cap-1 Maneuver	850	-	-	549	549	-	-			~ 55	0	619
Mov Cap-2 Maneuver	-	-	-	-	-	-	-			~ 55	0	-
Stage 1	-	-	-	-	-	-	-			301	0	-
Stage 2	-	-	-	-	-	-	-			317	0	-

Approach	SE	NW	SW
HCM Control Delay, s	2.7	0.1	60.9
HCM LOS			F

Minor Lane/Major Mvmt	NWL	NWT	NWR	SEL	SET	SER	SWLn1	SWLn2
Capacity (veh/h)	549	-	-	850	-	-	55	619
HCM Lane V/C Ratio	0.009	-	-	0.326	-	-	1.136	0.518
HCM Control Delay (s)	11.6	-	-	11.3	-	-	286.6	16.9
HCM Lane LOS	B	-	-	B	-	-	F	C
HCM 95th %tile Q(veh)	0	-	-	1.4	-	-	5.3	3

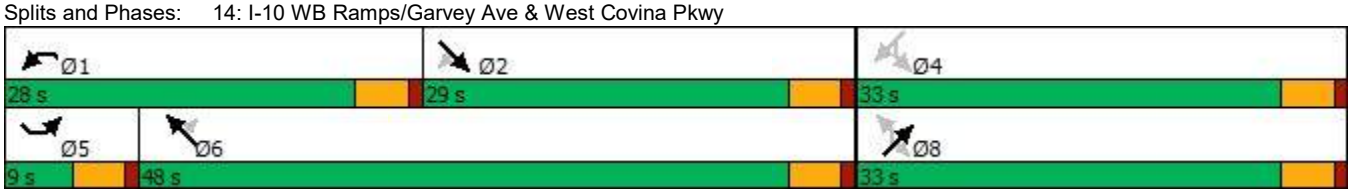
Notes

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

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT
Lane Configurations											
Traffic Volume (vph)	14	556	555	409	222	121	118	14	197	68	365
Future Volume (vph)	14	556	555	409	222	121	118	14	197	68	365
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	custom	NA
Protected Phases	5	2		1	6			8			
Permitted Phases			2			6	8		8	4	4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4
Switch Phase											
Minimum Initial (s)	1.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	32.5	32.5	9.5	28.5	28.5	32.5	32.5	32.5	32.5	32.5
Total Split (s)	9.0	29.0	29.0	28.0	48.0	48.0	33.0	33.0	33.0	33.0	33.0
Total Split (%)	10.0%	32.2%	32.2%	31.1%	53.3%	53.3%	36.7%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.5	3.5	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	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	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?											
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	4.5	24.5	24.5	23.2	50.4	50.4		28.5	28.5		28.5
Actuated g/C Ratio	0.05	0.27	0.27	0.26	0.56	0.56		0.32	0.32		0.32
v/c Ratio	0.17	0.63	1.07	0.94	0.12	0.13		1.04	0.41		0.85
Control Delay	45.5	32.2	81.6	64.5	10.0	2.6		111.7	4.9		44.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	45.5	32.2	81.6	64.5	10.0	2.6		111.7	4.9		44.9
LOS	D	C	F	E	B	A		F	A		D
Approach Delay		56.7			38.5			47.8			44.9
Approach LOS		E			D			D			D

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 89.7	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.07	
Intersection Signal Delay: 48.6	Intersection LOS: D
Intersection Capacity Utilization 92.4%	ICU Level of Service F
Analysis Period (min) 15	

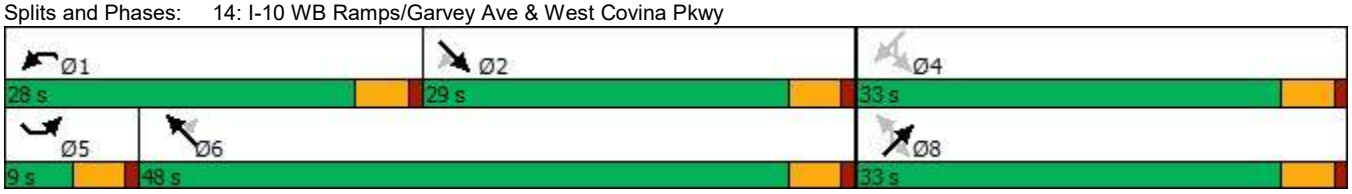
Splits and Phases: 14: I-10 WB Ramps/Garvey Ave & West Covina Pkwy



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT
Lane Configurations											
Traffic Volume (vph)	14	556	555	421	222	121	118	14	228	68	365
Future Volume (vph)	14	556	555	421	222	121	118	14	228	68	365
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	custom	NA
Protected Phases	5	2		1	6			8			
Permitted Phases			2			6	8		8	4	4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4
Switch Phase											
Minimum Initial (s)	1.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	32.5	32.5	9.5	28.5	28.5	32.5	32.5	32.5	32.5	32.5
Total Split (s)	9.0	29.0	29.0	28.0	48.0	48.0	33.0	33.0	33.0	33.0	33.0
Total Split (%)	10.0%	32.2%	32.2%	31.1%	53.3%	53.3%	36.7%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.5	3.5	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	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	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?											
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	4.5	24.5	24.5	23.5	50.7	50.7		28.5	28.5		28.5
Actuated g/C Ratio	0.05	0.27	0.27	0.26	0.56	0.56		0.32	0.32		0.32
v/c Ratio	0.17	0.63	1.08	0.96	0.12	0.13		1.05	0.46		0.85
Control Delay	45.5	32.3	83.9	67.5	10.0	2.6		114.8	5.0		45.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	45.5	32.3	83.9	67.5	10.0	2.6		114.8	5.0		45.4
LOS	D	C	F	E	A	A		F	A		D
Approach Delay		57.9			40.5			45.4			45.4
Approach LOS		E			D			D			D

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay: 49.2	Intersection LOS: D
Intersection Capacity Utilization 93.1%	ICU Level of Service F
Analysis Period (min) 15	

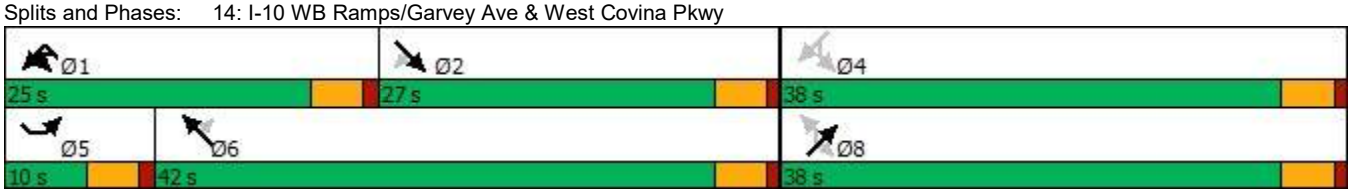
Splits and Phases: 14: I-10 WB Ramps/Garvey Ave & West Covina Pkwy



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT
Lane Configurations											
Traffic Volume (vph)	49	835	327	385	371	150	201	51	420	72	315
Future Volume (vph)	49	835	327	385	371	150	201	51	420	72	315
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	custom	NA
Protected Phases	5	2		1	6			8			
Permitted Phases			2			6	8		8	4	4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4
Switch Phase											
Minimum Initial (s)	1.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	32.5	32.5	9.5	28.5	28.5	32.5	32.5	32.5	32.5	32.5
Total Split (s)	10.0	27.0	27.0	25.0	42.0	42.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	11.1%	30.0%	30.0%	27.8%	46.7%	46.7%	42.2%	42.2%	42.2%	42.2%	42.2%
Yellow Time (s)	3.5	3.5	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	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	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?											
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	5.5	22.5	22.5	20.5	41.6	41.6		32.2	32.2		32.2
Actuated g/C Ratio	0.06	0.25	0.25	0.23	0.47	0.47		0.36	0.36		0.36
v/c Ratio	0.47	0.98	0.69	1.01	0.24	0.19		0.98	0.51		0.80
Control Delay	55.6	59.9	27.2	84.5	15.9	3.5		80.6	4.4		37.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	55.6	59.9	27.2	84.5	15.9	3.5		80.6	4.4		37.3
LOS	E	E	C	F	B	A		F	A		D
Approach Delay		50.9			43.0			33.0			37.3
Approach LOS		D			D			C			D

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 88.7	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.01	
Intersection Signal Delay: 43.2	Intersection LOS: D
Intersection Capacity Utilization 107.2%	ICU Level of Service G
Analysis Period (min) 15	

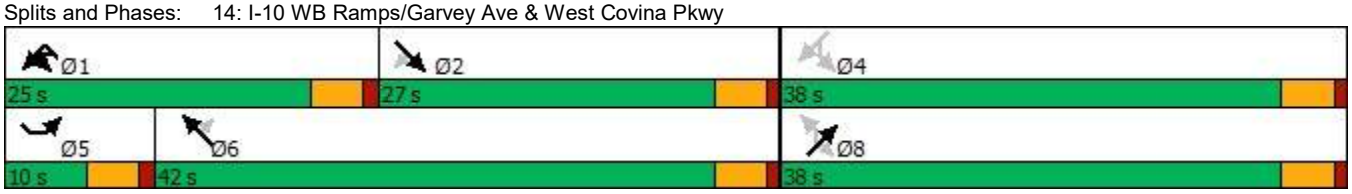
Splits and Phases: 14: I-10 WB Ramps/Garvey Ave & West Covina Pkwy



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT
Lane Configurations											
Traffic Volume (vph)	49	835	327	441	374	150	201	51	428	72	315
Future Volume (vph)	49	835	327	441	374	150	201	51	428	72	315
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	custom	NA
Protected Phases	5	2		1	6			8			
Permitted Phases			2			6	8		8	4	4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4
Switch Phase											
Minimum Initial (s)	1.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	32.5	32.5	9.5	28.5	28.5	32.5	32.5	32.5	32.5	32.5
Total Split (s)	10.0	27.0	27.0	25.0	42.0	42.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	11.1%	30.0%	30.0%	27.8%	46.7%	46.7%	42.2%	42.2%	42.2%	42.2%	42.2%
Yellow Time (s)	3.5	3.5	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	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	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?											
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	5.5	22.5	22.5	20.5	41.6	41.6		32.2	32.2		32.2
Actuated g/C Ratio	0.06	0.25	0.25	0.23	0.47	0.47		0.36	0.36		0.36
v/c Ratio	0.47	0.98	0.69	1.16	0.24	0.19		0.98	0.52		0.80
Control Delay	55.6	59.9	27.2	129.8	15.9	3.5		80.6	4.4		37.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	55.6	59.9	27.2	129.8	15.9	3.5		80.6	4.4		37.3
LOS	E	E	C	F	B	A		F	A		D
Approach Delay		50.9			66.1			32.7			37.3
Approach LOS		D			E			C			D

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 88.7	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.16	
Intersection Signal Delay: 50.0	Intersection LOS: D
Intersection Capacity Utilization 110.8%	ICU Level of Service H
Analysis Period (min) 15	

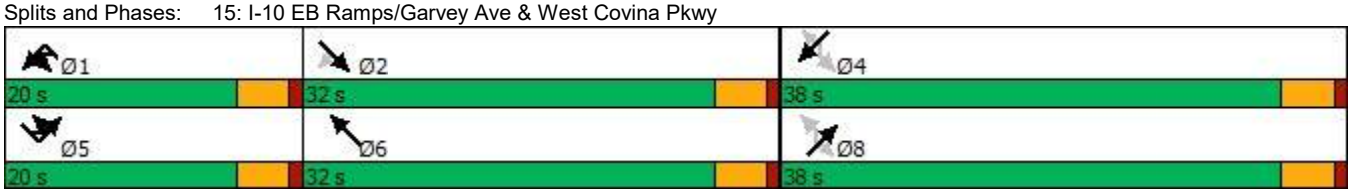
Splits and Phases: 14: I-10 WB Ramps/Garvey Ave & West Covina Pkwy



Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations											
Traffic Volume (vph)	159	688	493	253	707	58	55	141	27	37	234
Future Volume (vph)	159	688	493	253	707	58	55	141	27	37	234
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6		8			4	
Permitted Phases			2			8		8	4		4
Detector Phase	5	2	2	1	6	8	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	9.5	9.5	9.5	29.5	37.5	37.5	37.5	37.5	37.5	37.5
Total Split (s)	20.0	32.0	32.0	20.0	32.0	38.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	22.2%	35.6%	35.6%	22.2%	35.6%	42.2%	42.2%	42.2%	42.2%	42.2%	42.2%
Yellow Time (s)	3.5	3.5	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	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	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	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag						
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	Min	None	None	None	None	None	None
Act Effct Green (s)	10.9	21.4	21.4	10.7	21.1	9.1	9.1	9.1	9.1	9.1	9.1
Actuated g/C Ratio	0.20	0.39	0.39	0.19	0.38	0.16	0.16	0.16	0.16	0.16	0.16
v/c Ratio	0.48	0.52	0.55	0.46	0.66	0.32	0.22	0.42	0.15	0.14	0.57
Control Delay	26.8	14.9	4.1	24.0	17.2	26.8	24.1	8.3	24.1	23.3	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.8	14.9	4.1	24.0	17.2	26.8	24.1	8.3	24.1	23.3	8.7
LOS	C	B	A	C	B	C	C	A	C	C	A
Approach Delay		12.3			18.9		16.0			11.9	
Approach LOS		B			B		B			B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 55.2	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 15.0	Intersection LOS: B
Intersection Capacity Utilization 63.5%	ICU Level of Service B
Analysis Period (min) 15	

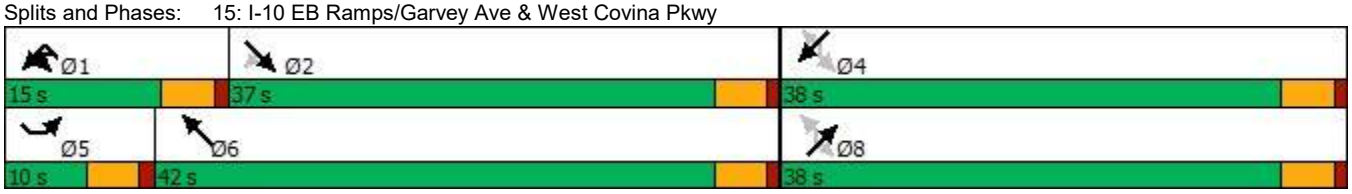
Splits and Phases: 15: I-10 EB Ramps/Garvey Ave & West Covina Pkwy



Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations											
Traffic Volume (vph)	25	340	481	193	542	90	37	146	17	7	77
Future Volume (vph)	25	340	481	193	542	90	37	146	17	7	77
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6		8			4	
Permitted Phases			2			8		8	4		4
Detector Phase	5	2	2	1	6	8	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	9.5	9.5	9.5	29.5	37.5	37.5	37.5	37.5	37.5	37.5
Total Split (s)	10.0	37.0	37.0	15.0	42.0	38.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	11.1%	41.1%	41.1%	16.7%	46.7%	42.2%	42.2%	42.2%	42.2%	42.2%	42.2%
Yellow Time (s)	3.5	3.5	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	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	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	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag						
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	Min	None	None	None	None	None	None
Act Effct Green (s)	5.7	13.9	13.9	8.5	25.6	9.7	9.7	9.7	9.7	9.7	9.7
Actuated g/C Ratio	0.12	0.30	0.30	0.18	0.55	0.21	0.21	0.21	0.21	0.21	0.21
v/c Ratio	0.13	0.37	0.64	0.35	0.32	0.36	0.11	0.37	0.07	0.02	0.21
Control Delay	24.4	14.2	5.6	20.2	7.3	21.0	17.1	6.3	17.1	16.6	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.4	14.2	5.6	20.2	7.3	21.0	17.1	6.3	17.1	16.6	3.5
LOS	C	B	A	C	A	C	B	A	B	B	A
Approach Delay		9.6			10.7		12.6			6.7	
Approach LOS		A			B		B			A	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 46.2	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 10.3	Intersection LOS: B
Intersection Capacity Utilization 50.8%	ICU Level of Service A
Analysis Period (min) 15	

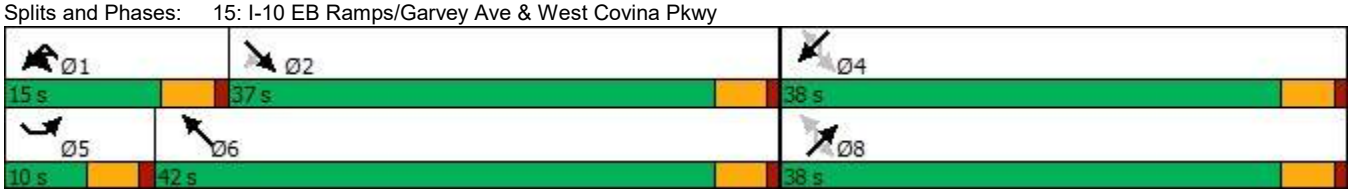
Splits and Phases: 15: I-10 EB Ramps/Garvey Ave & West Covina Pkwy



Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations											
Traffic Volume (vph)	25	371	481	200	554	90	37	146	17	7	77
Future Volume (vph)	25	371	481	200	554	90	37	146	17	7	77
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6		8			4	
Permitted Phases			2			8		8	4		4
Detector Phase	5	2	2	1	6	8	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	9.5	9.5	9.5	29.5	37.5	37.5	37.5	37.5	37.5	37.5
Total Split (s)	10.0	37.0	37.0	15.0	42.0	38.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	11.1%	41.1%	41.1%	16.7%	46.7%	42.2%	42.2%	42.2%	42.2%	42.2%	42.2%
Yellow Time (s)	3.5	3.5	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	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	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	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag						
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	Min	None	None	None	None	None	None
Act Effct Green (s)	5.7	14.4	14.4	8.6	26.2	9.8	9.8	9.8	9.8	9.8	9.8
Actuated g/C Ratio	0.12	0.31	0.31	0.18	0.56	0.21	0.21	0.21	0.21	0.21	0.21
v/c Ratio	0.13	0.39	0.64	0.36	0.33	0.37	0.11	0.37	0.07	0.02	0.21
Control Delay	24.8	14.3	5.4	20.6	7.3	21.4	17.4	6.3	17.4	16.7	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.8	14.3	5.4	20.6	7.3	21.4	17.4	6.3	17.4	16.7	3.5
LOS	C	B	A	C	A	C	B	A	B	B	A
Approach Delay		9.8			10.8		12.8			6.7	
Approach LOS		A			B		B			A	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 46.9	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 10.4	Intersection LOS: B
Intersection Capacity Utilization 51.0%	ICU Level of Service A
Analysis Period (min) 15	

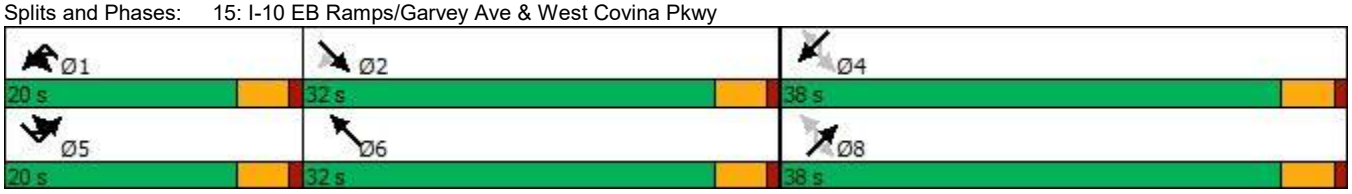
Splits and Phases: 15: I-10 EB Ramps/Garvey Ave & West Covina Pkwy



Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations											
Traffic Volume (vph)	159	680	493	221	648	58	55	141	27	37	234
Future Volume (vph)	159	680	493	221	648	58	55	141	27	37	234
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6		8			4	
Permitted Phases			2			8		8	4		4
Detector Phase	5	2	2	1	6	8	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	9.5	9.5	9.5	29.5	37.5	37.5	37.5	37.5	37.5	37.5
Total Split (s)	20.0	32.0	32.0	20.0	32.0	38.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	22.2%	35.6%	35.6%	22.2%	35.6%	42.2%	42.2%	42.2%	42.2%	42.2%	42.2%
Yellow Time (s)	3.5	3.5	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	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	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	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag						
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	Min	None	None	None	None	None	None
Act Effct Green (s)	10.9	20.6	20.6	10.0	22.9	9.0	9.0	9.0	9.0	9.0	9.0
Actuated g/C Ratio	0.20	0.38	0.38	0.19	0.43	0.17	0.17	0.17	0.17	0.17	0.17
v/c Ratio	0.47	0.52	0.56	0.42	0.54	0.31	0.21	0.42	0.14	0.14	0.56
Control Delay	25.8	14.6	4.1	23.5	15.2	25.9	23.4	8.2	23.4	22.7	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.8	14.6	4.1	23.5	15.2	25.9	23.4	8.2	23.4	22.7	8.5
LOS	C	B	A	C	B	C	C	A	C	C	A
Approach Delay		12.0			17.2		15.5			11.6	
Approach LOS		B			B		B			B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 53.7	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 14.1	Intersection LOS: B
Intersection Capacity Utilization 61.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 15: I-10 EB Ramps/Garvey Ave & West Covina Pkwy



Appendix D – ICU Spreadsheets and Synchro Reports – Phases 1A, 1B, and 2

SE-NW Street: Francisquito Ave
NE-SW Street: Sunset Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase II No Project				Phase II + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	125	1	1.00	0.08	125	1	1.00	0.08
Comb. L-T		0				0		
Southeast-bound Thru	558	1	1.60	0.22	558	1	1.60	0.22
Comb. T-R		1				1		
Southeast-bound Right	139	0	0.40	0.22	139	0	0.40	0.22
Comb. L-T-R		0				0		
Northwest-bound Left	155	1	1.00	0.10	155	1	1.00	0.10
Comb. L-T		0				0		
Northwest-bound Thru	768	2	2.00	0.24	768	2	2.00	0.24
Comb. T-R		0				0		
Northwest-bound Right	87	1	1.00	0.05	87	1	1.00	0.05
Comb. L-T-R		0				0		
Northeast-bound Left	144	1	1.00	0.09	144	1	1.00	0.09
Comb. L-T		0				0		
Northeast-bound Thru	753	2	2.00	0.24	773	2	2.00	0.24
Comb. T-R		0				0		
Northeast-bound Right	113	1	1.00	0.07	113	1	1.00	0.07
Comb. L-T-R		0				0		
Southwest-bound Left	98	1	1.00	0.06	98	1	1.00	0.06
Comb. L-T		0				0		
Southwest-bound Thru	1022	2	2.00	0.32	1028	2	2.00	0.32
Comb. T-R		0				0		
Southwest-bound Right	218	1	1.00	0.14	218	1	1.00	0.14
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.32	E-W:	0.32
	N-S:	0.41	N-S:	0.41
	Total:	0.73	Total:	0.73

Lost Time	0.10	0.10

V/C	0.828	0.829
Level of Service	D	D

SE-NW Street: Francisquito Ave
NE-SW Street: Sunset Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase II No Project				Phase II + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	146	1	1.00	0.09	146	1	1.00	0.09
Comb. L-T		0				0		
Southeast-bound Thru	809	1	1.81	0.28	809	1	1.81	0.28
Comb. T-R		1				1		
Southeast-bound Right	86	0	0.19	0.28	86	0	0.19	0.28
Comb. L-T-R		0				0		
Northwest-bound Left	88	1	1.00	0.06	88	1	1.00	0.06
Comb. L-T		0				0		
Northwest-bound Thru	472	2	2.00	0.15	472	2	2.00	0.15
Comb. T-R		0				0		
Northwest-bound Right	89	1	1.00	0.06	89	1	1.00	0.06
Comb. L-T-R		0				0		
Northeast-bound Left	151	1	1.00	0.09	151	1	1.00	0.09
Comb. L-T		0				0		
Northeast-bound Thru	1027	2	2.00	0.32	1033	2	2.00	0.32
Comb. T-R		0				0		
Northeast-bound Right	208	1	1.00	0.13	208	1	1.00	0.13
Comb. L-T-R		0				0		
Southwest-bound Left	145	1	1.00	0.09	145	1	1.00	0.09
Comb. L-T		0				0		
Southwest-bound Thru	786	2	2.00	0.25	807	2	2.00	0.25
Comb. T-R		0				0		
Southwest-bound Right	101	1	1.00	0.06	101	1	1.00	0.06
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.33	E-W:	0.33
	N-S:	0.41	N-S:	0.41
	Total:	0.75	Total:	0.75

Lost Time	0.10	0.10

V/C	0.846	0.848
Level of Service	D	D

SE-NW Street: Durness St
NE-SW Street: Sunset Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase II No Project				Phase II + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	131	0	0.63	0.13	131	0	0.63	0.13
Comb. L-T		1				1		
Southeast-bound Thru	78	0	0.37	0.13	78	0	0.37	0.13
Comb. T-R		0				0		
Southeast-bound Right	141	1	1.00	0.09	141	1	1.00	0.09
Comb. L-T-R		0				0		
Northwest-bound Left	38	0	0.26	0.09	38	0	0.26	0.09
Comb. L-T		1				1		
Northwest-bound Thru	111	0	0.74	0.09	111	0	0.74	0.09
Comb. T-R		0				0		
Northwest-bound Right	29	1	1.00	0.02	29	1	1.00	0.02
Comb. L-T-R		0				0		
Northeast-bound Left	82	1	1.00	0.05	82	1	1.00	0.05
Comb. L-T		0				0		
Northeast-bound Thru	985	2	2.00	0.31	1005	2	2.00	0.31
Comb. T-R		0				0		
Northeast-bound Right	16	1	1.00	0.01	16	1	1.00	0.01
Comb. L-T-R		0				0		
Southwest-bound Left	23	1	1.00	0.01	23	1	1.00	0.01
Comb. L-T		0				0		
Southwest-bound Thru	1082	2	2.00	0.34	1088	2	2.00	0.34
Comb. T-R		0				0		
Southwest-bound Right	76	1	1.00	0.05	76	1	1.00	0.05
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.22	E-W:	0.22
	N-S:	0.39	N-S:	0.39
	Total:	0.61	Total:	0.62

Lost Time	0.10	0.10

V/C	0.713	0.715
Level of Service	C	C

SE-NW Street: Durness St
NE-SW Street: Sunset Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase II No Project				Phase II + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	30	0	0.47	0.04	30	0	0.47	0.04
Comb. L-T		1				1		
Southeast-bound Thru	34	0	0.53	0.04	34	0	0.53	0.04
Comb. T-R		0				0		
Southeast-bound Right	29	1	1.00	0.02	29	1	1.00	0.02
Comb. L-T-R		0				0		
Northwest-bound Left	12	0	0.36	0.02	12	0	0.36	0.02
Comb. L-T		1				1		
Northwest-bound Thru	21	0	0.64	0.02	21	0	0.64	0.02
Comb. T-R		0				0		
Northwest-bound Right	7	1	1.00	0.00	7	1	1.00	0.00
Comb. L-T-R		0				0		
Northeast-bound Left	26	1	1.00	0.02	26	1	1.00	0.02
Comb. L-T		0				0		
Northeast-bound Thru	1234	2	2.00	0.39	1240	2	2.00	0.39
Comb. T-R		0				0		
Northeast-bound Right	10	1	1.00	0.01	10	1	1.00	0.01
Comb. L-T-R		0				0		
Southwest-bound Left	21	1	1.00	0.01	21	1	1.00	0.01
Comb. L-T		0				0		
Southwest-bound Thru	1041	2	2.00	0.33	1062	2	2.00	0.33
Comb. T-R		0				0		
Southwest-bound Right	19	1	1.00	0.01	19	1	1.00	0.01
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.06	E-W:	0.06
	N-S:	0.40	N-S:	0.40
	Total:	0.46	Total:	0.46

Lost Time	0.10	0.10

V/C	0.559	0.561
Level of Service	A	A

SE-NW Street: Merced Ave
NE-SW Street: Sunset Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase II No Project				Phase II + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	115	1	1.00	0.07	115	1	1.00	0.07
Comb. L-T		0				0		
Southeast-bound Thru	409	1	1.68	0.15	409	1	1.68	0.15
Comb. T-R		1				1		
Southeast-bound Right	78	0	0.32	0.15	78	0	0.32	0.15
Comb. L-T-R		0				0		
Northwest-bound Left	194	1	1.00	0.12	194	1	1.00	0.12
Comb. L-T		0				0		
Northwest-bound Thru	607	1	1.63	0.23	617	1	1.59	0.24
Comb. T-R		1				1		
Northwest-bound Right	137	0	0.37	0.23	157	0	0.41	0.24
Comb. L-T-R		0				0		
Northeast-bound Left	96	1	1.00	0.06	106	1	1.00	0.07
Comb. L-T		0				0		
Northeast-bound Thru	910	2	2.00	0.28	920	2	2.00	0.29
Comb. T-R		0				0		
Northeast-bound Right	120	1	1.00	0.08	120	1	1.00	0.08
Comb. L-T-R		0				0		
Southwest-bound Left	157	1	1.00	0.10	166	1	1.00	0.10
Comb. L-T		0				0		
Southwest-bound Thru	1041	2	2.00	0.33	1047	2	2.00	0.33
Comb. T-R		0				0		
Southwest-bound Right	182	1	1.00	0.11	182	1	1.00	0.11
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.30	E-W:	0.31
	N-S:	0.39	N-S:	0.39
	Total:	0.69	Total:	0.71

Lost Time	0.10	0.10

V/C	0.790	0.807
Level of Service	C	D

SE-NW Street: Merced Ave
NE-SW Street: Sunset Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase II No Project				Phase II + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	132	1	1.00	0.08	132	1	1.00	0.08
Comb. L-T		0				0		
Southeast-bound Thru	553	1	1.78	0.19	553	1	1.78	0.19
Comb. T-R		1				1		
Southeast-bound Right	67	0	0.22	0.19	67	0	0.22	0.19
Comb. L-T-R		0				0		
Northwest-bound Left	96	1	1.00	0.06	96	1	1.00	0.06
Comb. L-T		0				0		
Northwest-bound Thru	323	1	1.52	0.13	326	1	1.50	0.14
Comb. T-R		1				1		
Northwest-bound Right	102	0	0.48	0.13	108	0	0.50	0.14
Comb. L-T-R		0				0		
Northeast-bound Left	84	1	1.00	0.05	87	1	1.00	0.05
Comb. L-T		0				0		
Northeast-bound Thru	1058	2	2.00	0.33	1061	2	2.00	0.33
Comb. T-R		0				0		
Northeast-bound Right	153	1	1.00	0.10	153	1	1.00	0.10
Comb. L-T-R		0				0		
Southwest-bound Left	167	1	1.00	0.10	199	1	1.00	0.12
Comb. L-T		0				0		
Southwest-bound Thru	900	2	2.00	0.28	921	2	2.00	0.29
Comb. T-R		0				0		
Southwest-bound Right	127	1	1.00	0.08	127	1	1.00	0.08
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.25	E-W:	0.25
	N-S:	0.44	N-S:	0.46
	Total:	0.69	Total:	0.71

Lost Time	0.10	0.10

V/C	0.789	0.810
Level of Service	C	D

SE-NW Street: Vine Ave
NE-SW Street: Sunset Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase II No Project				Phase II + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	70	0	0.97	0.05	113	0	0.98	0.07
Comb. L-T		1				1		
Southeast-bound Thru	2	0	0.03	0.05	2	0	0.02	0.07
Comb. T-R		0				0		
Southeast-bound Right	46	1	1.00	0.03	60	1	1.00	0.04
Comb. L-T-R		0				0		
Northwest-bound Left	39	0	0.83	0.03	39	0	0.83	0.03
Comb. L-T		1				1		
Northwest-bound Thru	8	0	0.17	0.03	8	0	0.17	0.03
Comb. T-R		0				0		
Northwest-bound Right	70	1	1.00	0.04	70	1	1.00	0.04
Comb. L-T-R		0				0		
Northeast-bound Left	61	1	1.00	0.04	91	1	1.00	0.06
Comb. L-T		0				0		
Northeast-bound Thru	1067	2	2.00	0.33	1067	2	2.00	0.33
Comb. T-R		0				0		
Northeast-bound Right	39	1	1.00	0.02	39	1	1.00	0.02
Comb. L-T-R		0				0		
Southwest-bound Left	38	1	1.00	0.02	38	1	1.00	0.02
Comb. L-T		0				0		
Southwest-bound Thru	1349	2	2.00	0.42	1349	2	2.00	0.42
Comb. T-R		0				0		
Southwest-bound Right	113	1	1.00	0.07	220	1	1.00	0.14
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.09	E-W:	0.12
	N-S:	0.46	N-S:	0.48
	Total:	0.55	Total:	0.59

Lost Time	0.10	0.10

V/C	0.648	0.694
Level of Service	B	B

SE-NW Street: Vine Ave
NE-SW Street: Sunset Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase II No Project				Phase II + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	116	0	0.94	0.08	270	0	0.97	0.17
Comb. L-T		1				1		
Southeast-bound Thru	8	0	0.06	0.08	8	0	0.03	0.17
Comb. T-R		0				0		
Southeast-bound Right	49	1	1.00	0.03	102	1	1.00	0.06
Comb. L-T-R		0				0		
Northwest-bound Left	4	0	0.67	0.00	4	0	0.67	0.00
Comb. L-T		1				1		
Northwest-bound Thru	2	0	0.33	0.00	2	0	0.33	0.00
Comb. T-R		0				0		
Northwest-bound Right	37	1	1.00	0.02	37	1	1.00	0.02
Comb. L-T-R		0				0		
Northeast-bound Left	35	1	1.00	0.02	44	1	1.00	0.03
Comb. L-T		0				0		
Northeast-bound Thru	1212	2	2.00	0.38	1212	2	2.00	0.38
Comb. T-R		0				0		
Northeast-bound Right	35	1	1.00	0.02	35	1	1.00	0.02
Comb. L-T-R		0				0		
Southwest-bound Left	48	1	1.00	0.03	48	1	1.00	0.03
Comb. L-T		0				0		
Southwest-bound Thru	1080	2	2.00	0.34	1080	2	2.00	0.34
Comb. T-R		0				0		
Southwest-bound Right	58	1	1.00	0.04	90	1	1.00	0.06
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.10	E-W:	0.20
	N-S:	0.41	N-S:	0.41
	Total:	0.51	Total:	0.61

Lost Time	0.10	0.10

V/C	0.609	0.706
Level of Service	B	C

SE-NW Street: Cameron Ave
NE-SW Street: Sunset Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase II No Project				Phase II + Project				Phase II + Project With Mitigation			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	77	1	1.00	0.05	77	1	1.00	0.05	77	1	1.00	0.05
Comb. L-T		0				0				0		
Southeast-bound Thru	427	1	1.46	0.18	427	1	1.31	0.20	427	1	1.31	0.20
Comb. T-R		1				1				1		
Southeast-bound Right	158	0	0.54	0.18	224	0	0.69	0.20	224	0	0.69	0.20
Comb. L-T-R		0				0				0		
Northwest-bound Left	250	1	1.00	0.16	260	1	1.00	0.16	260	1	1.00	0.16
Comb. L-T		0				0				0		
Northwest-bound Thru	809	1	1.89	0.27	809	1	1.89	0.27	809	1	1.89	0.27
Comb. T-R		1				1				1		
Northwest-bound Right	47	0	0.11	0.27	47	0	0.11	0.27	47	0	0.11	0.27
Comb. L-T-R		0				0				0		
Northeast-bound Left	209	1	1.00	0.13	209	1	1.00	0.13	209	1	1.00	0.13
Comb. L-T		0				0				0		
Northeast-bound Thru	878	2	2.00	0.27	918	2	2.00	0.29	918	2	2.59	0.22
Comb. T-R		0				0				1		
Northeast-bound Right	141	1	1.00	0.09	144	1	1.00	0.09	144	0	0.41	0.22
Comb. L-T-R		0				0				0		
Southwest-bound Left	39	1	1.00	0.02	39	1	1.00	0.02	39	1	1.00	0.02
Comb. L-T		0				0				0		
Southwest-bound Thru	1000	2	2.00	0.31	1030	2	2.00	0.32	1030	2	2.73	0.24
Comb. T-R		0				0				1		
Southwest-bound Right	102	1	1.00	0.06	102	1	1.00	0.06	102	0	0.27	0.24
Comb. L-T-R		0				0				0		

Critical Volumes			E-W:	0.34			E-W:	0.37			E-W:	0.37
			N-S:	0.44			N-S:	0.45			N-S:	0.37
			Total:	0.78			Total:	0.82			Total:	0.73

Lost Time				0.10				0.10				0.10

V/C				0.882				0.918				0.832
Level of Service				D				E				D

SE-NW Street: Cameron Ave
NE-SW Street: Sunset Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase II No Project				Phase II + Project				Phase II + Project With Mitigation			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	159	1	1.00	0.10	159	1	1.00	0.10	159	1	1.00	0.10
Comb. L-T		0				0				0		
Southeast-bound Thru	662	1	1.56	0.27	662	1	1.52	0.27	662	1	1.52	0.27
Comb. T-R		1				1				1		
Southeast-bound Right	187	0	0.44	0.27	207	0	0.48	0.27	207	0	0.48	0.27
Comb. L-T-R		0				0				0		
Northwest-bound Left	110	1	1.00	0.07	113	1	1.00	0.07	113	1	1.00	0.07
Comb. L-T		0				0				0		
Northwest-bound Thru	476	1	1.78	0.17	476	1	1.78	0.17	476	1	1.78	0.17
Comb. T-R		1				1				1		
Northwest-bound Right	58	0	0.22	0.17	58	0	0.22	0.17	58	0	0.22	0.17
Comb. L-T-R		0				0				0		
Northeast-bound Left	182	1	1.00	0.11	182	1	1.00	0.11	182	1	1.00	0.11
Comb. L-T		0				0				0		
Northeast-bound Thru	1038	2	2.00	0.32	1181	2	2.00	0.37	1181	2	2.64	0.28
Comb. T-R		0				0				1		
Northeast-bound Right	149	1	1.00	0.09	160	1	1.00	0.10	160	0	0.36	0.28
Comb. L-T-R		0				0				0		
Southwest-bound Left	73	1	1.00	0.05	73	1	1.00	0.05	73	1	1.00	0.05
Comb. L-T		0				0				0		
Southwest-bound Thru	823	2	2.00	0.26	832	2	2.00	0.26	832	2	2.81	0.19
Comb. T-R		0				0				1		
Southwest-bound Right	56	1	1.00	0.04	56	1	1.00	0.04	56	0	0.19	0.19
Comb. L-T-R		0				0				0		

Critical Volumes			E-W:	0.33			E-W:	0.34			E-W:	0.34
			N-S:	0.37			N-S:	0.41			N-S:	0.33
			Total:	0.71			Total:	0.76			Total:	0.67
Lost Time				0.10				0.10				0.10
V/C				0.805				0.857				0.767
Level of Service				D				D				C

SE-NW Street: West Covina Pkwy
NE-SW Street: Sunset Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase II No Project				Phase II + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	135	1	1.00	0.08	135	1	1.00	0.08
Comb. L-T		0				0		
Southeast-bound Thru	209	1	1.51	0.09	209	1	1.46	0.09
Comb. T-R		1				1		
Southeast-bound Right	67	0	0.49	0.09	77	0	0.54	0.09
Comb. L-T-R		0				0		
Northwest-bound Left	133	1	1.00	0.08	133	1	1.00	0.08
Comb. L-T		0				0		
Northwest-bound Thru	535	1	1.66	0.20	535	1	1.66	0.20
Comb. T-R		1				1		
Northwest-bound Right	108	0	0.34	0.20	108	0	0.34	0.20
Comb. L-T-R		0				0		
Northeast-bound Left	129	1	1.00	0.08	163	1	1.00	0.10
Comb. L-T		0				0		
Northeast-bound Thru	676	2	2.00	0.21	682	2	2.00	0.21
Comb. T-R		0				0		
Northeast-bound Right	186	1	1.00	0.12	186	1	1.00	0.12
Comb. L-T-R		0				0		
Southwest-bound Left	64	1	1.00	0.04	64	1	1.00	0.04
Comb. L-T		0				0		
Southwest-bound Thru	938	2	2.00	0.29	958	2	2.00	0.30
Comb. T-R		0				0		
Southwest-bound Right	236	1	1.00	0.15	236	1	1.00	0.15
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.29	E-W:	0.29
	N-S:	0.37	N-S:	0.40
	Total:	0.66	Total:	0.69

Lost Time	0.10	0.10

V/C	0.759	0.787
Level of Service	C	C

SE-NW Street: West Covina Pkwy
NE-SW Street: Sunset Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase II No Project				Phase II + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	203	1	1.00	0.13	203	1	1.00	0.13
Comb. L-T		0				0		
Southeast-bound Thru	469	1	1.51	0.19	469	1	1.50	0.20
Comb. T-R		1				1		
Southeast-bound Right	152	0	0.49	0.19	155	0	0.50	0.20
Comb. L-T-R		0				0		
Northwest-bound Left	153	1	1.00	0.10	153	1	1.00	0.10
Comb. L-T		0				0		
Northwest-bound Thru	502	1	1.65	0.19	502	1	1.65	0.19
Comb. T-R		1				1		
Northwest-bound Right	106	0	0.35	0.19	106	0	0.35	0.19
Comb. L-T-R		0				0		
Northeast-bound Left	119	1	1.00	0.07	241	1	1.00	0.15
Comb. L-T		0				0		
Northeast-bound Thru	903	2	2.00	0.28	924	2	2.00	0.29
Comb. T-R		0				0		
Northeast-bound Right	277	1	1.00	0.17	277	1	1.00	0.17
Comb. L-T-R		0				0		
Southwest-bound Left	156	1	1.00	0.10	156	1	1.00	0.10
Comb. L-T		0				0		
Southwest-bound Thru	655	2	2.00	0.20	661	2	2.00	0.21
Comb. T-R		0				0		
Southwest-bound Right	199	1	1.00	0.12	199	1	1.00	0.12
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.32	E-W:	0.32
	N-S:	0.38	N-S:	0.39
	Total:	0.70	Total:	0.70

Lost Time	0.10	0.10

V/C	0.797	0.803
Level of Service	C	D

SE-NW Street: Merced Ave
NE-SW Street: Orange Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase II No Project				Phase II + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	120	1	1.00	0.08	120	1	1.00	0.08
Comb. L-T		0				0		
Southeast-bound Thru	482	2	2.00	0.15	530	2	2.00	0.17
Comb. T-R		0				0		
Southeast-bound Right	92	1	1.00	0.06	92	1	1.00	0.06
Comb. L-T-R		0				0		
Northwest-bound Left	165	1	1.00	0.10	165	1	1.00	0.10
Comb. L-T		0				0		
Northwest-bound Thru	272	1	1.35	0.13	274	1	1.35	0.13
Comb. T-R		1				1		
Northwest-bound Right	132	0	0.65	0.13	132	0	0.65	0.13
Comb. L-T-R		0				0		
Northeast-bound Left	105	1	1.00	0.07	105	1	1.00	0.07
Comb. L-T		0				0		
Northeast-bound Thru	336	1	1.34	0.16	336	1	1.34	0.16
Comb. T-R		1				1		
Northeast-bound Right	167	0	0.66	0.16	167	0	0.66	0.16
Comb. L-T-R		0				0		
Southwest-bound Left	106	1	1.00	0.07	106	1	1.00	0.07
Comb. L-T		0				0		
Southwest-bound Thru	456	1	1.88	0.15	456	1	1.88	0.15
Comb. T-R		1				1		
Southwest-bound Right	30	0	0.12	0.15	30	0	0.12	0.15
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.25	E-W:	0.27
	N-S:	0.22	N-S:	0.22
	Total:	0.48	Total:	0.49

Lost Time	0.10	0.10

V/C	0.577	0.592
Level of Service	A	A

SE-NW Street: Merced Ave
NE-SW Street: Orange Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase II No Project				Phase II + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	91	1	1.00	0.06	91	1	1.00	0.06
Comb. L-T		0				0		
Southeast-bound Thru	462	2	2.00	0.14	476	2	2.00	0.15
Comb. T-R		0				0		
Southeast-bound Right	42	1	1.00	0.03	42	1	1.00	0.03
Comb. L-T-R		0				0		
Northwest-bound Left	76	1	1.00	0.05	76	1	1.00	0.05
Comb. L-T		0				0		
Northwest-bound Thru	237	1	1.10	0.13	243	1	1.12	0.14
Comb. T-R		1				1		
Northwest-bound Right	192	0	0.90	0.13	192	0	0.88	0.14
Comb. L-T-R		0				0		
Northeast-bound Left	37	1	1.00	0.02	37	1	1.00	0.02
Comb. L-T		0				0		
Northeast-bound Thru	338	1	1.63	0.13	338	1	1.63	0.13
Comb. T-R		1				1		
Northeast-bound Right	78	0	0.38	0.13	78	0	0.38	0.13
Comb. L-T-R		0				0		
Southwest-bound Left	155	1	1.00	0.10	155	1	1.00	0.10
Comb. L-T		0				0		
Southwest-bound Thru	344	1	1.76	0.12	344	1	1.76	0.12
Comb. T-R		1				1		
Southwest-bound Right	46	0	0.24	0.12	46	0	0.24	0.12
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.19	E-W:	0.20
	N-S:	0.23	N-S:	0.23
	Total:	0.42	Total:	0.42

Lost Time	0.10	0.10

V/C	0.519	0.523
Level of Service	A	A

SE-NW Street: Merced Ave
NE-SW Street: California Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase II No Project				Phase II + Project				Phase II + Project With Mitigation			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	74	0	0.14	0.33	74	0	0.14	0.34	74	1	1.00	0.05
Comb. L-T		1				1				0		
Southeast-bound Thru	459	1	1.86	0.15	468	1	1.86	0.16	468	1	1.82	0.16
Comb. T-R		0				0				1		
Southeast-bound Right	47	1	1.00	0.03	47	1	1.00	0.03	47	0	0.18	0.16
Comb. L-T-R		0				0				0		
Northwest-bound Left	83	0	0.10	0.51	83	0	0.10	0.53	83	1	1.00	0.05
Comb. L-T		1				1				0		
Northwest-bound Thru	730	1	1.90	0.24	760	1	1.90	0.25	760	1	1.90	0.25
Comb. T-R		0				0				1		
Northwest-bound Right	41	1	1.00	0.03	41	1	1.00	0.03	41	0	0.10	0.25
Comb. L-T-R		0				0				0		
Northeast-bound Left	30	0	0.13	0.14	30	0	0.13	0.14	30	0	0.13	0.14
Comb. L-T		1				1				1		
Northeast-bound Thru	199	0	0.87	0.14	199	0	0.87	0.14	199	0	0.87	0.14
Comb. T-R		0				0				0		
Northeast-bound Right	67	1	1.00	0.04	67	1	1.00	0.04	67	1	1.00	0.04
Comb. L-T-R		0				0				0		
Southwest-bound Left	47	0	0.19	0.16	47	0	0.19	0.16	47	0	0.19	0.16
Comb. L-T		1				1				1		
Southwest-bound Thru	207	0	0.81	0.16	207	0	0.81	0.16	207	0	0.81	0.16
Comb. T-R		0				0				0		
Southwest-bound Right	75	1	1.00	0.05	75	1	1.00	0.05	75	1	1.00	0.05
Comb. L-T-R		0				0				0		

Critical Volumes			E-W:	0.66			E-W:	0.68			E-W:	0.30
			N-S:	0.30			N-S:	0.30			N-S:	0.30
			Total:	0.96			Total:	0.99			Total:	0.60
Lost Time				0.10				0.10				0.10
V/C				1.064				1.086				0.698
Level of Service				F				F				B

SE-NW Street: Merced Ave
NE-SW Street: California Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase II No Project				Phase II + Project				Phase II + Project With Mitigation			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	85	0	0.11	0.47	85	0	0.11	0.49	85	1	1.00	0.05
Comb. L-T		1				1				0		
Southeast-bound Thru	663	1	1.89	0.22	695	1	1.89	0.23	695	1	1.91	0.23
Comb. T-R		0				0				1		
Southeast-bound Right	32	1	1.00	0.02	32	1	1.00	0.02	32	0	0.09	0.23
Comb. L-T-R		0				0				0		
Northwest-bound Left	48	0	0.11	0.28	48	0	0.10	0.29	48	1	1.00	0.03
Comb. L-T		1				1				0		
Northwest-bound Thru	407	1	1.89	0.13	416	1	1.90	0.14	416	1	1.79	0.15
Comb. T-R		0				0				1		
Northwest-bound Right	50	1	1.00	0.03	50	1	1.00	0.03	50	0	0.21	0.15
Comb. L-T-R		0				0				0		
Northeast-bound Left	30	0	0.10	0.18	30	0	0.10	0.18	30	0	0.10	0.18
Comb. L-T		1				1				1		
Northeast-bound Thru	260	0	0.90	0.18	260	0	0.90	0.18	260	0	0.90	0.18
Comb. T-R		0				0				0		
Northeast-bound Right	55	1	1.00	0.03	55	1	1.00	0.03	55	1	1.00	0.03
Comb. L-T-R		0				0				0		
Southwest-bound Left	41	0	0.15	0.18	41	0	0.15	0.18	41	0	0.15	0.18
Comb. L-T		1				1				1		
Southwest-bound Thru	240	0	0.85	0.18	240	0	0.85	0.18	240	0	0.85	0.18
Comb. T-R		0				0				0		
Southwest-bound Right	50	1	1.00	0.03	50	1	1.00	0.03	50	1	1.00	0.03
Comb. L-T-R		0				0				0		

Critical Volumes			E-W:	0.60			E-W:	0.62			E-W:	0.26
			N-S:	0.36			N-S:	0.36			N-S:	0.36
			Total:	0.96			Total:	0.98			Total:	0.61
Lost Time				0.10				0.10				0.10
V/C				1.059				1.081				0.714
Level of Service				F				F				C

SE-NW Street: Merced Ave
NE-SW Street: Glendora Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase II No Project				Phase II + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	61	1	1.00	0.04	61	1	1.00	0.04
Comb. L-T		0				0		
Southeast-bound Thru	437	1	1.75	0.16	440	1	1.73	0.16
Comb. T-R		1				1		
Southeast-bound Right	63	0	0.25	0.16	69	0	0.27	0.16
Comb. L-T-R		0				0		
Northwest-bound Left	69	1	1.00	0.04	69	1	1.00	0.04
Comb. L-T		0				0		
Northwest-bound Thru	588	1	1.83	0.20	598	1	1.84	0.20
Comb. T-R		1				1		
Northwest-bound Right	53	0	0.17	0.20	53	0	0.16	0.20
Comb. L-T-R		0				0		
Northeast-bound Left	60	1	1.00	0.04	80	1	1.00	0.05
Comb. L-T		0				0		
Northeast-bound Thru	811	2	2.00	0.25	811	2	2.00	0.25
Comb. T-R		0				0		
Northeast-bound Right	54	1	1.00	0.03	54	1	1.00	0.03
Comb. L-T-R		0				0		
Southwest-bound Left	31	1	1.00	0.02	31	1	1.00	0.02
Comb. L-T		0				0		
Southwest-bound Thru	882	2	2.00	0.28	882	2	2.00	0.28
Comb. T-R		0				0		
Southwest-bound Right	209	1	1.00	0.13	209	1	1.00	0.13
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.24	E-W:	0.24
	N-S:	0.31	N-S:	0.33
	Total:	0.55	Total:	0.57

Lost Time	0.10	0.10

V/C	0.652	0.667
Level of Service	B	B

SE-NW Street: Merced Ave
NE-SW Street: Glendora Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase II No Project				Phase II + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	115	1	1.00	0.07	115	1	1.00	0.07
Comb. L-T		0				0		
Southeast-bound Thru	550	1	1.70	0.20	561	1	1.65	0.21
Comb. T-R		1				1		
Southeast-bound Right	98	0	0.30	0.20	119	0	0.35	0.21
Comb. L-T-R		0				0		
Northwest-bound Left	48	1	1.00	0.03	48	1	1.00	0.03
Comb. L-T		0				0		
Northwest-bound Thru	313	1	1.75	0.11	316	1	1.75	0.11
Comb. T-R		1				1		
Northwest-bound Right	45	0	0.25	0.11	45	0	0.25	0.11
Comb. L-T-R		0				0		
Northeast-bound Left	86	1	1.00	0.05	92	1	1.00	0.06
Comb. L-T		0				0		
Northeast-bound Thru	1007	2	2.00	0.31	1007	2	2.00	0.31
Comb. T-R		0				0		
Northeast-bound Right	120	1	1.00	0.08	120	1	1.00	0.08
Comb. L-T-R		0				0		
Southwest-bound Left	75	1	1.00	0.05	75	1	1.00	0.05
Comb. L-T		0				0		
Southwest-bound Thru	883	2	2.00	0.28	883	2	2.00	0.28
Comb. T-R		0				0		
Southwest-bound Right	131	1	1.00	0.08	131	1	1.00	0.08
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.23	E-W:	0.24
	N-S:	0.36	N-S:	0.36
	Total:	0.59	Total:	0.60

Lost Time	0.10	0.10

V/C	0.694	0.704
Level of Service	B	C

SE-NW Street: Cameron Ave
NE-SW Street: Orange Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase II No Project				Phase II + Project				Phase II + Project With Mitigation			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	9	1	1.00	0.01	9	1	1.00	0.01	9	1	1.00	0.01
Comb. L-T		0				0				0		
Southeast-bound Thru	458	1	1.15	0.25	462	1	1.15	0.25	462	1	1.15	0.25
Comb. T-R		1				1				1		
Southeast-bound Right	339	0	0.85	0.25	339	0	0.85	0.25	339	0	0.85	0.25
Comb. L-T-R		0				0				0		
Northwest-bound Left	346	1	1.00	0.22	346	1	1.00	0.22	346	1	1.00	0.22
Comb. L-T		0				0				0		
Northwest-bound Thru	709	1	1.97	0.22	709	1	1.97	0.22	709	1	1.97	0.22
Comb. T-R		1				1				1		
Northwest-bound Right	10	0	0.03	0.22	10	0	0.03	0.22	10	0	0.03	0.22
Comb. L-T-R		0				0				0		
Northeast-bound Left	378	0	0.96	0.25	378	0	0.96	0.25	378	1	1.00	0.24
Comb. L-T		1				1				0		
Northeast-bound Thru	16	0	0.04	0.25	16	0	0.04	0.25	16	0	0.04	0.24
Comb. T-R		0				0				1		
Northeast-bound Right	362	1	1.00	0.23	362	1	1.00	0.23	362	0	0.96	0.24
Comb. L-T-R		0				0				0		
Southwest-bound Left	112	0	0.57	0.12	142	0	0.63	0.14	142	1	1.00	0.09
Comb. L-T		1				1				0		
Southwest-bound Thru	85	0	0.43	0.12	85	0	0.37	0.14	85	0	0.59	0.09
Comb. T-R		0				0				1		
Southwest-bound Right	59	1	1.00	0.04	59	1	1.00	0.04	59	0	0.41	0.09
Comb. L-T-R		0				0				0		

Critical Volumes			E-W:	0.47			E-W:	0.47			E-W:	0.47
			N-S:	0.37			N-S:	0.39			N-S:	0.33
			Total:	0.83			Total:	0.85			Total:	0.79

Lost Time				0.10				0.10				0.10

V/C				0.935				0.955				0.893
Level of Service				E				E				D

SE-NW Street: Cameron Ave
NE-SW Street: Orange Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase II No Project				Phase II + Project				Phase II + Project With Mitigation			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	8	1	1.00	0.01	8	1	1.00	0.01	8	1	1.00	0.01
Comb. L-T		0				0				0		
Southeast-bound Thru	523	1	1.38	0.24	524	1	1.38	0.24	524	1	1.38	0.24
Comb. T-R		1				1				1		
Southeast-bound Right	236	0	0.62	0.24	236	0	0.62	0.24	236	0	0.62	0.24
Comb. L-T-R		0				0				0		
Northwest-bound Left	371	1	1.00	0.23	371	1	1.00	0.23	371	1	1.00	0.23
Comb. L-T		0				0				0		
Northwest-bound Thru	582	1	1.99	0.18	582	1	1.99	0.18	582	1	1.99	0.18
Comb. T-R		1				1				1		
Northwest-bound Right	4	0	0.01	0.18	4	0	0.01	0.18	4	0	0.01	0.18
Comb. L-T-R		0				0				0		
Northeast-bound Left	348	0	0.96	0.23	348	0	0.96	0.23	348	1	1.00	0.22
Comb. L-T		1				1				0		
Northeast-bound Thru	16	0	0.04	0.23	16	0	0.04	0.23	16	0	0.03	0.29
Comb. T-R		0				0				1		
Northeast-bound Right	450	1	1.00	0.28	450	1	1.00	0.28	450	0	0.97	0.29
Comb. L-T-R		0				0				0		
Southwest-bound Left	79	0	0.59	0.08	88	0	0.62	0.09	88	1	1.00	0.06
Comb. L-T		1				1				0		
Southwest-bound Thru	55	0	0.41	0.08	55	0	0.38	0.09	55	0	0.45	0.08
Comb. T-R		0				0				1		
Southwest-bound Right	68	1	1.00	0.04	68	1	1.00	0.04	68	0	0.55	0.08
Comb. L-T-R		0				0				0		

Critical Volumes			E-W:	0.47			E-W:	0.47			E-W:	0.47
			N-S:	0.37			N-S:	0.37			N-S:	0.35
			Total:	0.83			Total:	0.84			Total:	0.82

Lost Time				0.10				0.10				0.10

V/C				0.934				0.940				0.916
Level of Service				E				E				E

SE-NW Street: West Covina Pkwy
NE-SW Street: Toluca Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase II No Project				Phase II + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	0	0	0.00	0.00	0	0	0.00	0.00
Comb. L-T		0				0		
Southeast-bound Thru	304	2	2.00	0.10	314	2	2.00	0.10
Comb. T-R		0				0		
Southeast-bound Right	115	1	1.00	0.07	145	1	1.00	0.09
Comb. L-T-R		0				0		
Northwest-bound Left	143	1	1.00	0.09	143	1	1.00	0.09
Comb. L-T		0				0		
Northwest-bound Thru	702	2	2.00	0.22	736	2	2.00	0.23
Comb. T-R		0				0		
Northwest-bound Right	0	0	0.00	0.00	0	0	0.00	0.00
Comb. L-T-R		0				0		
Northeast-bound Left	162	1	0.61	0.17	162	1	0.61	0.17
Comb. L-T		0				0		
Northeast-bound Thru	0	0	0.00	0.00	0	0	0.00	0.00
Comb. T-R		0				0		
Northeast-bound Right	104	0	0.39	0.17	104	0	0.39	0.17
Comb. L-R		1				1		
Southwest-bound Left	0	0	0.00	0.00	0	0	0.00	0.00
Comb. L-T		0				0		
Southwest-bound Thru	0	0	0.00	0.00	0	0	0.00	0.00
Comb. T-R		0				0		
Southwest-bound Right	0	0	0.00	0.00	0	0	0.00	0.00
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.22	E-W:	0.23
	N-S:	0.17	N-S:	0.17
	Total:	0.39	Total:	0.40

Lost Time	0.10	0.10

V/C	0.486	0.496
Level of Service	A	A

SE-NW Street: West Covina Pkwy
NE-SW Street: Toluca Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Phase II No Project				Phase II + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	0	0	0.00	0.00	0	0	0.00	0.00
Comb. L-T		0				0		
Southeast-bound Thru	602	2	2.00	0.19	605	2	2.00	0.19
Comb. T-R		0				0		
Southeast-bound Right	215	1	1.00	0.13	224	1	1.00	0.14
Comb. L-T-R		0				0		
Northwest-bound Left	134	1	1.00	0.08	134	1	1.00	0.08
Comb. L-T		0				0		
Northwest-bound Thru	663	2	2.00	0.21	785	2	2.00	0.25
Comb. T-R		0				0		
Northwest-bound Right	0	0	0.00		0	0	0.00	
Comb. L-T-R		0				0		
Northeast-bound Left	326	1	0.67	0.30	326	1	0.67	0.30
Comb. L-T		0				0		
Northeast-bound Thru	0	0	0.00	0.00	0	0	0.00	0.00
Comb. T-R		0				0		
Northeast-bound Right	158	0	0.33	0.30	158	0	0.33	0.30
Comb. L-R		1				1		
Southwest-bound Left	0	0	0.00	0.00	0	0	0.00	0.00
Comb. L-T		0				0		
Southwest-bound Thru	0	0	0.00	0.00	0	0	0.00	0.00
Comb. T-R		0				0		
Southwest-bound Right	0	0	0.00	0.00	0	0	0.00	0.00
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.27	E-W:	0.27
	N-S:	0.30	N-S:	0.30
	Total:	0.57	Total:	0.58

Lost Time	0.10	0.10

V/C	0.674	0.675
Level of Service	B	B

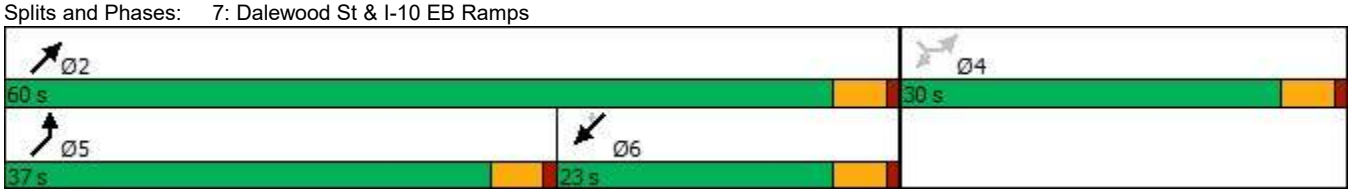
Timings
7: Dalewood St & I-10 EB Ramps

11/05/2018

Lane Group	SEL	SER	NEL	NET	SWT	SWR2
Lane Configurations						
Traffic Volume (vph)	217	98	572	203	311	316
Future Volume (vph)	217	98	572	203	311	316
Turn Type	Perm	Perm	Prot	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	30.0	30.0	10.0	22.0	22.0	22.0
Total Split (s)	30.0	30.0	37.0	60.0	23.0	23.0
Total Split (%)	33.3%	33.3%	41.1%	66.7%	25.6%	25.6%
Yellow Time (s)	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
Lost Time Adjust (s)	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
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None	None	Min	Min	Min
Act Effct Green (s)	11.6	11.6	32.6	54.9	17.8	17.8
Actuated g/C Ratio	0.15	0.15	0.43	0.73	0.24	0.24
v/c Ratio	0.55	0.37	0.93	0.10	0.79	0.57
Control Delay	33.8	9.0	42.1	3.4	42.8	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.8	9.0	42.1	3.4	42.8	8.5
LOS	C	A	D	A	D	A
Approach Delay	26.1			31.9	25.5	
Approach LOS	C			C	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 75.5	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 28.6	Intersection LOS: C
Intersection Capacity Utilization 65.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 7: Dalewood St & I-10 EB Ramps



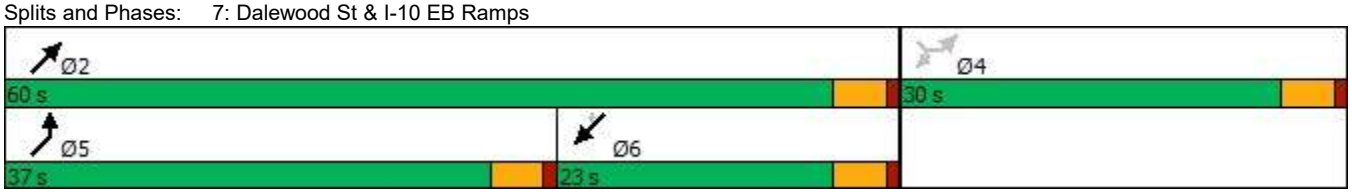
Timings
7: Dalewood St & I-10 EB Ramps

11/05/2018

Lane Group	SEL	SER	NEL	NET	SWT	SWR2
Lane Configurations						
Traffic Volume (vph)	255	98	572	209	312	316
Future Volume (vph)	255	98	572	209	312	316
Turn Type	Perm	Perm	Prot	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	30.0	30.0	10.0	22.0	22.0	22.0
Total Split (s)	30.0	30.0	37.0	60.0	23.0	23.0
Total Split (%)	33.3%	33.3%	41.1%	66.7%	25.6%	25.6%
Yellow Time (s)	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
Lost Time Adjust (s)	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
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None	None	Min	Min	Min
Act Effct Green (s)	13.0	13.0	32.6	55.0	17.9	17.9
Actuated g/C Ratio	0.17	0.17	0.42	0.71	0.23	0.23
v/c Ratio	0.59	0.35	0.94	0.10	0.81	0.58
Control Delay	33.9	8.3	46.0	3.8	45.2	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.9	8.3	46.0	3.8	45.2	8.8
LOS	C	A	D	A	D	A
Approach Delay	26.8			34.8	26.9	
Approach LOS	C			C	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 77	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 30.4	Intersection LOS: C
Intersection Capacity Utilization 66.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 7: Dalewood St & I-10 EB Ramps



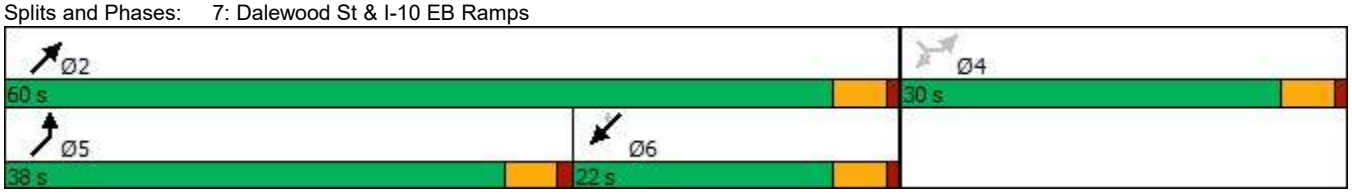
Timings
7: Dalewood St & I-10 EB Ramps

11/05/2018

Lane Group	SEL	SER	NEL	NET	SWT	SWR2
Lane Configurations						
Traffic Volume (vph)	173	61	611	511	208	118
Future Volume (vph)	173	61	611	511	208	118
Turn Type	Perm	Perm	Prot	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	30.0	30.0	10.0	22.0	22.0	22.0
Total Split (s)	30.0	30.0	38.0	60.0	22.0	22.0
Total Split (%)	33.3%	33.3%	42.2%	66.7%	24.4%	24.4%
Yellow Time (s)	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
Lost Time Adjust (s)	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
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None	None	Min	Min	Min
Act Effct Green (s)	9.5	9.5	33.7	51.4	13.2	13.2
Actuated g/C Ratio	0.14	0.14	0.48	0.73	0.19	0.19
v/c Ratio	0.44	0.26	0.80	0.22	0.63	0.32
Control Delay	31.4	10.3	25.9	3.3	34.9	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.4	10.3	25.9	3.3	34.9	7.5
LOS	C	B	C	A	C	A
Approach Delay	25.9			15.6	25.0	
Approach LOS	C			B	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 70	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 18.8	Intersection LOS: B
Intersection Capacity Utilization 61.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: Dalewood St & I-10 EB Ramps



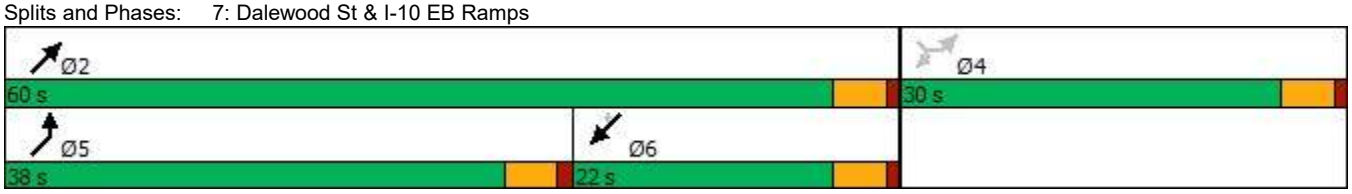
Timings
7: Dalewood St & I-10 EB Ramps

11/05/2018

Lane Group	SEL	SER	NEL	NET	SWT	SWR2
Lane Configurations						
Traffic Volume (vph)	182	61	611	512	214	118
Future Volume (vph)	182	61	611	512	214	118
Turn Type	Perm	Perm	Prot	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	30.0	30.0	10.0	22.0	22.0	22.0
Total Split (s)	30.0	30.0	38.0	60.0	22.0	22.0
Total Split (%)	33.3%	33.3%	42.2%	66.7%	24.4%	24.4%
Yellow Time (s)	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
Lost Time Adjust (s)	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
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None	None	Min	Min	Min
Act Effct Green (s)	9.7	9.7	33.7	51.6	13.4	13.4
Actuated g/C Ratio	0.14	0.14	0.48	0.73	0.19	0.19
v/c Ratio	0.45	0.26	0.80	0.22	0.64	0.31
Control Delay	31.6	10.2	26.4	3.4	35.5	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.6	10.2	26.4	3.4	35.5	7.5
LOS	C	B	C	A	D	A
Approach Delay	26.2			15.9	25.5	
Approach LOS	C			B	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 70.4	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 19.2	Intersection LOS: B
Intersection Capacity Utilization 61.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: Dalewood St & I-10 EB Ramps



Intersection	
Intersection Delay, s/veh	66.5
Intersection LOS	F

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	539	2	50	377	4	101
Future Vol, veh/h	539	2	50	377	4	101
Peak Hour Factor	0.90	0.90	0.83	0.83	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	599	2	60	454	5	116
Number of Lanes	1	1	1	0	0	1

Approach	NW	NE	SW
Opposing Approach		SW	NE
Opposing Lanes	0	1	1
Conflicting Approach Left	NE		NW
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SW	NW	
Conflicting Lanes Right	1	2	0
HCM Control Delay	110.9	27.3	12.4
HCM LOS	F	D	B

Lane	NELn1	NWLn1	NWLn2	SWLn1
Vol Left, %	0%	100%	0%	4%
Vol Thru, %	12%	0%	0%	96%
Vol Right, %	88%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	427	539	2	105
LT Vol	0	539	0	4
Through Vol	50	0	0	101
RT Vol	377	0	2	0
Lane Flow Rate	514	599	2	121
Geometry Grp	2	7	7	2
Degree of Util (X)	0.787	1.148	0.004	0.227
Departure Headway (Hd)	5.935	6.903	5.684	7.243
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	612	527	633	498
Service Time	3.935	4.61	3.391	5.243
HCM Lane V/C Ratio	0.84	1.137	0.003	0.243
HCM Control Delay	27.3	111.3	8.4	12.4
HCM Lane LOS	D	F	A	B
HCM 95th-tile Q	7.6	20.6	0	0.9

Intersection	
Intersection Delay, s/veh	73.8
Intersection LOS	F

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	540	2	50	421	4	101
Future Vol, veh/h	540	2	50	421	4	101
Peak Hour Factor	0.90	0.90	0.83	0.83	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	600	2	60	507	5	116
Number of Lanes	1	1	1	0	0	1

Approach	NW	NE	SW
Opposing Approach		SW	NE
Opposing Lanes	0	1	1
Conflicting Approach Left	NE		NW
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SW	NW	
Conflicting Lanes Right	1	2	0
HCM Control Delay	121.8	35.9	12.6
HCM LOS	F	E	B

Lane	NELn1	NWLn1	NWLn2	SWLn1
Vol Left, %	0%	100%	0%	4%
Vol Thru, %	11%	0%	0%	96%
Vol Right, %	89%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	471	540	2	105
LT Vol	0	540	0	4
Through Vol	50	0	0	101
RT Vol	421	0	2	0
Lane Flow Rate	567	600	2	121
Geometry Grp	2	7	7	2
Degree of Util (X)	0.867	1.176	0.004	0.231
Departure Headway (Hd)	5.991	7.053	5.832	7.417
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	607	516	616	488
Service Time	3.991	4.761	3.54	5.417
HCM Lane V/C Ratio	0.934	1.163	0.003	0.248
HCM Control Delay	35.9	122.2	8.6	12.6
HCM Lane LOS	E	F	A	B
HCM 95th-tile Q	9.8	21.6	0	0.9

Intersection	
Intersection Delay, s/veh	40.8
Intersection LOS	E

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	258	9	247	433	7	55
Future Vol, veh/h	258	9	247	433	7	55
Peak Hour Factor	0.84	0.84	0.93	0.93	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	307	11	266	466	9	68
Number of Lanes	1	1	1	0	0	1

Approach	NW	NE	SW
Opposing Approach		SW	NE
Opposing Lanes	0	1	1
Conflicting Approach Left	NE		NW
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SW	NW	
Conflicting Lanes Right	1	2	0
HCM Control Delay	19.9	53.1	10.2
HCM LOS	C	F	B

Lane	NELn1	NWLn1	NWLn2	SWLn1
Vol Left, %	0%	100%	0%	11%
Vol Thru, %	36%	0%	0%	89%
Vol Right, %	64%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	680	258	9	62
LT Vol	0	258	0	7
Through Vol	247	0	0	55
RT Vol	433	0	9	0
Lane Flow Rate	731	307	11	77
Geometry Grp	2	7	7	2
Degree of Util (X)	0.993	0.606	0.018	0.131
Departure Headway (Hd)	4.888	7.101	5.88	6.173
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	746	507	606	576
Service Time	2.888	4.86	3.639	4.255
HCM Lane V/C Ratio	0.98	0.606	0.018	0.134
HCM Control Delay	53.1	20.3	8.7	10.2
HCM Lane LOS	F	C	A	B
HCM 95th-tile Q	16.2	4	0.1	0.4

Intersection	
Intersection Delay, s/veh	44.7
Intersection LOS	E

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	264	9	247	444	7	55
Future Vol, veh/h	264	9	247	444	7	55
Peak Hour Factor	0.84	0.84	0.93	0.93	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	314	11	266	477	9	68
Number of Lanes	1	1	1	0	0	1

Approach	NW	NE	SW
Opposing Approach		SW	NE
Opposing Lanes	0	1	1
Conflicting Approach Left	NE		NW
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SW	NW	
Conflicting Lanes Right	1	2	0
HCM Control Delay	20.7	58.8	10.3
HCM LOS	C	F	B

Lane	NELn1	NWLn1	NWLn2	SWLn1
Vol Left, %	0%	100%	0%	11%
Vol Thru, %	36%	0%	0%	89%
Vol Right, %	64%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	691	264	9	62
LT Vol	0	264	0	7
Through Vol	247	0	0	55
RT Vol	444	0	9	0
Lane Flow Rate	743	314	11	77
Geometry Grp	2	7	7	2
Degree of Util (X)	1.015	0.623	0.018	0.133
Departure Headway (Hd)	4.92	7.141	5.92	6.233
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	743	506	602	571
Service Time	2.92	4.904	3.683	4.32
HCM Lane V/C Ratio	1	0.621	0.018	0.135
HCM Control Delay	58.8	21.1	8.8	10.3
HCM Lane LOS	F	C	A	B
HCM 95th-tile Q	17.4	4.2	0.1	0.5

Intersection	
Int Delay, s/veh	10.2

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	540	2	50	421	4	101
Future Vol, veh/h	540	2	50	421	4	101
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	0	-	0	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	83	83	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	600	2	60	507	5	116

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	186	60	0	0	567	0
Stage 1	60	-	-	-	-	-
Stage 2	126	-	-	-	-	-
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	803	1005	-	-	1005	-
Stage 1	963	-	-	-	-	-
Stage 2	900	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	799	1005	-	-	1005	-
Mov Cap-2 Maneuver	799	-	-	-	-	-
Stage 1	958	-	-	-	-	-
Stage 2	900	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	21.8	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	-	799	1005	1005	-
HCM Lane V/C Ratio	-	-	0.751	0.002	0.005	-
HCM Control Delay (s)	-	-	21.8	8.6	8.6	0
HCM Lane LOS	-	-	C	A	A	A
HCM 95th %tile Q(veh)	-	-	7	0	0	-

HCM 6th TWSC
8: Dalewood St/Garvey Ave & Merced Ave

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Intersection	
Int Delay, s/veh	4.6

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	264	9	247	444	7	55
Future Vol, veh/h	264	9	247	444	7	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	0	-	0	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	93	93	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	314	11	266	477	9	68

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	352	266	0	0	743	0
Stage 1	266	-	-	-	-	-
Stage 2	86	-	-	-	-	-
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	646	773	-	-	864	-
Stage 1	779	-	-	-	-	-
Stage 2	937	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	639	773	-	-	864	-
Mov Cap-2 Maneuver	639	-	-	-	-	-
Stage 1	770	-	-	-	-	-
Stage 2	937	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	15.8	0	1
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	-	639	773	864	-
HCM Lane V/C Ratio	-	-	0.492	0.014	0.01	-
HCM Control Delay (s)	-	-	16	9.7	9.2	0
HCM Lane LOS	-	-	C	A	A	A
HCM 95th %tile Q(veh)	-	-	2.7	0	0	-

Intersection													
Int Delay, s/veh	4												

Movement	SEL	SET	SER	NWU	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Vol, veh/h	212	686	4	1	6	948	101	0	0	0	10	2	169
Future Vol, veh/h	212	686	4	1	6	948	101	0	0	0	10	2	169
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	-	60	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	-	0	-	-	22350	-	-	0	-
Grade, %	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	92	92	92	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	228	738	4	1	6	1019	109	0	0	0	12	2	201

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	1128	0	0	742	742	0	0			1913	2286	564
Stage 1	-	-	-	-	-	-	-			1088	1088	-
Stage 2	-	-	-	-	-	-	-			825	1198	-
Critical Hdwy	4.14	-	-	6.44	4.14	-	-			6.84	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-			5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-			5.84	5.54	-
Follow-up Hdwy	2.22	-	-	2.52	2.22	-	-			3.52	4.02	3.32
Pot Cap-1 Maneuver	615	-	-	486	861	-	-			60	39	469
Stage 1	-	-	-	-	-	-	-			284	290	-
Stage 2	-	-	-	-	-	-	-			391	257	-
Platoon blocked, %		-	-			-	-					
Mov Cap-1 Maneuver	615	-	-	776	776	-	-			37	0	469
Mov Cap-2 Maneuver	-	-	-	-	-	-	-			37	0	-
Stage 1	-	-	-	-	-	-	-			177	0	-
Stage 2	-	-	-	-	-	-	-			391	0	-

Approach	SE	NW	SW
HCM Control Delay, s	3.4	0.1	27.3
HCM LOS			D

Minor Lane/Major Mvmt	NWL	NWT	NWR	SEL	SET	SER	SWLn1	SWLn2
Capacity (veh/h)	776	-	-	615	-	-	37	469
HCM Lane V/C Ratio	0.01	-	-	0.371	-	-	0.386	0.429
HCM Control Delay (s)	9.7	-	-	14.3	-	-	153.9	18.3
HCM Lane LOS	A	-	-	B	-	-	F	C
HCM 95th %tile Q(veh)	0	-	-	1.7	-	-	1.3	2.1

Intersection	
Int Delay, s/veh	15.1

Movement	SEL	SET	SER	NWU	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Vol, veh/h	212	718	4	1	6	948	101	0	0	0	45	2	169
Future Vol, veh/h	212	718	4	1	6	948	101	0	0	0	45	2	169
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	-	60	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	-	0	-	-	22350	-	-	0	-
Grade, %	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	92	92	92	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	228	772	4	1	6	1019	109	0	0	0	54	2	201

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	1128	0	0	776	776	0	0			1930	2320	564
Stage 1	-	-	-	-	-	-	-			1088	1088	-
Stage 2	-	-	-	-	-	-	-			842	1232	-
Critical Hdwy	4.14	-	-	6.44	4.14	-	-			6.84	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-			5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-			5.84	5.54	-
Follow-up Hdwy	2.22	-	-	2.52	2.22	-	-			3.52	4.02	3.32
Pot Cap-1 Maneuver	615	-	-	462	836	-	-			58	37	469
Stage 1	-	-	-	-	-	-	-			284	290	-
Stage 2	-	-	-	-	-	-	-			383	248	-
Platoon blocked, %		-	-			-	-					
Mov Cap-1 Maneuver	615	-	-	749	749	-	-			~ 36	0	469
Mov Cap-2 Maneuver	-	-	-	-	-	-	-			~ 36	0	-
Stage 1	-	-	-	-	-	-	-			177	0	-
Stage 2	-	-	-	-	-	-	-			383	0	-

Approach	SE	NW	SW
HCM Control Delay, s	3.2	0.1	127.9
HCM LOS			F

Minor Lane/Major Mvmt	NWL	NWT	NWR	SEL	SET	SER	SWLn1	SWLn2
Capacity (veh/h)	749	-	-	615	-	-	36	469
HCM Lane V/C Ratio	0.01	-	-	0.371	-	-	1.554	0.429
HCM Control Delay (s)	9.9	-	-	14.3	-	-	-$ 522.1	18.3
HCM Lane LOS	A	-	-	B	-	-	F	C
HCM 95th %tile Q(veh)	0	-	-	1.7	-	-	6	2.1

Notes

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

Intersection	
Int Delay, s/veh	13

Movement	SEL	SET	SER	NWU	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Vol, veh/h	266	849	2	2	3	644	125	0	0	0	51	0	298
Future Vol, veh/h	266	849	2	2	3	644	125	0	0	0	51	0	298
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	-	60	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	-	0	-	-	22350	-	-	0	-
Grade, %	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	96	96	96	96	92	92	92	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	292	933	2	2	3	671	130	0	0	0	58	0	339

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	801	0	0	935	935	0	0			1797	2265	401
Stage 1	-	-	-	-	-	-	-			746	746	-
Stage 2	-	-	-	-	-	-	-			1051	1519	-
Critical Hdwy	4.14	-	-	6.44	4.14	-	-			6.84	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-			5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-			5.84	5.54	-
Follow-up Hdwy	2.22	-	-	2.52	2.22	-	-			3.52	4.02	3.32
Pot Cap-1 Maneuver	818	-	-	366	728	-	-			71	40	599
Stage 1	-	-	-	-	-	-	-			430	419	-
Stage 2	-	-	-	-	-	-	-			298	180	-
Platoon blocked, %		-	-			-	-					
Mov Cap-1 Maneuver	818	-	-	522	522	-	-			~ 45	0	599
Mov Cap-2 Maneuver	-	-	-	-	-	-	-			~ 45	0	-
Stage 1	-	-	-	-	-	-	-			274	0	-
Stage 2	-	-	-	-	-	-	-			298	0	-

Approach	SE	NW	SW
HCM Control Delay, s	2.8	0.1	70.5
HCM LOS			F

Minor Lane/Major Mvmt	NWL	NWT	NWR	SEL	SET	SER	SWLn1	SWLn2
Capacity (veh/h)	522	-	-	818	-	-	45	599
HCM Lane V/C Ratio	0.01	-	-	0.357	-	-	1.288	0.565
HCM Control Delay (s)	12	-	-	11.8	-	-	-$ 374.6	18.5
HCM Lane LOS	B	-	-	B	-	-	F	C
HCM 95th %tile Q(veh)	0	-	-	1.6	-	-	5.5	3.5

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

Intersection													
Int Delay, s/veh	15.9												

Movement	SEL	SET	SER	NWU	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Vol, veh/h	266	857	2	2	3	644	125	0	0	0	58	0	298
Future Vol, veh/h	266	857	2	2	3	644	125	0	0	0	58	0	298
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	-	60	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	-	0	-	-	22350	-	-	0	-
Grade, %	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	96	96	96	96	92	92	92	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	292	942	2	2	3	671	130	0	0	0	66	0	339

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	801	0	0	944	944	0	0			1801	2274	401
Stage 1	-	-	-	-	-	-	-			746	746	-
Stage 2	-	-	-	-	-	-	-			1055	1528	-
Critical Hdwy	4.14	-	-	6.44	4.14	-	-			6.84	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-			5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-			5.84	5.54	-
Follow-up Hdwy	2.22	-	-	2.52	2.22	-	-			3.52	4.02	3.32
Pot Cap-1 Maneuver	818	-	-	361	722	-	-			71	40	599
Stage 1	-	-	-	-	-	-	-			430	419	-
Stage 2	-	-	-	-	-	-	-			296	178	-
Platoon blocked, %		-	-			-	-					
Mov Cap-1 Maneuver	818	-	-	516	516	-	-			~ 45	0	599
Mov Cap-2 Maneuver	-	-	-	-	-	-	-			~ 45	0	-
Stage 1	-	-	-	-	-	-	-			274	0	-
Stage 2	-	-	-	-	-	-	-			296	0	-

Approach	SE	NW	SW
HCM Control Delay, s	2.8	0.1	87.5
HCM LOS			F

Minor Lane/Major Mvmt	NWL	NWT	NWR	SEL	SET	SER	SWLn1	SWLn2
Capacity (veh/h)	516	-	-	818	-	-	45	599
HCM Lane V/C Ratio	0.01	-	-	0.357	-	-	1.465	0.565
HCM Control Delay (s)	12.1	-	-	11.8	-	-	-$ 441.8	18.5
HCM Lane LOS	B	-	-	B	-	-	F	C
HCM 95th %tile Q(veh)	0	-	-	1.6	-	-	6.4	3.5

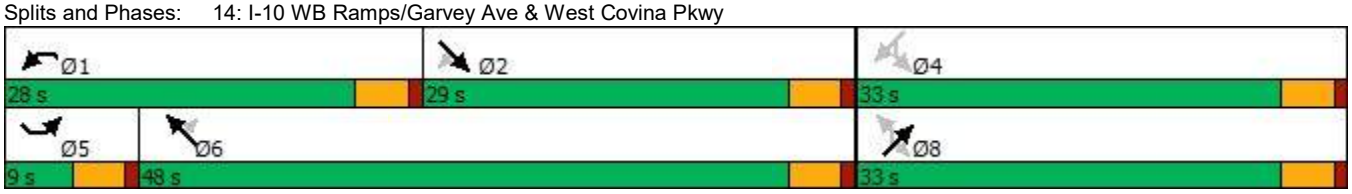
Notes

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

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT
Lane Configurations											
Traffic Volume (vph)	15	588	587	433	235	127	125	15	208	72	386
Future Volume (vph)	15	588	587	433	235	127	125	15	208	72	386
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	custom	NA
Protected Phases	5	2		1	6			8			
Permitted Phases			2			6	8		8	4	4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4
Switch Phase											
Minimum Initial (s)	1.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	32.5	32.5	9.5	28.5	28.5	32.5	32.5	32.5	32.5	32.5
Total Split (s)	9.0	29.0	29.0	28.0	48.0	48.0	33.0	33.0	33.0	33.0	33.0
Total Split (%)	10.0%	32.2%	32.2%	31.1%	53.3%	53.3%	36.7%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.5	3.5	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	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	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?											
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	4.5	24.5	24.5	23.5	48.9	48.9		28.5	28.5		28.5
Actuated g/C Ratio	0.05	0.27	0.27	0.26	0.54	0.54		0.32	0.32		0.32
v/c Ratio	0.18	0.67	1.16	0.99	0.13	0.15		1.16	0.43		0.92
Control Delay	45.9	33.2	115.2	73.9	11.1	2.8		150.5	4.9		54.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	45.9	33.2	115.2	73.9	11.1	2.8		150.5	4.9		54.0
LOS	D	C	F	E	B	A		F	A		D
Approach Delay		73.8			44.0			63.5			54.0
Approach LOS		E			D			E			D

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.16	
Intersection Signal Delay: 61.1	Intersection LOS: E
Intersection Capacity Utilization 97.1%	ICU Level of Service F
Analysis Period (min) 15	

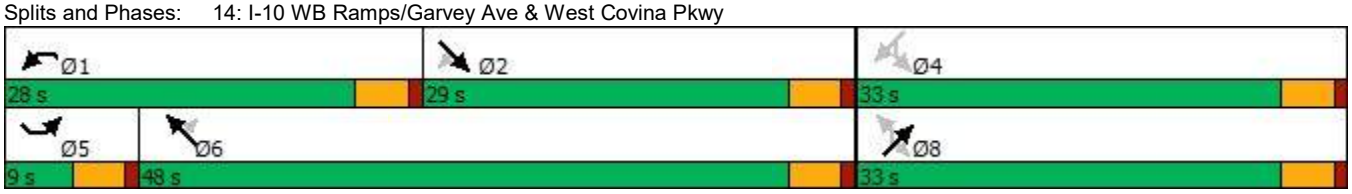
Splits and Phases: 14: I-10 WB Ramps/Garvey Ave & West Covina Pkwy



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT
Lane Configurations											
Traffic Volume (vph)	15	588	587	451	236	127	125	15	246	72	386
Future Volume (vph)	15	588	587	451	236	127	125	15	246	72	386
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	custom	NA
Protected Phases	5	2		1	6			8			
Permitted Phases			2			6	8		8	4	4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4
Switch Phase											
Minimum Initial (s)	1.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	32.5	32.5	9.5	28.5	28.5	32.5	32.5	32.5	32.5	32.5
Total Split (s)	9.0	29.0	29.0	28.0	48.0	48.0	33.0	33.0	33.0	33.0	33.0
Total Split (%)	10.0%	32.2%	32.2%	31.1%	53.3%	53.3%	36.7%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.5	3.5	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	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	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?											
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	4.5	24.5	24.5	23.5	48.9	48.9		28.5	28.5		28.5
Actuated g/C Ratio	0.05	0.27	0.27	0.26	0.54	0.54		0.32	0.32		0.32
v/c Ratio	0.18	0.67	1.17	1.03	0.13	0.15		1.16	0.48		0.92
Control Delay	45.9	33.2	117.9	84.0	11.2	2.8		150.5	5.0		54.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	45.9	33.2	117.9	84.0	11.2	2.8		150.5	5.0		54.0
LOS	D	C	F	F	B	A		F	A		D
Approach Delay		75.2			50.2			57.8			54.0
Approach LOS		E			D			E			D

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.17	
Intersection Signal Delay: 62.3	Intersection LOS: E
Intersection Capacity Utilization 98.1%	ICU Level of Service F
Analysis Period (min) 15	

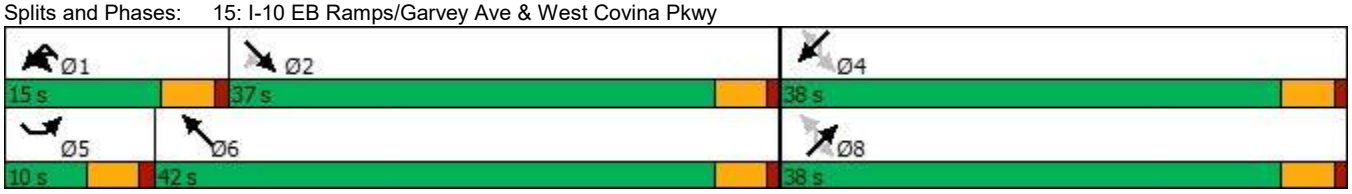
Splits and Phases: 14: I-10 WB Ramps/Garvey Ave & West Covina Pkwy



Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations											
Traffic Volume (vph)	27	398	509	215	592	95	39	154	18	8	82
Future Volume (vph)	27	398	509	215	592	95	39	154	18	8	82
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6		8			4	
Permitted Phases			2			8		8	4		4
Detector Phase	5	2	2	1	6	8	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	9.5	9.5	9.5	29.5	37.5	37.5	37.5	37.5	37.5	37.5
Total Split (s)	10.0	37.0	37.0	15.0	42.0	38.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	11.1%	41.1%	41.1%	16.7%	46.7%	42.2%	42.2%	42.2%	42.2%	42.2%	42.2%
Yellow Time (s)	3.5	3.5	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	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	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	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag						
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	Min	None	None	None	None	None	None
Act Effct Green (s)	5.7	15.5	15.5	8.9	25.9	10.2	10.2	10.2	10.2	10.2	10.2
Actuated g/C Ratio	0.12	0.32	0.32	0.18	0.53	0.21	0.21	0.21	0.21	0.21	0.21
v/c Ratio	0.15	0.41	0.65	0.39	0.37	0.39	0.12	0.39	0.07	0.02	0.22
Control Delay	26.0	14.5	5.4	21.7	9.0	22.5	18.1	6.4	18.1	17.4	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.0	14.5	5.4	21.7	9.0	22.5	18.1	6.4	18.1	17.4	4.0
LOS	C	B	A	C	A	C	B	A	B	B	A
Approach Delay		9.9			12.3		13.3			7.3	
Approach LOS		A			B		B			A	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 48.7	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 11.1	Intersection LOS: B
Intersection Capacity Utilization 53.2%	ICU Level of Service A
Analysis Period (min) 15	

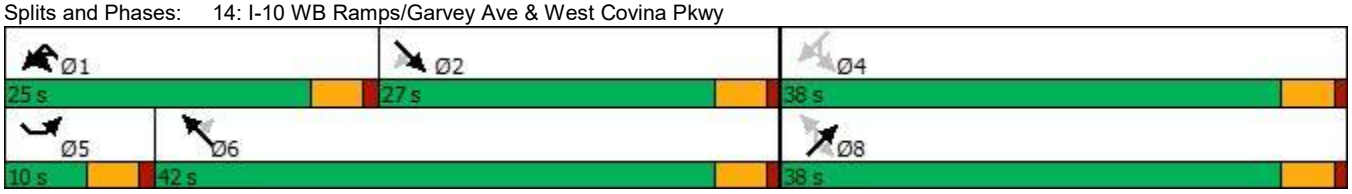
Splits and Phases: 15: I-10 EB Ramps/Garvey Ave & West Covina Pkwy



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT
Lane Configurations											
Traffic Volume (vph)	51	883	345	475	396	159	212	54	453	76	333
Future Volume (vph)	51	883	345	475	396	159	212	54	453	76	333
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	custom	NA
Protected Phases	5	2		1	6			8			
Permitted Phases			2			6	8		8	4	4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4
Switch Phase											
Minimum Initial (s)	1.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	32.5	32.5	9.5	28.5	28.5	32.5	32.5	32.5	32.5	32.5
Total Split (s)	10.0	27.0	27.0	25.0	42.0	42.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	11.1%	30.0%	30.0%	27.8%	46.7%	46.7%	42.2%	42.2%	42.2%	42.2%	42.2%
Yellow Time (s)	3.5	3.5	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	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	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?											
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	5.5	22.5	22.5	20.5	39.5	39.5		33.5	33.5		33.5
Actuated g/C Ratio	0.06	0.25	0.25	0.23	0.44	0.44		0.37	0.37		0.37
v/c Ratio	0.50	1.05	0.74	1.27	0.27	0.22		1.02	0.53		0.84
Control Delay	57.5	78.8	30.3	171.9	17.3	3.5		92.0	4.8		40.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	57.5	78.8	30.3	171.9	17.3	3.5		92.0	4.8		40.7
LOS	E	E	C	F	B	A		F	A		D
Approach Delay		64.8			86.6			37.1			40.7
Approach LOS		E			F			D			D

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.27	
Intersection Signal Delay: 62.6	Intersection LOS: E
Intersection Capacity Utilization 116.8%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 14: I-10 WB Ramps/Garvey Ave & West Covina Pkwy



With Mitigations

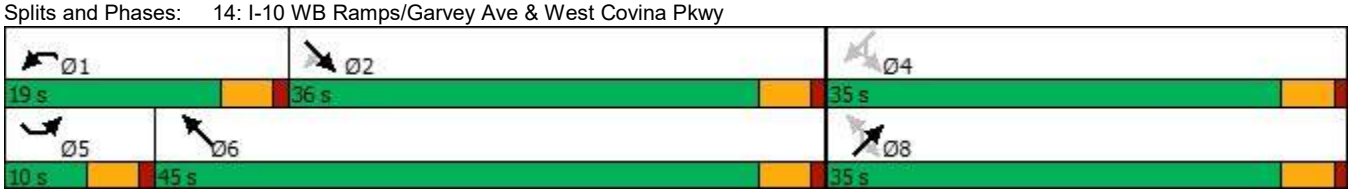
Timings
14: I-10 WB Ramps/Garvey Ave & West Covina Pkwy

11/05/2018

Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	NER	SWL	SWT
Lane Configurations										
Traffic Volume (vph)	15	588	587	451	236	125	15	246	72	386
Future Volume (vph)	15	588	587	451	236	125	15	246	72	386
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	custom	NA
Protected Phases	5	2		1	6		8			
Permitted Phases			2			8		8	4	4
Detector Phase	5	2	2	1	6	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	1.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	32.5	32.5	9.5	28.5	32.5	32.5	32.5	32.5	32.5
Total Split (s)	10.0	36.0	36.0	19.0	45.0	35.0	35.0	35.0	35.0	35.0
Total Split (%)	11.1%	40.0%	40.0%	21.1%	50.0%	38.9%	38.9%	38.9%	38.9%	38.9%
Yellow Time (s)	3.5	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	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	Lag	Lead	Lag					
Lead-Lag Optimize?										
Recall Mode	None	Min	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	5.5	31.2	31.2	14.3	48.0		30.5	30.5		30.5
Actuated g/C Ratio	0.06	0.35	0.35	0.16	0.54		0.34	0.34		0.34
v/c Ratio	0.15	0.52	0.96	0.87	0.21		1.02	0.48		0.84
Control Delay	43.3	25.1	48.4	54.2	7.7		101.4	5.8		42.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	43.3	25.1	48.4	54.2	7.7		101.4	5.8		42.3
LOS	D	C	D	D	A		F	A		D
Approach Delay		36.8			33.4		40.5			42.3
Approach LOS		D			C		D			D

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 89.5	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 37.4	Intersection LOS: D
Intersection Capacity Utilization 86.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 14: I-10 WB Ramps/Garvey Ave & West Covina Pkwy



With Mitigations

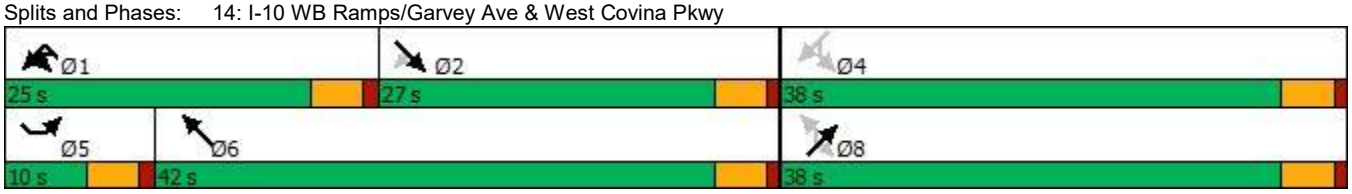
Timings
14: I-10 WB Ramps/Garvey Ave & West Covina Pkwy

11/05/2018

Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	NER	SWL	SWT
Lane Configurations										
Traffic Volume (vph)	51	883	345	475	396	212	54	453	76	333
Future Volume (vph)	51	883	345	475	396	212	54	453	76	333
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	custom	NA
Protected Phases	5	2		1	6		8			
Permitted Phases			2			8		8	4	4
Detector Phase	5	2	2	1	6	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	1.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	32.5	32.5	9.5	28.5	32.5	32.5	32.5	32.5	32.5
Total Split (s)	10.0	27.0	27.0	25.0	42.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	11.1%	30.0%	30.0%	27.8%	46.7%	42.2%	42.2%	42.2%	42.2%	42.2%
Yellow Time (s)	3.5	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	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	Lag	Lead	Lag					
Lead-Lag Optimize?										
Recall Mode	None	Min	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	5.5	22.5	22.5	17.5	36.7		33.5	33.5		33.5
Actuated g/C Ratio	0.06	0.26	0.26	0.20	0.42		0.38	0.38		0.38
v/c Ratio	0.49	1.02	0.72	0.74	0.41		0.96	0.53		0.79
Control Delay	55.7	67.7	28.7	39.8	16.4		75.5	4.7		35.6
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	55.7	67.7	28.7	39.8	16.4		75.5	4.7		35.6
LOS	E	E	C	D	B		E	A		D
Approach Delay		56.7			27.2		30.9			35.6
Approach LOS		E			C		C			D

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 87.1	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 39.8	Intersection LOS: D
Intersection Capacity Utilization 104.0%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 14: I-10 WB Ramps/Garvey Ave & West Covina Pkwy



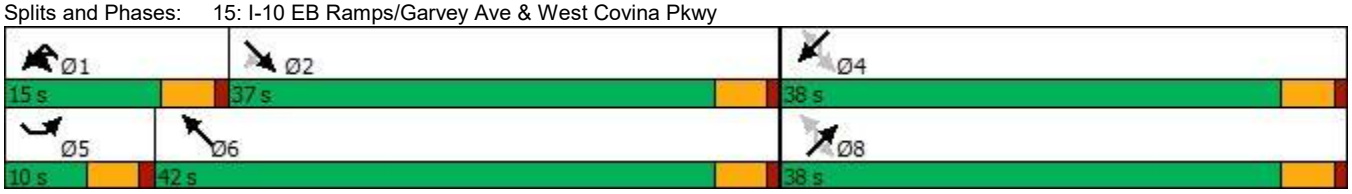
Timings
15: I-10 EB Ramps/Garvey Ave & West Covina Pkwy

11/05/2018

Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations											
Traffic Volume (vph)	27	360	509	205	573	95	39	154	18	8	82
Future Volume (vph)	27	360	509	205	573	95	39	154	18	8	82
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6		8			4	
Permitted Phases			2			8		8	4		4
Detector Phase	5	2	2	1	6	8	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	9.5	9.5	9.5	29.5	37.5	37.5	37.5	37.5	37.5	37.5
Total Split (s)	10.0	37.0	37.0	15.0	42.0	38.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	11.1%	41.1%	41.1%	16.7%	46.7%	42.2%	42.2%	42.2%	42.2%	42.2%	42.2%
Yellow Time (s)	3.5	3.5	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	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	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	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag						
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	Min	None	None	None	None	None	None
Act Effct Green (s)	5.7	14.9	14.9	8.8	25.0	10.1	10.1	10.1	10.1	10.1	10.1
Actuated g/C Ratio	0.12	0.31	0.31	0.18	0.52	0.21	0.21	0.21	0.21	0.21	0.21
v/c Ratio	0.15	0.38	0.65	0.37	0.36	0.38	0.12	0.38	0.07	0.02	0.22
Control Delay	25.5	14.3	5.5	21.2	9.0	22.0	17.7	6.3	17.7	17.1	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.5	14.3	5.5	21.2	9.0	22.0	17.7	6.3	17.7	17.1	4.0
LOS	C	B	A	C	A	C	B	A	B	B	A
Approach Delay		9.6			12.2		13.0			7.2	
Approach LOS		A			B		B			A	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 47.8	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 10.9	Intersection LOS: B
Intersection Capacity Utilization 52.9%	ICU Level of Service A
Analysis Period (min) 15	

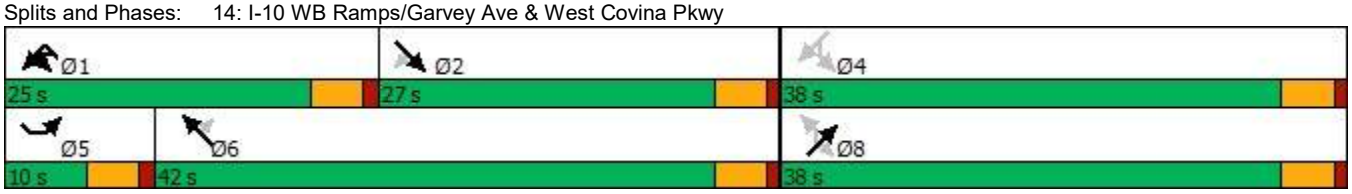
Splits and Phases: 15: I-10 EB Ramps/Garvey Ave & West Covina Pkwy



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT
Lane Configurations											
Traffic Volume (vph)	51	883	345	407	392	159	212	54	444	76	333
Future Volume (vph)	51	883	345	407	392	159	212	54	444	76	333
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	custom	NA
Protected Phases	5	2		1	6			8			
Permitted Phases			2			6	8		8	4	4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4
Switch Phase											
Minimum Initial (s)	1.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	32.5	32.5	9.5	28.5	28.5	32.5	32.5	32.5	32.5	32.5
Total Split (s)	10.0	27.0	27.0	25.0	42.0	42.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	11.1%	30.0%	30.0%	27.8%	46.7%	46.7%	42.2%	42.2%	42.2%	42.2%	42.2%
Yellow Time (s)	3.5	3.5	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	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	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?											
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	5.5	22.5	22.5	20.5	39.5	39.5		33.5	33.5		33.5
Actuated g/C Ratio	0.06	0.25	0.25	0.23	0.44	0.44		0.37	0.37		0.37
v/c Ratio	0.50	1.05	0.74	1.09	0.27	0.22		1.02	0.52		0.84
Control Delay	57.5	78.8	30.3	106.1	17.3	3.5		92.0	4.5		40.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	57.5	78.8	30.3	106.1	17.3	3.5		92.0	4.5		40.7
LOS	E	E	C	F	B	A		F	A		D
Approach Delay		64.8			52.8			37.3			40.7
Approach LOS		E			D			D			D

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.09	
Intersection Signal Delay: 52.5	Intersection LOS: D
Intersection Capacity Utilization 112.5%	ICU Level of Service H
Analysis Period (min) 15	

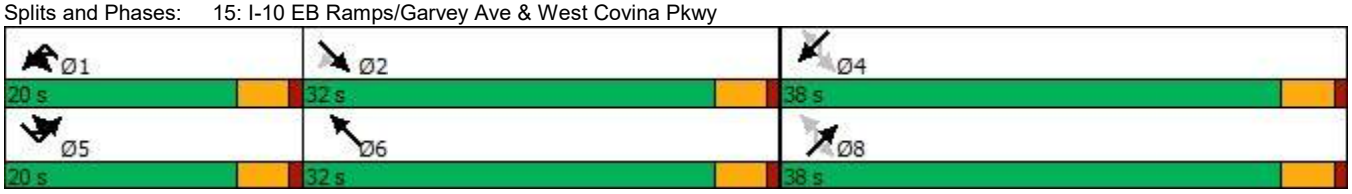
Splits and Phases: 14: I-10 WB Ramps/Garvey Ave & West Covina Pkwy



Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations											
Traffic Volume (vph)	168	719	521	234	685	61	58	149	29	39	247
Future Volume (vph)	168	719	521	234	685	61	58	149	29	39	247
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6		8			4	
Permitted Phases			2			8		8	4		4
Detector Phase	5	2	2	1	6	8	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	9.5	9.5	9.5	29.5	37.5	37.5	37.5	37.5	37.5	37.5
Total Split (s)	20.0	32.0	32.0	20.0	32.0	38.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	22.2%	35.6%	35.6%	22.2%	35.6%	42.2%	42.2%	42.2%	42.2%	42.2%	42.2%
Yellow Time (s)	3.5	3.5	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	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	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	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag						
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	Min	None	None	None	None	None	None
Act Effct Green (s)	11.2	22.0	22.0	10.3	21.0	9.2	9.2	9.2	9.2	9.2	9.2
Actuated g/C Ratio	0.20	0.40	0.40	0.19	0.38	0.17	0.17	0.17	0.17	0.17	0.17
v/c Ratio	0.50	0.54	0.57	0.44	0.64	0.33	0.23	0.44	0.16	0.15	0.58
Control Delay	27.0	14.8	4.1	24.4	17.2	26.9	24.2	8.3	24.1	23.3	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.0	14.8	4.1	24.4	17.2	26.9	24.2	8.3	24.1	23.3	8.7
LOS	C	B	A	C	B	C	C	A	C	C	A
Approach Delay		12.3			19.0		15.9			11.9	
Approach LOS		B			B		B			B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 55.5	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 14.9	Intersection LOS: B
Intersection Capacity Utilization 64.3%	ICU Level of Service C
Analysis Period (min) 15	

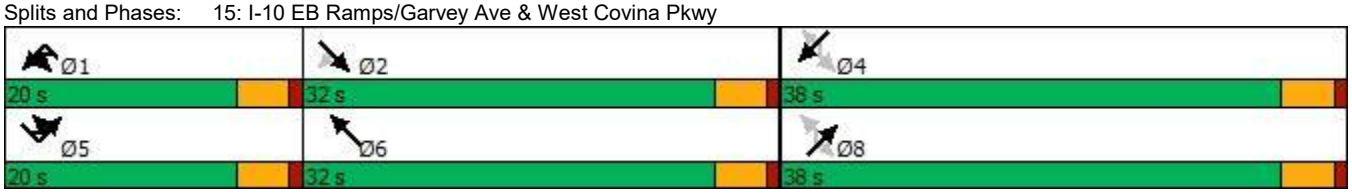
Splits and Phases: 15: I-10 EB Ramps/Garvey Ave & West Covina Pkwy



Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations											
Traffic Volume (vph)	168	728	521	272	756	61	58	149	29	39	247
Future Volume (vph)	168	728	521	272	756	61	58	149	29	39	247
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6		8			4	
Permitted Phases			2			8		8	4		4
Detector Phase	5	2	2	1	6	8	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	9.5	9.5	9.5	29.5	37.5	37.5	37.5	37.5	37.5	37.5
Total Split (s)	20.0	32.0	32.0	20.0	32.0	38.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	22.2%	35.6%	35.6%	22.2%	35.6%	42.2%	42.2%	42.2%	42.2%	42.2%	42.2%
Yellow Time (s)	3.5	3.5	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	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	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	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag						
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	Min	None	None	None	None	None	None
Act Effct Green (s)	11.3	22.8	22.8	11.1	22.7	9.2	9.2	9.2	9.2	9.2	9.2
Actuated g/C Ratio	0.20	0.40	0.40	0.19	0.40	0.16	0.16	0.16	0.16	0.16	0.16
v/c Ratio	0.51	0.54	0.57	0.49	0.68	0.33	0.23	0.44	0.16	0.15	0.59
Control Delay	28.0	15.2	4.1	24.8	17.6	27.8	24.9	8.5	24.8	23.9	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.0	15.2	4.1	24.8	17.6	27.8	24.9	8.5	24.8	23.9	8.9
LOS	C	B	A	C	B	C	C	A	C	C	A
Approach Delay		12.7			19.5		16.4			12.2	
Approach LOS		B			B		B			B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 57.1	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 15.5	Intersection LOS: B
Intersection Capacity Utilization 66.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 15: I-10 EB Ramps/Garvey Ave & West Covina Pkwy



Appendix E – ICU Spreadsheets and Synchro Reports – Buildout Conditions

SE-NW Street: Francisquito Ave
NE-SW Street: Sunset Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Buildout No Project				Buildout + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	142	1	1.00	0.09	142	1	1.00	0.09
Comb. L-T		0				0		
Southeast-bound Thru	632	1	1.60	0.25	632	1	1.60	0.25
Comb. T-R		1				1		
Southeast-bound Right	157	0	0.40	0.25	157	0	0.40	0.25
Comb. L-T-R		0				0		
Northwest-bound Left	176	1	1.00	0.11	176	1	1.00	0.11
Comb. L-T		0				0		
Northwest-bound Thru	870	2	2.00	0.27	870	2	2.00	0.27
Comb. T-R		0				0		
Northwest-bound Right	99	1	1.00	0.06	99	1	1.00	0.06
Comb. L-T-R		0				0		
Northeast-bound Left	164	1	1.00	0.10	164	1	1.00	0.10
Comb. L-T		0				0		
Northeast-bound Thru	854	2	2.00	0.27	891	2	2.00	0.28
Comb. T-R		0				0		
Northeast-bound Right	128	1	1.00	0.08	128	1	1.00	0.08
Comb. L-T-R		0				0		
Southwest-bound Left	111	1	1.00	0.07	111	1	1.00	0.07
Comb. L-T		0				0		
Southwest-bound Thru	1158	2	2.00	0.36	1168	2	2.00	0.37
Comb. T-R		0				0		
Southwest-bound Right	247	1	1.00	0.15	247	1	1.00	0.15
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.36	E-W:	0.36
	N-S:	0.46	N-S:	0.47
	Total:	0.83	Total:	0.83

Lost Time	0.10	0.10

V/C	0.925	0.928
Level of Service	E	E

SE-NW Street: Francisquito Ave
NE-SW Street: Sunset Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Buildout No Project				Buildout + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	166	1	1.00	0.10	166	1	1.00	0.10
Comb. L-T		0				0		
Southeast-bound Thru	917	1	1.81	0.32	917	1	1.81	0.32
Comb. T-R		1				1		
Southeast-bound Right	98	0	0.19	0.32	98	0	0.19	0.32
Comb. L-T-R		0				0		
Northwest-bound Left	100	1	1.00	0.06	100	1	1.00	0.06
Comb. L-T		0				0		
Northwest-bound Thru	535	2	2.00	0.17	535	2	2.00	0.17
Comb. T-R		0				0		
Northwest-bound Right	101	1	1.00	0.06	101	1	1.00	0.06
Comb. L-T-R		0				0		
Northeast-bound Left	171	1	1.00	0.11	171	1	1.00	0.11
Comb. L-T		0				0		
Northeast-bound Thru	1164	2	2.00	0.36	1174	2	2.00	0.37
Comb. T-R		0				0		
Northeast-bound Right	236	1	1.00	0.15	236	1	1.00	0.15
Comb. L-T-R		0				0		
Southwest-bound Left	164	1	1.00	0.10	164	1	1.00	0.10
Comb. L-T		0				0		
Southwest-bound Thru	890	2	2.00	0.28	928	2	2.00	0.29
Comb. T-R		0				0		
Southwest-bound Right	114	1	1.00	0.07	114	1	1.00	0.07
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.38	E-W:	0.38
	N-S:	0.47	N-S:	0.47
	Total:	0.85	Total:	0.85

Lost Time	0.10	0.10

V/C	0.946	0.949
Level of Service	E	E

SE-NW Street: Durness St
NE-SW Street: Sunset Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Buildout No Project				Buildout + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	148	0	0.62	0.15	148	0	0.62	0.15
Comb. L-T		1				1		
Southeast-bound Thru	89	0	0.38	0.15	89	0	0.38	0.15
Comb. T-R		0				0		
Southeast-bound Right	160	1	1.00	0.10	160	1	1.00	0.10
Comb. L-T-R		0				0		
Northwest-bound Left	43	0	0.26	0.11	43	0	0.26	0.11
Comb. L-T		1				1		
Northwest-bound Thru	125	0	0.74	0.11	125	0	0.74	0.11
Comb. T-R		0				0		
Northwest-bound Right	33	1	1.00	0.02	33	1	1.00	0.02
Comb. L-T-R		0				0		
Northeast-bound Left	92	1	1.00	0.06	92	1	1.00	0.06
Comb. L-T		0				0		
Northeast-bound Thru	1116	2	2.00	0.35	1153	2	2.00	0.36
Comb. T-R		0				0		
Northeast-bound Right	18	1	1.00	0.01	18	1	1.00	0.01
Comb. L-T-R		0				0		
Southwest-bound Left	27	1	1.00	0.02	27	1	1.00	0.02
Comb. L-T		0				0		
Southwest-bound Thru	1226	2	2.00	0.38	1236	2	2.00	0.39
Comb. T-R		0				0		
Southwest-bound Right	86	1	1.00	0.05	86	1	1.00	0.05
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.25	E-W:	0.25
	N-S:	0.44	N-S:	0.44
	Total:	0.69	Total:	0.70

Lost Time	0.10	0.10

V/C	0.794	0.797
Level of Service	C	C

SE-NW Street: Durness St
NE-SW Street: Sunset Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Buildout No Project				Buildout + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	34	0	0.47	0.05	34	0	0.47	0.05
Comb. L-T		1				1		
Southeast-bound Thru	38	0	0.53	0.05	38	0	0.53	0.05
Comb. T-R		0				0		
Southeast-bound Right	33	1	1.00	0.02	33	1	1.00	0.02
Comb. L-T-R		0				0		
Northwest-bound Left	14	0	0.37	0.02	14	0	0.37	0.02
Comb. L-T		1				1		
Northwest-bound Thru	24	0	0.63	0.02	24	0	0.63	0.02
Comb. T-R		0				0		
Northwest-bound Right	8	1	1.00	0.01	8	1	1.00	0.01
Comb. L-T-R		0				0		
Northeast-bound Left	29	1	1.00	0.02	29	1	1.00	0.02
Comb. L-T		0				0		
Northeast-bound Thru	1398	2	2.00	0.44	1408	2	2.00	0.44
Comb. T-R		0				0		
Northeast-bound Right	11	1	1.00	0.01	11	1	1.00	0.01
Comb. L-T-R		0				0		
Southwest-bound Left	24	1	1.00	0.02	24	1	1.00	0.02
Comb. L-T		0				0		
Southwest-bound Thru	1179	2	2.00	0.37	1217	2	2.00	0.38
Comb. T-R		0				0		
Southwest-bound Right	22	1	1.00	0.01	22	1	1.00	0.01
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.07	E-W:	0.07
	N-S:	0.45	N-S:	0.46
	Total:	0.52	Total:	0.52

Lost Time	0.10	0.10

V/C	0.621	0.624
Level of Service	B	B

SE-NW Street: Merced Ave
NE-SW Street: Sunset Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Buildout No Project				Buildout + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	130	1	1.00	0.08	130	1	1.00	0.08
Comb. L-T		0				0		
Southeast-bound Thru	464	1	1.68	0.17	464	1	1.68	0.17
Comb. T-R		1				1		
Southeast-bound Right	89	0	0.32	0.17	89	0	0.32	0.17
Comb. L-T-R		0				0		
Northwest-bound Left	220	1	1.00	0.14	220	1	1.00	0.14
Comb. L-T		0				0		
Northwest-bound Thru	688	1	1.63	0.26	707	1	1.57	0.28
Comb. T-R		1				1		
Northwest-bound Right	156	0	0.37	0.26	193	0	0.43	0.28
Comb. L-T-R		0				0		
Northeast-bound Left	109	1	1.00	0.07	128	1	1.00	0.08
Comb. L-T		0				0		
Northeast-bound Thru	1031	2	2.00	0.32	1050	2	2.00	0.33
Comb. T-R		0				0		
Northeast-bound Right	136	1	1.00	0.09	136	1	1.00	0.09
Comb. L-T-R		0				0		
Southwest-bound Left	179	1	1.00	0.11	194	1	1.00	0.12
Comb. L-T		0				0		
Southwest-bound Thru	1179	2	2.00	0.37	1189	2	2.00	0.37
Comb. T-R		0				0		
Southwest-bound Right	206	1	1.00	0.13	206	1	1.00	0.13
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.35	E-W:	0.36
	N-S:	0.44	N-S:	0.45
	Total:	0.78	Total:	0.81

Lost Time	0.10	0.10

V/C	0.882	0.914
Level of Service	D	E

SE-NW Street: Merced Ave
NE-SW Street: Sunset Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Buildout No Project				Buildout + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	149	1	1.00	0.09	149	1	1.00	0.09
Comb. L-T		0				0		
Southeast-bound Thru	627	1	1.78	0.22	627	1	1.78	0.22
Comb. T-R		1				1		
Southeast-bound Right	76	0	0.22	0.22	76	0	0.22	0.22
Comb. L-T-R		0				0		
Northwest-bound Left	109	1	1.00	0.07	109	1	1.00	0.07
Comb. L-T		0				0		
Northwest-bound Thru	366	1	1.52	0.15	371	1	1.50	0.16
Comb. T-R		1				1		
Northwest-bound Right	115	0	0.48	0.15	125	0	0.50	0.16
Comb. L-T-R		0				0		
Northeast-bound Left	96	1	1.00	0.06	101	1	1.00	0.06
Comb. L-T		0				0		
Northeast-bound Thru	1199	2	2.00	0.37	1204	2	2.00	0.38
Comb. T-R		0				0		
Northeast-bound Right	174	1	1.00	0.11	174	1	1.00	0.11
Comb. L-T-R		0				0		
Southwest-bound Left	190	1	1.00	0.12	247	1	1.00	0.15
Comb. L-T		0				0		
Southwest-bound Thru	1020	2	2.00	0.32	1058	2	2.00	0.33
Comb. T-R		0				0		
Southwest-bound Right	144	1	1.00	0.09	144	1	1.00	0.09
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.29	E-W:	0.29
	N-S:	0.49	N-S:	0.53
	Total:	0.78	Total:	0.82
Lost Time		0.10		0.10
V/C		0.881		0.918
Level of Service		D		E

SE-NW Street: Vine Ave
NE-SW Street: Sunset Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Buildout No Project				Buildout + Project				Buildout + Project With Mitigation			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	80	0	0.96	0.05	152	0	0.98	0.10	152	2	2.00	0.05
Comb. L-T		1				1				0		
Southeast-bound Thru	3	0	0.04	0.05	3	0	0.02	0.10	3	0	0.04	0.05
Comb. T-R		0				0				1		
Southeast-bound Right	52	1	1.00	0.03	77	1	1.00	0.05	77	0	0.96	0.05
Comb. L-T-R		0				0				0		
Northwest-bound Left	44	0	0.83	0.03	44	0	0.83	0.03	44	0	0.83	0.03
Comb. L-T		1				1				1		
Northwest-bound Thru	9	0	0.17	0.03	9	0	0.17	0.03	9	0	0.17	0.03
Comb. T-R		0				0				0		
Northwest-bound Right	80	1	1.00	0.05	80	1	1.00	0.05	80	1	1.00	0.05
Comb. L-T-R		0				0				0		
Northeast-bound Left	70	1	1.00	0.04	126	1	1.00	0.08	126	1	1.00	0.08
Comb. L-T		0				0				0		
Northeast-bound Thru	1210	2	2.00	0.38	1210	2	2.00	0.38	1210	2	2.89	0.26
Comb. T-R		0				0				1		
Northeast-bound Right	44	1	1.00	0.03	44	1	1.00	0.03	44	0	0.11	0.26
Comb. L-T-R		0				0				0		
Southwest-bound Left	44	1	1.00	0.03	44	1	1.00	0.03	44	1	1.00	0.03
Comb. L-T		0				0				0		
Southwest-bound Thru	1529	2	2.00	0.48	1529	2	2.00	0.48	1529	2	2.48	0.39
Comb. T-R		0				0				1		
Southwest-bound Right	128	1	1.00	0.08	322	1	1.00	0.20	322	0	0.52	0.39
Comb. L-T-R		0				0				0		

Critical Volumes			E-W:	0.10			E-W:	0.15			E-W:	0.10
			N-S:	0.52			N-S:	0.56			N-S:	0.46
			Total:	0.62			Total:	0.70			Total:	0.57
Lost Time				0.10				0.10				0.10
V/C				0.723				0.803				0.667
Level of Service				C				D				B

SE-NW Street: Vine Ave
NE-SW Street: Sunset Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Buildout No Project				Buildout + Project				Buildout + Project With Mitigation			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	132	0	0.94	0.09	406	0	0.98	0.26	406	2	2.00	0.14
Comb. L-T		1				1				0		
Southeast-bound Thru	9	0	0.06	0.09	9	0	0.02	0.26	9	0	0.06	0.10
Comb. T-R		0				0				1		
Southeast-bound Right	56	1	1.00	0.04	151	1	1.00	0.09	151	0	0.94	0.10
Comb. L-T-R		0				0				0		
Northwest-bound Left	5	0	0.63	0.01	5	0	0.63	0.01	5	0	0.63	0.01
Comb. L-T		1				1				1		
Northwest-bound Thru	3	0	0.38	0.01	3	0	0.38	0.01	3	0	0.38	0.01
Comb. T-R		0				0				0		
Northwest-bound Right	42	1	1.00	0.03	42	1	1.00	0.03	42	1	1.00	0.03
Comb. L-T-R		0				0				0		
Northeast-bound Left	41	1	1.00	0.03	56	1	1.00	0.04	56	1	1.00	0.04
Comb. L-T		0				0				0		
Northeast-bound Thru	1373	2	2.00	0.43	1373	2	2.00	0.43	1373	2	2.92	0.29
Comb. T-R		0				0				1		
Northeast-bound Right	39	1	1.00	0.02	39	1	1.00	0.02	39	0	0.08	0.29
Comb. L-T-R		0				0				0		
Southwest-bound Left	54	1	1.00	0.03	54	1	1.00	0.03	54	1	1.00	0.03
Comb. L-T		0				0				0		
Southwest-bound Thru	1224	2	2.00	0.38	1224	2	2.00	0.38	1224	2	2.74	0.28
Comb. T-R		0				0				1		
Southwest-bound Right	66	1	1.00	0.04	118	1	1.00	0.07	118	0	0.26	0.28
Comb. L-T-R		0				0				0		

Critical Volumes			E-W:	0.11			E-W:	0.29			E-W:	0.17
			N-S:	0.46			N-S:	0.46			N-S:	0.33
			Total:	0.58			Total:	0.75			Total:	0.50

Lost Time				0.10				0.10				0.10

V/C				0.677				0.848				0.595
Level of Service				B				D				A

SE-NW Street: Cameron Ave
NE-SW Street: Sunset Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Buildout No Project				Buildout + Project				Buildout + Project With Mitigation			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	87	1	1.00	0.05	87	1	1.00	0.05	87	1	1.00	0.05
Comb. L-T		0				0				0		
Southeast-bound Thru	484	1	1.46	0.21	484	1	1.24	0.24	484	1	1.24	0.24
Comb. T-R		1				1				1		
Southeast-bound Right	179	0	0.54	0.21	298	0	0.76	0.24	298	0	0.76	0.24
Comb. L-T-R		0				0				0		
Northwest-bound Left	284	1	1.00	0.18	303	1	1.00	0.19	303	1	1.00	0.19
Comb. L-T		0				0				0		
Northwest-bound Thru	917	1	1.89	0.30	917	1	1.89	0.30	917	1	1.89	0.30
Comb. T-R		1				1				1		
Northwest-bound Right	53	0	0.11	0.30	53	0	0.11	0.30	53	0	0.11	0.30
Comb. L-T-R		0				0				0		
Northeast-bound Left	237	1	1.00	0.15	237	1	1.00	0.15	237	1	1.00	0.15
Comb. L-T		0				0				0		
Northeast-bound Thru	996	2	2.00	0.31	1063	2	2.00	0.33	1063	2	2.60	0.26
Comb. T-R		0				0				1		
Northeast-bound Right	160	1	1.00	0.10	165	1	1.00	0.10	165	0	0.40	0.26
Comb. L-T-R		0				0				0		
Southwest-bound Left	45	1	1.00	0.03	45	1	1.00	0.03	45	1	1.00	0.03
Comb. L-T		0				0				0		
Southwest-bound Thru	1134	2	2.00	0.35	1190	2	2.00	0.37	1190	2	2.74	0.27
Comb. T-R		0				0				1		
Southwest-bound Right	115	1	1.00	0.07	115	1	1.00	0.07	115	0	0.26	0.27
Comb. L-T-R		0				0				0		

Critical Volumes			E-W:	0.38			E-W:	0.43			E-W:	0.43
			N-S:	0.50			N-S:	0.52			N-S:	0.42
			Total:	0.89			Total:	0.95			Total:	0.85
Lost Time				0.10				0.10				0.10
V/C				0.987				1.054				0.954
Level of Service				E				F				E

SE-NW Street: Cameron Ave
NE-SW Street: Sunset Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Buildout No Project				Buildout + Project				Buildout + Project With Mitigation			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	180	1	1.00	0.11	180	1	1.00	0.11	180	1	1.00	0.11
Comb. L-T		0				0				0		
Southeast-bound Thru	750	1	1.56	0.30	750	1	1.51	0.31	750	1	1.51	0.31
Comb. T-R		1				1				1		
Southeast-bound Right	212	0	0.44	0.30	244	0	0.49	0.31	244	0	0.49	0.31
Comb. L-T-R		0				0				0		
Northwest-bound Left	124	1	1.00	0.08	129	1	1.00	0.08	129	1	1.00	0.08
Comb. L-T		0				0				0		
Northwest-bound Thru	540	1	1.78	0.19	540	1	1.78	0.19	540	1	1.78	0.19
Comb. T-R		1				1				1		
Northwest-bound Right	66	0	0.22	0.19	66	0	0.22	0.19	66	0	0.22	0.19
Comb. L-T-R		0				0				0		
Northeast-bound Left	207	1	1.00	0.13	207	1	1.00	0.13	207	1	1.00	0.13
Comb. L-T		0				0				0		
Northeast-bound Thru	1177	2	2.00	0.37	1432	2	2.00	0.45	1432	2	2.65	0.34
Comb. T-R		0				0				1		
Northeast-bound Right	168	1	1.00	0.11	187	1	1.00	0.12	187	0	0.35	0.34
Comb. L-T-R		0				0				0		
Southwest-bound Left	82	1	1.00	0.05	82	1	1.00	0.05	82	1	1.00	0.05
Comb. L-T		0				0				0		
Southwest-bound Thru	932	2	2.00	0.29	947	2	2.00	0.30	947	2	2.81	0.21
Comb. T-R		0				0				1		
Southwest-bound Right	63	1	1.00	0.04	63	1	1.00	0.04	63	0	0.19	0.21
Comb. L-T-R		0				0				0		

Critical Volumes			E-W:	0.38			E-W:	0.39			E-W:	0.39
			N-S:	0.42			N-S:	0.50			N-S:	0.39
			Total:	0.80			Total:	0.89			Total:	0.78

Lost Time	0.10	0.10	0.10

V/C	0.899	0.990	0.880
Level of Service	D	E	D

SE-NW Street: West Covina Pkwy
NE-SW Street: Sunset Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Buildout No Project				Buildout + Project				Buildout + Project With Mitigation			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	153	1	1.00	0.10	153	1	1.00	0.10	153	1	1.00	0.10
Comb. L-T		0				0				0		
Southeast-bound Thru	237	1	1.51	0.10	237	1	1.43	0.10	237	2	2.00	0.07
Comb. T-R		1				1				0		
Southeast-bound Right	76	0	0.49	0.10	95	0	0.57	0.10	95	1	1.00	0.06
Comb. L-T-R		0				0				0		
Northwest-bound Left	151	1	1.00	0.09	151	1	1.00	0.09	151	1	1.00	0.09
Comb. L-T		0				0				0		
Northwest-bound Thru	607	1	1.66	0.23	607	1	1.66	0.23	607	2	2.00	0.19
Comb. T-R		1				1				0		
Northwest-bound Right	123	0	0.34	0.23	123	0	0.34	0.23	123	1	1.00	0.08
Comb. L-T-R		0				0				0		
Northeast-bound Left	147	1	1.00	0.09	204	1	1.00	0.13	204	1	1.00	0.13
Comb. L-T		0				0				0		
Northeast-bound Thru	766	2	2.00	0.24	776	2	2.00	0.24	776	2	2.00	0.24
Comb. T-R		0				0				0		
Northeast-bound Right	210	1	1.00	0.13	210	1	1.00	0.13	210	1	1.00	0.13
Comb. L-T-R		0				0				0		
Southwest-bound Left	73	1	1.00	0.05	73	1	1.00	0.05	73	1	1.00	0.05
Comb. L-T		0				0				0		
Southwest-bound Thru	1063	2	2.00	0.33	1100	2	2.00	0.34	1100	2	2.00	0.34
Comb. T-R		0				0				0		
Southwest-bound Right	267	1	1.00	0.17	267	1	1.00	0.17	267	1	1.00	0.17
Comb. L-T-R		0				0				0		

Critical Volumes			E-W:	0.32			E-W:	0.32			E-W:	0.29
			N-S:	0.42			N-S:	0.47			N-S:	0.47
			Total:	0.75			Total:	0.80			Total:	0.76

Lost Time				0.10				0.10				0.10

V/C				0.848				0.895				0.857
Level of Service				D				D				D

SE-NW Street: West Covina Pkwy
NE-SW Street: Sunset Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Buildout No Project				Buildout + Project				Buildout + Project With Mitigation			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	231	1	1.00	0.14	231	1	1.00	0.14	231	1	1.00	0.14
Comb. L-T		0				0				0		
Southeast-bound Thru	532	1	1.51	0.22	532	1	1.50	0.22	532	2	2.00	0.17
Comb. T-R		1				1				0		
Southeast-bound Right	172	0	0.49	0.22	177	0	0.50	0.22	177	1	1.00	0.11
Comb. L-T-R		0				0				0		
Northwest-bound Left	174	1	1.00	0.11	174	1	1.00	0.11	174	1	1.00	0.11
Comb. L-T		0				0				0		
Northwest-bound Thru	569	1	1.65	0.22	569	1	1.65	0.22	569	2	2.00	0.18
Comb. T-R		1				1				0		
Northwest-bound Right	120	0	0.35	0.22	120	0	0.35	0.22	120	1	1.00	0.08
Comb. L-T-R		0				0				0		
Northeast-bound Left	135	1	1.00	0.08	352	1	1.00	0.22	352	1	1.00	0.22
Comb. L-T		0				0				0		
Northeast-bound Thru	1023	2	2.00	0.32	1061	2	2.00	0.33	1061	2	2.00	0.33
Comb. T-R		0				0				0		
Northeast-bound Right	314	1	1.00	0.20	314	1	1.00	0.20	314	1	1.00	0.20
Comb. L-T-R		0				0				0		
Southwest-bound Left	176	1	1.00	0.11	176	1	1.00	0.11	176	1	1.00	0.11
Comb. L-T		0				0				0		
Southwest-bound Thru	742	2	2.00	0.23	752	2	2.00	0.24	752	2	2.00	0.24
Comb. T-R		0				0				0		
Southwest-bound Right	225	1	1.00	0.14	225	1	1.00	0.14	225	1	1.00	0.14
Comb. L-T-R		0				0				0		

Critical Volumes			E-W:	0.36			E-W:	0.36			E-W:	0.32
			N-S:	0.43			N-S:	0.46			N-S:	0.46
			Total:	0.79			Total:	0.81			Total:	0.78

Lost Time	0.10	0.10	0.10

V/C	0.889	0.915	0.877
Level of Service	D	E	D

SE-NW Street: Merced Ave
NE-SW Street: Orange Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Buildout No Project				Buildout + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	136	1	1.00	0.09	136	1	1.00	0.09
Comb. L-T		0				0		
Southeast-bound Thru	546	2	2.00	0.17	632	2	2.00	0.20
Comb. T-R		0				0		
Southeast-bound Right	104	1	1.00	0.07	104	1	1.00	0.07
Comb. L-T-R		0				0		
Northwest-bound Left	187	1	1.00	0.12	187	1	1.00	0.12
Comb. L-T		0				0		
Northwest-bound Thru	308	1	1.35	0.14	311	1	1.35	0.14
Comb. T-R		1				1		
Northwest-bound Right	149	0	0.65	0.14	149	0	0.65	0.14
Comb. L-T-R		0				0		
Northeast-bound Left	119	1	1.00	0.07	119	1	1.00	0.07
Comb. L-T		0				0		
Northeast-bound Thru	381	1	1.34	0.18	381	1	1.34	0.18
Comb. T-R		1				1		
Northeast-bound Right	189	0	0.66	0.18	189	0	0.66	0.18
Comb. L-T-R		0				0		
Southwest-bound Left	120	1	1.00	0.08	120	1	1.00	0.08
Comb. L-T		0				0		
Southwest-bound Thru	517	1	1.88	0.17	517	1	1.88	0.17
Comb. T-R		1				1		
Southwest-bound Right	34	0	0.12	0.17	34	0	0.12	0.17
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.29	E-W:	0.31
	N-S:	0.25	N-S:	0.25
	Total:	0.54	Total:	0.57

Lost Time	0.10	0.10

V/C	0.641	0.668
Level of Service	B	B

SE-NW Street: Merced Ave
NE-SW Street: Orange Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Buildout No Project				Buildout + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	103	1	1.00	0.06	103	1	1.00	0.06
Comb. L-T		0				0		
Southeast-bound Thru	523	2	2.00	0.16	546	2	2.00	0.17
Comb. T-R		0				0		
Southeast-bound Right	48	1	1.00	0.03	48	1	1.00	0.03
Comb. L-T-R		0				0		
Northwest-bound Left	86	1	1.00	0.05	86	1	1.00	0.05
Comb. L-T		0				0		
Northwest-bound Thru	269	1	1.10	0.15	281	1	1.13	0.16
Comb. T-R		1				1		
Northwest-bound Right	218	0	0.90	0.15	218	0	0.87	0.16
Comb. L-T-R		0				0		
Northeast-bound Left	42	1	1.00	0.03	42	1	1.00	0.03
Comb. L-T		0				0		
Northeast-bound Thru	383	1	1.62	0.15	383	1	1.62	0.15
Comb. T-R		1				1		
Northeast-bound Right	89	0	0.38	0.15	89	0	0.38	0.15
Comb. L-T-R		0				0		
Southwest-bound Left	176	1	1.00	0.11	176	1	1.00	0.11
Comb. L-T		0				0		
Southwest-bound Thru	390	1	1.76	0.14	390	1	1.76	0.14
Comb. T-R		1				1		
Southwest-bound Right	52	0	0.24	0.14	52	0	0.24	0.14
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.22	E-W:	0.22
	N-S:	0.26	N-S:	0.26
	Total:	0.47	Total:	0.48

Lost Time	0.10	0.10

V/C	0.575	0.582
Level of Service	A	A

SE-NW Street: Merced Ave
NE-SW Street: California Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Buildout No Project				Buildout + Project				Buildout + Project With Mitigation			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	84	0	0.14	0.38	84	0	0.14	0.39	84	1	1.00	0.05
Comb. L-T		1				1				0		
Southeast-bound Thru	521	1	1.86	0.17	536	1	1.86	0.18	536	1	1.82	0.18
Comb. T-R		0				0				1		
Southeast-bound Right	53	1	1.00	0.03	53	1	1.00	0.03	53	0	0.18	0.18
Comb. L-T-R		0				0				0		
Northwest-bound Left	94	0	0.10	0.58	94	0	0.10	0.61	94	1	1.00	0.06
Comb. L-T		1				1				0		
Northwest-bound Thru	827	1	1.90	0.27	883	1	1.90	0.29	883	1	1.90	0.29
Comb. T-R		0				0				1		
Northwest-bound Right	47	1	1.00	0.03	47	1	1.00	0.03	47	0	0.10	0.29
Comb. L-T-R		0				0				0		
Northeast-bound Left	34	0	0.13	0.16	34	0	0.13	0.16	34	0	0.13	0.16
Comb. L-T		1				1				1		
Northeast-bound Thru	225	0	0.87	0.16	225	0	0.87	0.16	225	0	0.87	0.16
Comb. T-R		0				0				0		
Northeast-bound Right	76	1	1.00	0.05	76	1	1.00	0.05	76	1	1.00	0.05
Comb. L-T-R		0				0				0		
Southwest-bound Left	53	0	0.18	0.18	53	0	0.18	0.18	53	0	0.18	0.18
Comb. L-T		1				1				1		
Southwest-bound Thru	234	0	0.82	0.18	234	0	0.82	0.18	234	0	0.82	0.18
Comb. T-R		0				0				0		
Southwest-bound Right	85	1	1.00	0.05	85	1	1.00	0.05	85	1	1.00	0.05
Comb. L-T-R		0				0				0		

Critical Volumes			E-W:	0.75			E-W:	0.79			E-W:	0.34
			N-S:	0.34			N-S:	0.34			N-S:	0.34
			Total:	1.09			Total:	1.13			Total:	0.68
Lost Time				0.10				0.10				0.10
V/C				1.192				1.232				0.784
Level of Service				F				F				C

SE-NW Street: Merced Ave
NE-SW Street: California Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Buildout No Project				Buildout + Project				Buildout + Project With Mitigation			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	96	0	0.11	0.53	96	0	0.11	0.57	96	1	1.00	0.06
Comb. L-T		1				1				0		
Southeast-bound Thru	751	1	1.89	0.25	808	1	1.89	0.27	808	1	1.91	0.26
Comb. T-R		0				0				1		
Southeast-bound Right	37	1	1.00	0.02	37	1	1.00	0.02	37	0	0.09	0.26
Comb. L-T-R		0				0				0		
Northwest-bound Left	54	0	0.10	0.32	54	0	0.10	0.33	54	1	1.00	0.03
Comb. L-T		1				1				0		
Northwest-bound Thru	461	1	1.90	0.15	476	1	1.90	0.16	476	1	1.79	0.17
Comb. T-R		0				0				1		
Northwest-bound Right	57	1	1.00	0.04	57	1	1.00	0.04	57	0	0.21	0.17
Comb. L-T-R		0				0				0		
Northeast-bound Left	34	0	0.10	0.21	34	0	0.10	0.21	34	0	0.10	0.21
Comb. L-T		1				1				1		
Northeast-bound Thru	295	0	0.90	0.21	295	0	0.90	0.21	295	0	0.90	0.21
Comb. T-R		0				0				0		
Northeast-bound Right	62	1	1.00	0.04	62	1	1.00	0.04	62	1	1.00	0.04
Comb. L-T-R		0				0				0		
Southwest-bound Left	47	0	0.15	0.20	47	0	0.15	0.20	47	0	0.15	0.20
Comb. L-T		1				1				1		
Southwest-bound Thru	272	0	0.85	0.20	272	0	0.85	0.20	272	0	0.85	0.20
Comb. T-R		0				0				0		
Southwest-bound Right	57	1	1.00	0.04	57	1	1.00	0.04	57	1	1.00	0.04
Comb. L-T-R		0				0				0		

Critical Volumes			E-W:	0.68			E-W:	0.72			E-W:	0.30
			N-S:	0.41			N-S:	0.41			N-S:	0.41
			Total:	1.09			Total:	1.13			Total:	0.70
Lost Time				0.10				0.10				0.10
V/C				1.186				1.227				0.803
Level of Service				F				F				D

SE-NW Street: Merced Ave
NE-SW Street: Glendora Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Buildout No Project				Buildout + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	70	1	1.00	0.04	70	1	1.00	0.04
Comb. L-T		0				0		
Southeast-bound Thru	495	1	1.75	0.18	500	1	1.72	0.18
Comb. T-R		1				1		
Southeast-bound Right	71	0	0.25	0.18	81	0	0.28	0.18
Comb. L-T-R		0				0		
Northwest-bound Left	79	1	1.00	0.05	79	1	1.00	0.05
Comb. L-T		0				0		
Northwest-bound Thru	666	1	1.83	0.23	685	1	1.84	0.23
Comb. T-R		1				1		
Northwest-bound Right	60	0	0.17	0.23	60	0	0.16	0.23
Comb. L-T-R		0				0		
Northeast-bound Left	69	1	1.00	0.04	106	1	1.00	0.07
Comb. L-T		0				0		
Northeast-bound Thru	920	2	2.00	0.29	920	2	2.00	0.29
Comb. T-R		0				0		
Northeast-bound Right	61	1	1.00	0.04	61	1	1.00	0.04
Comb. L-T-R		0				0		
Southwest-bound Left	35	1	1.00	0.02	35	1	1.00	0.02
Comb. L-T		0				0		
Southwest-bound Thru	999	2	2.00	0.31	999	2	2.00	0.31
Comb. T-R		0				0		
Southwest-bound Right	237	1	1.00	0.15	237	1	1.00	0.15
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.27	E-W:	0.28
	N-S:	0.36	N-S:	0.38
	Total:	0.63	Total:	0.66

Lost Time	0.10	0.10

V/C	0.726	0.755
Level of Service	C	C

SE-NW Street: Merced Ave
NE-SW Street: Glendora Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Buildout No Project				Buildout + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	130	1	1.00	0.08	130	1	1.00	0.08
Comb. L-T		0				0		
Southeast-bound Thru	623	1	1.70	0.23	642	1	1.62	0.25
Comb. T-R		1				1		
Southeast-bound Right	111	0	0.30	0.23	149	0	0.38	0.25
Comb. L-T-R		0				0		
Northwest-bound Left	54	1	1.00	0.03	54	1	1.00	0.03
Comb. L-T		0				0		
Northwest-bound Thru	355	1	1.75	0.13	360	1	1.75	0.13
Comb. T-R		1				1		
Northwest-bound Right	51	0	0.25	0.13	51	0	0.25	0.13
Comb. L-T-R		0				0		
Northeast-bound Left	98	1	1.00	0.06	108	1	1.00	0.07
Comb. L-T		0				0		
Northeast-bound Thru	1141	2	2.00	0.36	1141	2	2.00	0.36
Comb. T-R		0				0		
Northeast-bound Right	136	1	1.00	0.09	136	1	1.00	0.09
Comb. L-T-R		0				0		
Southwest-bound Left	85	1	1.00	0.05	85	1	1.00	0.05
Comb. L-T		0				0		
Southwest-bound Thru	1001	2	2.00	0.31	1001	2	2.00	0.31
Comb. T-R		0				0		
Southwest-bound Right	148	1	1.00	0.09	148	1	1.00	0.09
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.26	E-W:	0.28
	N-S:	0.41	N-S:	0.41
	Total:	0.67	Total:	0.69

Lost Time	0.10	0.10

V/C	0.773	0.791
Level of Service	C	C

SE-NW Street: Cameron Ave
NE-SW Street: Orange Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Buildout No Project				Buildout + Project				Buildout + Project With Mitigation			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	10	1	1.00	0.01	10	1	1.00	0.01	10	1	1.00	0.01
Comb. L-T		0				0				0		
Southeast-bound Thru	519	1	1.15	0.28	527	1	1.16	0.28	527	1	1.16	0.28
Comb. T-R		1				1				1		
Southeast-bound Right	384	0	0.85	0.28	384	0	0.84	0.28	384	0	0.84	0.28
Comb. L-T-R		0				0				0		
Northwest-bound Left	393	1	1.00	0.25	393	1	1.00	0.25	393	1	1.00	0.25
Comb. L-T		0				0				0		
Northwest-bound Thru	803	1	1.97	0.25	803	1	1.97	0.25	803	1	1.97	0.25
Comb. T-R		1				1				1		
Northwest-bound Right	11	0	0.03	0.25	11	0	0.03	0.25	11	0	0.03	0.25
Comb. L-T-R		0				0				0		
Northeast-bound Left	428	0	0.96	0.28	428	0	0.96	0.28	428	1	1.00	0.27
Comb. L-T		1				1				0		
Northeast-bound Thru	18	0	0.04	0.28	18	0	0.04	0.28	18	0	0.04	0.27
Comb. T-R		0				0				1		
Northeast-bound Right	410	1	1.00	0.26	410	1	1.00	0.26	410	0	0.96	0.27
Comb. L-T-R		0				0				0		
Southwest-bound Left	127	0	0.57	0.14	183	0	0.66	0.17	183	1	1.00	0.11
Comb. L-T		1				1				0		
Southwest-bound Thru	96	0	0.43	0.14	96	0	0.34	0.17	96	0	0.59	0.10
Comb. T-R		0				0				1		
Southwest-bound Right	67	1	1.00	0.04	67	1	1.00	0.04	67	0	0.41	0.10
Comb. L-T-R		0				0				0		

Critical Volumes			E-W:	0.53			E-W:	0.53			E-W:	0.53
			N-S:	0.42			N-S:	0.45			N-S:	0.38
			Total:	0.95			Total:	0.98			Total:	0.91
Lost Time				0.10				0.10				0.10
V/C				1.046				1.083				1.012
Level of Service				F				F				F

SE-NW Street: Cameron Ave
NE-SW Street: Orange Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Buildout No Project				Buildout + Project				Buildout + Project With Mitigation			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	9	1	1.00	0.01	9	1	1.00	0.01	9	1	1.00	0.01
Comb. L-T		0				0				0		
Southeast-bound Thru	593	1	1.38	0.27	595	1	1.38	0.27	595	1	1.38	0.27
Comb. T-R		1				1				1		
Southeast-bound Right	267	0	0.62	0.27	267	0	0.62	0.27	267	0	0.62	0.27
Comb. L-T-R		0				0				0		
Northwest-bound Left	421	1	1.00	0.26	421	1	1.00	0.26	421	1	1.00	0.26
Comb. L-T		0				0				0		
Northwest-bound Thru	660	1	1.98	0.21	660	1	1.98	0.21	660	1	1.98	0.21
Comb. T-R		1				1				1		
Northwest-bound Right	5	0	0.02	0.21	5	0	0.02	0.21	5	0	0.02	0.21
Comb. L-T-R		0				0				0		
Northeast-bound Left	394	0	0.96	0.26	394	0	0.96	0.26	394	1	1.00	0.25
Comb. L-T		1				1				0		
Northeast-bound Thru	18	0	0.04	0.26	18	0	0.04	0.26	18	0	0.03	0.33
Comb. T-R		0				0				1		
Northeast-bound Right	510	1	1.00	0.32	510	1	1.00	0.32	510	0	0.97	0.33
Comb. L-T-R		0				0				0		
Southwest-bound Left	90	0	0.59	0.10	105	0	0.63	0.10	105	1	1.00	0.07
Comb. L-T		1				1				0		
Southwest-bound Thru	62	0	0.41	0.10	62	0	0.37	0.10	62	0	0.45	0.09
Comb. T-R		0				0				1		
Southwest-bound Right	77	1	1.00	0.05	77	1	1.00	0.05	77	0	0.55	0.09
Comb. L-T-R		0				0				0		

Critical Volumes			E-W:	0.53			E-W:	0.53			E-W:	0.53
			N-S:	0.41			N-S:	0.42			N-S:	0.40
			Total:	0.95			Total:	0.96			Total:	0.93
Lost Time				0.10				0.10				0.10
V/C				1.046				1.056				1.028
Level of Service				F				F				F

SE-NW Street: West Covina Pkwy
NE-SW Street: Toluca Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Buildout No Project				Buildout + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	0	0	0.00	0.00	0	0	0.00	0.00
Comb. L-T		0				0		
Southeast-bound Thru	345	2	2.00	0.11	364	2	2.00	0.11
Comb. T-R		0				0		
Southeast-bound Right	130	1	1.00	0.08	186	1	1.00	0.12
Comb. L-T-R		0				0		
Northwest-bound Left	162	1	1.00	0.10	162	1	1.00	0.10
Comb. L-T		0				0		
Northwest-bound Thru	795	2	2.00	0.25	852	2	2.00	0.27
Comb. T-R		0				0		
Northwest-bound Right	0	0	0.00	0.00	0	0	0.00	0.00
Comb. L-T-R		0				0		
Northeast-bound Left	184	1	0.61	0.19	184	1	0.61	0.19
Comb. L-T		0				0		
Northeast-bound Thru	0	0	0.00	0.00	0	0	0.00	0.00
Comb. T-R		0				0		
Northeast-bound Right	118	0	0.39	0.19	118	0	0.39	0.19
Comb. L-R		1				1		
Southwest-bound Left	0	0	0.00	0.00	0	0	0.00	0.00
Comb. L-T		0				0		
Southwest-bound Thru	0	0	0.00	0.00	0	0	0.00	0.00
Comb. T-R		0				0		
Southwest-bound Right	0	0	0.00	0.00	0	0	0.00	0.00
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.25	E-W:	0.27
	N-S:	0.19	N-S:	0.19
	Total:	0.44	Total:	0.46

Lost Time	0.10	0.10

V/C	0.537	0.555
Level of Service	A	A

SE-NW Street: West Covina Pkwy
NE-SW Street: Toluca Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	Buildout No Project				Buildout + Project			
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C
Southeast-bound Left	0	0	0.00	0.00	0	0	0.00	0.00
Comb. L-T		0				0		
Southeast-bound Thru	683	2	2.00	0.21	688	2	2.00	0.22
Comb. T-R		0				0		
Southeast-bound Right	243	1	1.00	0.15	258	1	1.00	0.16
Comb. L-T-R		0				0		
Northwest-bound Left	152	1	1.00	0.10	152	1	1.00	0.10
Comb. L-T		0				0		
Northwest-bound Thru	751	2	2.00	0.23	968	2	2.00	0.30
Comb. T-R		0				0		
Northwest-bound Right	0	0	0.00		0	0	0.00	
Comb. L-T-R		0				0		
Northeast-bound Left	370	1	0.67	0.34	370	1	0.67	0.34
Comb. L-T		0				0		
Northeast-bound Thru	0	0	0.00	0.00	0	0	0.00	0.00
Comb. T-R		0				0		
Northeast-bound Right	179	0	0.33	0.34	179	0	0.33	0.34
Comb. L-R		1				1		
Southwest-bound Left	0	0	0.00	0.00	0	0	0.00	0.00
Comb. L-T		0				0		
Southwest-bound Thru	0	0	0.00	0.00	0	0	0.00	0.00
Comb. T-R		0				0		
Southwest-bound Right	0	0	0.00	0.00	0	0	0.00	0.00
Comb. L-T-R		0				0		

Critical Volumes	E-W:	0.31	E-W:	0.31
	N-S:	0.34	N-S:	0.34
	Total:	0.65	Total:	0.65

Lost Time	0.10	0.10

V/C	0.752	0.753
Level of Service	C	C

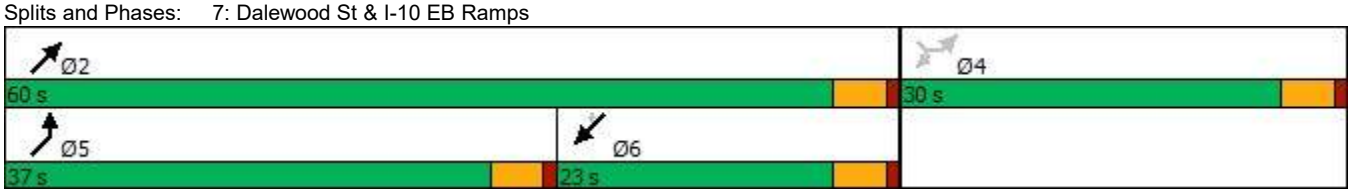
Timings
7: Dalewood St & I-10 EB Ramps

11/05/2018

Lane Group	SEL	SER	NEL	NET	SWT	SWR2
Lane Configurations						
Traffic Volume (vph)	246	111	649	231	352	358
Future Volume (vph)	246	111	649	231	352	358
Turn Type	Perm	Perm	Prot	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	30.0	30.0	10.0	22.0	22.0	22.0
Total Split (s)	30.0	30.0	37.0	60.0	23.0	23.0
Total Split (%)	33.3%	33.3%	41.1%	66.7%	25.6%	25.6%
Yellow Time (s)	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
Lost Time Adjust (s)	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
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None	None	Min	Min	Min
Act Effct Green (s)	12.7	12.7	32.5	55.6	18.5	18.5
Actuated g/C Ratio	0.16	0.16	0.42	0.72	0.24	0.24
v/c Ratio	0.58	0.39	1.08	0.11	0.89	0.64
Control Delay	34.1	8.4	80.4	3.8	53.5	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.1	8.4	80.4	3.8	53.5	11.7
LOS	C	A	F	A	D	B
Approach Delay	26.1			60.3	32.4	
Approach LOS	C			E	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 77.3	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay: 43.9	Intersection LOS: D
Intersection Capacity Utilization 72.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 7: Dalewood St & I-10 EB Ramps



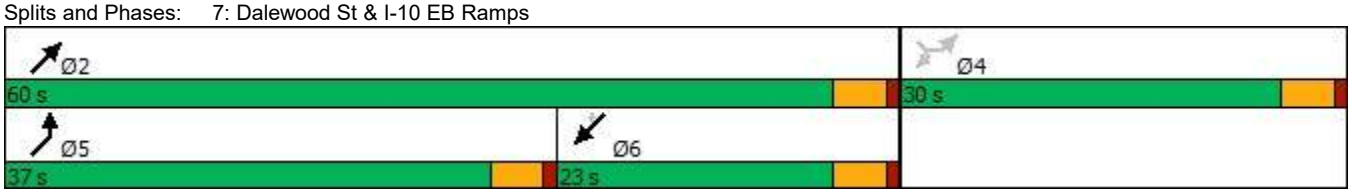
Timings
7: Dalewood St & I-10 EB Ramps

11/05/2018

Lane Group	SEL	SER	NEL	NET	SWT	SWR2
Lane Configurations						
Traffic Volume (vph)	321	111	649	242	355	358
Future Volume (vph)	321	111	649	242	355	358
Turn Type	Perm	Perm	Prot	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	30.0	30.0	10.0	22.0	22.0	22.0
Total Split (s)	30.0	30.0	37.0	60.0	23.0	23.0
Total Split (%)	33.3%	33.3%	41.1%	66.7%	25.6%	25.6%
Yellow Time (s)	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
Lost Time Adjust (s)	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
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None	None	Min	Min	Min
Act Effct Green (s)	15.4	15.4	32.6	55.6	18.5	18.5
Actuated g/C Ratio	0.19	0.19	0.41	0.70	0.23	0.23
v/c Ratio	0.65	0.35	1.11	0.12	0.93	0.65
Control Delay	34.6	7.4	95.1	4.6	61.3	12.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.6	7.4	95.1	4.6	61.3	12.5
LOS	C	A	F	A	E	B
Approach Delay	27.6			70.5	36.8	
Approach LOS	C			E	D	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 80	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.11	
Intersection Signal Delay: 49.6	Intersection LOS: D
Intersection Capacity Utilization 75.0%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 7: Dalewood St & I-10 EB Ramps



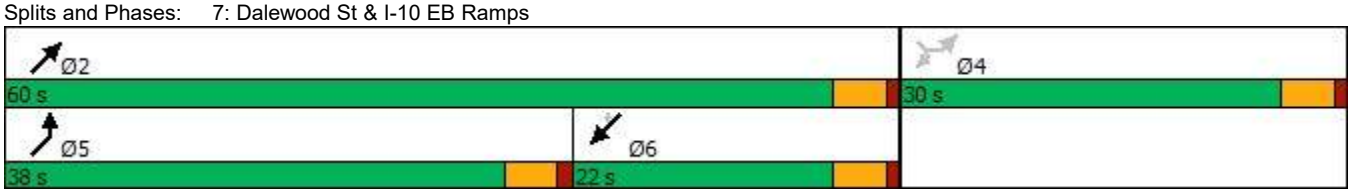
Timings
7: Dalewood St & I-10 EB Ramps

11/05/2018

Lane Group	SEL	SER	NEL	NET	SWT	SWR2
Lane Configurations						
Traffic Volume (vph)	196	70	693	579	236	134
Future Volume (vph)	196	70	693	579	236	134
Turn Type	Perm	Perm	Prot	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	30.0	30.0	10.0	22.0	22.0	22.0
Total Split (s)	30.0	30.0	38.0	60.0	22.0	22.0
Total Split (%)	33.3%	33.3%	42.2%	66.7%	24.4%	24.4%
Yellow Time (s)	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
Lost Time Adjust (s)	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
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None	None	Min	Min	Min
Act Effct Green (s)	10.2	10.2	33.6	52.5	14.3	14.3
Actuated g/C Ratio	0.14	0.14	0.47	0.73	0.20	0.20
v/c Ratio	0.48	0.28	0.93	0.25	0.67	0.33
Control Delay	32.2	10.1	39.5	3.6	36.6	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.2	10.1	39.5	3.6	36.6	7.2
LOS	C	B	D	A	D	A
Approach Delay	26.4			23.1	25.9	
Approach LOS	C			C	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 71.7	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 24.1	Intersection LOS: C
Intersection Capacity Utilization 67.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 7: Dalewood St & I-10 EB Ramps



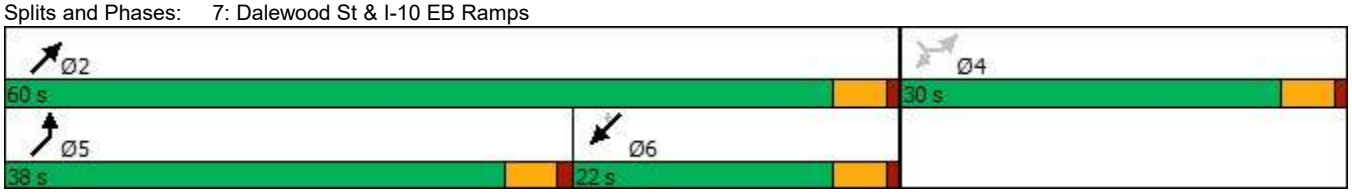
Timings
7: Dalewood St & I-10 EB Ramps

11/05/2018

Lane Group	SEL	SER	NEL	NET	SWT	SWR2
Lane Configurations						
Traffic Volume (vph)	216	70	693	582	248	134
Future Volume (vph)	216	70	693	582	248	134
Turn Type	Perm	Perm	Prot	NA	NA	Perm
Protected Phases			5	2	6	
Permitted Phases	4	4				6
Detector Phase	4	4	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	30.0	30.0	10.0	22.0	22.0	22.0
Total Split (s)	30.0	30.0	38.0	60.0	22.0	22.0
Total Split (%)	33.3%	33.3%	42.2%	66.7%	24.4%	24.4%
Yellow Time (s)	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
Lost Time Adjust (s)	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
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None	None	Min	Min	Min
Act Effct Green (s)	10.7	10.7	33.6	53.0	14.8	14.8
Actuated g/C Ratio	0.15	0.15	0.46	0.73	0.20	0.20
v/c Ratio	0.50	0.27	0.94	0.25	0.70	0.33
Control Delay	32.6	9.9	42.2	3.7	37.8	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.6	9.9	42.2	3.7	37.8	7.2
LOS	C	A	D	A	D	A
Approach Delay	27.1			24.6	27.0	
Approach LOS	C			C	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 72.7	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 25.5	Intersection LOS: C
Intersection Capacity Utilization 68.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 7: Dalewood St & I-10 EB Ramps



Intersection	
Intersection Delay, s/veh	111.4
Intersection LOS	F

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	611	3	57	427	5	114
Future Vol, veh/h	611	3	57	427	5	114
Peak Hour Factor	0.90	0.90	0.83	0.83	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	679	3	69	514	6	131
Number of Lanes	1	1	1	0	0	1

Approach	NW	NE	SW
Opposing Approach		SW	NE
Opposing Lanes	0	1	1
Conflicting Approach Left	NE		NW
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SW	NW	
Conflicting Lanes Right	1	2	0
HCM Control Delay	190	42.4	13.7
HCM LOS	F	E	B

Lane	NELn1	NWLn1	NWLn2	SWLn1
Vol Left, %	0%	100%	0%	4%
Vol Thru, %	12%	0%	0%	96%
Vol Right, %	88%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	484	611	3	119
LT Vol	0	611	0	5
Through Vol	57	0	0	114
RT Vol	427	0	3	0
Lane Flow Rate	583	679	3	137
Geometry Grp	2	7	7	2
Degree of Util (X)	0.899	1.349	0.005	0.263
Departure Headway (Hd)	6.395	7.154	5.933	7.867
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	571	516	606	460
Service Time	4.395	4.862	3.641	5.867
HCM Lane V/C Ratio	1.021	1.316	0.005	0.298
HCM Control Delay	42.4	190.9	8.7	13.7
HCM Lane LOS	E	F	A	B
HCM 95th-tile Q	10.7	30.3	0	1

Intersection	
Intersection Delay, s/veh	128.4
Intersection LOS	F

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	614	3	57	513	5	114
Future Vol, veh/h	614	3	57	513	5	114
Peak Hour Factor	0.90	0.90	0.83	0.83	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	682	3	69	618	6	131
Number of Lanes	1	1	1	0	0	1

Approach	NW	NE	SW
Opposing Approach		SW	NE
Opposing Lanes	0	1	1
Conflicting Approach Left	NE		NW
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SW	NW	
Conflicting Lanes Right	1	2	0
HCM Control Delay	200.7	79.1	14.1
HCM LOS	F	F	B

Lane	NELn1	NWLn1	NWLn2	SWLn1
Vol Left, %	0%	100%	0%	4%
Vol Thru, %	10%	0%	0%	96%
Vol Right, %	90%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	570	614	3	119
LT Vol	0	614	0	5
Through Vol	57	0	0	114
RT Vol	513	0	3	0
Lane Flow Rate	687	682	3	137
Geometry Grp	2	7	7	2
Degree of Util (X)	1.057	1.372	0.006	0.267
Departure Headway (Hd)	6.437	7.45	6.226	8.15
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	570	491	578	443
Service Time	4.437	5.15	3.926	6.15
HCM Lane V/C Ratio	1.205	1.389	0.005	0.309
HCM Control Delay	79.1	201.6	9	14.1
HCM Lane LOS	F	F	A	B
HCM 95th-tile Q	17	30.6	0	1.1

Intersection	
Intersection Delay, s/veh	79.1
Intersection LOS	F

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	293	10	280	490	8	62
Future Vol, veh/h	293	10	280	490	8	62
Peak Hour Factor	0.84	0.84	0.93	0.93	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	349	12	301	527	10	77
Number of Lanes	1	1	1	0	0	1

Approach	NW	NE	SW
Opposing Approach		SW	NE
Opposing Lanes	0	1	1
Conflicting Approach Left	NE		NW
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SW	NW	
Conflicting Lanes Right	1	2	0
HCM Control Delay	24.8	109.9	10.8
HCM LOS	C	F	B

Lane	NELn1	NWLn1	NWLn2	SWLn1
Vol Left, %	0%	100%	0%	11%
Vol Thru, %	36%	0%	0%	89%
Vol Right, %	64%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	770	293	10	70
LT Vol	0	293	0	8
Through Vol	280	0	0	62
RT Vol	490	0	10	0
Lane Flow Rate	828	349	12	86
Geometry Grp	2	7	7	2
Degree of Util (X)	1.168	0.69	0.02	0.152
Departure Headway (Hd)	5.078	7.514	6.289	6.656
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	720	485	573	542
Service Time	3.078	5.214	3.989	4.656
HCM Lane V/C Ratio	1.15	0.72	0.021	0.159
HCM Control Delay	109.9	25.3	9.1	10.8
HCM Lane LOS	F	D	A	B
HCM 95th-tile Q	26.6	5.2	0.1	0.5

Intersection	
Intersection Delay, s/veh	90.7
Intersection LOS	F

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	305	10	280	513	8	62
Future Vol, veh/h	305	10	280	513	8	62
Peak Hour Factor	0.84	0.84	0.93	0.93	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	363	12	301	552	10	77
Number of Lanes	1	1	1	0	0	1

Approach	NW	NE	SW
Opposing Approach		SW	NE
Opposing Lanes	0	1	1
Conflicting Approach Left	NE		NW
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SW	NW	
Conflicting Lanes Right	1	2	0
HCM Control Delay	26.5	127	11
HCM LOS	D	F	B

Lane	NELn1	NWLn1	NWLn2	SWLn1
Vol Left, %	0%	100%	0%	11%
Vol Thru, %	35%	0%	0%	89%
Vol Right, %	65%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	793	305	10	70
LT Vol	0	305	0	8
Through Vol	280	0	0	62
RT Vol	513	0	10	0
Lane Flow Rate	853	363	12	86
Geometry Grp	2	7	7	2
Degree of Util (X)	1.212	0.714	0.019	0.154
Departure Headway (Hd)	5.118	7.599	6.373	6.765
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	716	479	565	533
Service Time	3.121	5.299	4.073	4.765
HCM Lane V/C Ratio	1.191	0.758	0.021	0.161
HCM Control Delay	127	27.1	9.2	11
HCM Lane LOS	F	D	A	B
HCM 95th-tile Q	29.5	5.6	0.1	0.5

Intersection	
Int Delay, s/veh	15.5

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	614	3	57	513	5	114
Future Vol, veh/h	614	3	57	513	5	114
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	0	-	0	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	83	83	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	682	3	69	618	6	131

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	212	69	0	0	687	0
Stage 1	69	-	-	-	-	-
Stage 2	143	-	-	-	-	-
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	776	994	-	-	907	-
Stage 1	954	-	-	-	-	-
Stage 2	884	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	771	994	-	-	907	-
Mov Cap-2 Maneuver	771	-	-	-	-	-
Stage 1	947	-	-	-	-	-
Stage 2	884	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	34	0	0.4
HCM LOS	D		

Minor Lane/Major Mvmt	NET	NER	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	-	771	994	907	-
HCM Lane V/C Ratio	-	-	0.885	0.003	0.006	-
HCM Control Delay (s)	-	-	34.1	8.6	9	0
HCM Lane LOS	-	-	D	A	A	A
HCM 95th %tile Q(veh)	-	-	11.4	0	0	-

Intersection	
Int Delay, s/veh	5.6

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	305	10	280	513	8	62
Future Vol, veh/h	305	10	280	513	8	62
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	0	-	0	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	93	93	81	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	363	12	301	552	10	77

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	398	301	0	0	853	0
Stage 1	301	-	-	-	-	-
Stage 2	97	-	-	-	-	-
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	607	739	-	-	786	-
Stage 1	751	-	-	-	-	-
Stage 2	927	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	599	739	-	-	786	-
Mov Cap-2 Maneuver	599	-	-	-	-	-
Stage 1	741	-	-	-	-	-
Stage 2	927	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	19.5	0	1.1
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	-	599	739	786	-
HCM Lane V/C Ratio	-	-	0.606	0.016	0.013	-
HCM Control Delay (s)	-	-	19.8	10	9.6	0
HCM Lane LOS	-	-	C	B	A	A
HCM 95th %tile Q(veh)	-	-	4.1	0	0	-

Intersection	
Int Delay, s/veh	6.2

Movement	SEL	SET	SER	NWU	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Vol, veh/h	241	778	5	1	6	1074	114	0	0	0	11	3	191
Future Vol, veh/h	241	778	5	1	6	1074	114	0	0	0	11	3	191
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	-	60	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	-	0	-	-	22350	-	-	0	-
Grade, %	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	92	92	92	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	259	837	5	1	6	1155	123	0	0	0	13	4	227

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	1278	0	0	842	842	0	0			2168	2591	639
Stage 1	-	-	-	-	-	-	-			1231	1231	-
Stage 2	-	-	-	-	-	-	-			937	1360	-
Critical Hdwy	4.14	-	-	6.44	4.14	-	-			6.84	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-			5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-			5.84	5.54	-
Follow-up Hdwy	2.22	-	-	2.52	2.22	-	-			3.52	4.02	3.32
Pot Cap-1 Maneuver	539	-	-	419	789	-	-			40	25	419
Stage 1	-	-	-	-	-	-	-			239	248	-
Stage 2	-	-	-	-	-	-	-			342	215	-
Platoon blocked, %		-	-			-	-					
Mov Cap-1 Maneuver	539	-	-	701	701	-	-			21	0	419
Mov Cap-2 Maneuver	-	-	-	-	-	-	-			21	0	-
Stage 1	-	-	-	-	-	-	-			123	0	-
Stage 2	-	-	-	-	-	-	-			342	0	-

Approach	SE	NW	SW
HCM Control Delay, s	4.2	0.1	47.8
HCM LOS			E

Minor Lane/Major Mvmt	NWL	NWT	NWR	SEL	SET	SER	SWLn1	SWLn2
Capacity (veh/h)	701	-	-	539	-	-	21	419
HCM Lane V/C Ratio	0.011	-	-	0.481	-	-	0.794	0.543
HCM Control Delay (s)	10.2	-	-	17.7	-	-	-$ 381.8	23.3
HCM Lane LOS	B	-	-	C	-	-	F	C
HCM 95th %tile Q(veh)	0	-	-	2.6	-	-	2.2	3.1

Intersection	
Int Delay, s/veh	61.9

Movement	SEL	SET	SER	NWU	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Vol, veh/h	241	841	5	1	6	1074	114	0	0	0	67	3	191
Future Vol, veh/h	241	841	5	1	6	1074	114	0	0	0	67	3	191
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	-	60	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	-	0	-	-	22350	-	-	0	-
Grade, %	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	92	92	92	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	259	904	5	1	6	1155	123	0	0	0	80	4	227

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	1278	0	0	910	909	0	0			2201	2658	639
Stage 1	-	-	-	-	-	-	-			1231	1231	-
Stage 2	-	-	-	-	-	-	-			970	1427	-
Critical Hdwy	4.14	-	-	6.44	4.14	-	-			6.84	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-			5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-			5.84	5.54	-
Follow-up Hdwy	2.22	-	-	2.52	2.22	-	-			3.52	4.02	3.32
Pot Cap-1 Maneuver	539	-	-	379	745	-	-			~ 38	22	419
Stage 1	-	-	-	-	-	-	-			239	248	-
Stage 2	-	-	-	-	-	-	-			328	199	-
Platoon blocked, %		-	-			-	-					
Mov Cap-1 Maneuver	539	-	-	655	655	-	-			~ 19	0	419
Mov Cap-2 Maneuver	-	-	-	-	-	-	-			~ 19	0	-
Stage 1	-	-	-	-	-	-	-			123	0	-
Stage 2	-	-	-	-	-	-	-			328	0	-

Approach	SE	NW	SW
HCM Control Delay, s	3.9	0.1	$ 535.5
HCM LOS			F

Minor Lane/Major Mvmt	NWL	NWT	NWR	SEL	SET	SER	SWLn1	SWLn2
Capacity (veh/h)	655	-	-	539	-	-	19	419
HCM Lane V/C Ratio	0.011	-	-	0.481	-	-	4.386	0.543
HCM Control Delay (s)	10.6	-	-	17.7	-	-	$ 1933.2	23.3
HCM Lane LOS	B	-	-	C	-	-	F	C
HCM 95th %tile Q(veh)	0	-	-	2.6	-	-	10.9	3.1

Notes

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

Intersection	
Int Delay, s/veh	28.2

Movement	SEL	SET	SER	NWU	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Vol, veh/h	301	963	3	3	4	730	142	0	0	0	58	0	338
Future Vol, veh/h	301	963	3	3	4	730	142	0	0	0	58	0	338
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	-	60	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	-	0	-	-	22350	-	-	0	-
Grade, %	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	96	96	96	96	92	92	92	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	331	1058	3	3	4	760	148	0	0	0	66	0	384

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	908	0	0	1062	1061	0	0			2039	2571	454
Stage 1	-	-	-	-	-	-	-			848	848	-
Stage 2	-	-	-	-	-	-	-			1191	1723	-
Critical Hdwy	4.14	-	-	6.44	4.14	-	-			6.84	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-			5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-			5.84	5.54	-
Follow-up Hdwy	2.22	-	-	2.52	2.22	-	-			3.52	4.02	3.32
Pot Cap-1 Maneuver	745	-	-	303	652	-	-			~ 49	26	553
Stage 1	-	-	-	-	-	-	-			380	376	-
Stage 2	-	-	-	-	-	-	-			251	142	-
Platoon blocked, %		-	-			-	-					
Mov Cap-1 Maneuver	745	-	-	437	437	-	-			~ 27	0	553
Mov Cap-2 Maneuver	-	-	-	-	-	-	-			~ 27	0	-
Stage 1	-	-	-	-	-	-	-			208	0	-
Stage 2	-	-	-	-	-	-	-			251	0	-

Approach	SE	NW	SW
HCM Control Delay, s	3.2	0.1	162.6
HCM LOS			F

Minor Lane/Major Mvmt	NWL	NWT	NWR	SEL	SET	SER	SWLn1	SWLn2
Capacity (veh/h)	437	-	-	745	-	-	27	553
HCM Lane V/C Ratio	0.017	-	-	0.444	-	-	2.441	0.695
HCM Control Delay (s)	13.4	-	-	13.6	-	-	-$ 964.2	25
HCM Lane LOS	B	-	-	B	-	-	F	D
HCM 95th %tile Q(veh)	0.1	-	-	2.3	-	-	8	5.4

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

Intersection	
Int Delay, s/veh	43.7

Movement	SEL	SET	SER	NWU	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations													
Traffic Vol, veh/h	301	980	3	3	4	730	142	0	0	0	73	0	338
Future Vol, veh/h	301	980	3	3	4	730	142	0	0	0	73	0	338
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	-	60	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	-	0	-	-	22350	-	-	0	-
Grade, %	-	0	-	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	96	96	96	96	92	92	92	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	331	1077	3	3	4	760	148	0	0	0	83	0	384

Major/Minor	Major1			Major2						Minor2		
Conflicting Flow All	908	0	0	1080	1080	0	0			2049	2590	454
Stage 1	-	-	-	-	-	-	-			848	848	-
Stage 2	-	-	-	-	-	-	-			1201	1742	-
Critical Hdwy	4.14	-	-	6.44	4.14	-	-			6.84	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-			5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-			5.84	5.54	-
Follow-up Hdwy	2.22	-	-	2.52	2.22	-	-			3.52	4.02	3.32
Pot Cap-1 Maneuver	745	-	-	295	641	-	-			~ 48	25	553
Stage 1	-	-	-	-	-	-	-			380	376	-
Stage 2	-	-	-	-	-	-	-			248	139	-
Platoon blocked, %		-	-			-	-					
Mov Cap-1 Maneuver	745	-	-	427	427	-	-			~ 26	0	553
Mov Cap-2 Maneuver	-	-	-	-	-	-	-			~ 26	0	-
Stage 1	-	-	-	-	-	-	-			208	0	-
Stage 2	-	-	-	-	-	-	-			248	0	-

Approach	SE	NW	SW
HCM Control Delay, s	3.2	0.1	251.6
HCM LOS			F

Minor Lane/Major Mvmt	NWL	NWT	NWR	SEL	SET	SER	SWLn1	SWLn2
Capacity (veh/h)	427	-	-	745	-	-	26	553
HCM Lane V/C Ratio	0.017	-	-	0.444	-	-	3.191	0.695
HCM Control Delay (s)	13.6	-	-	13.6	-	-	$ 1301	25
HCM Lane LOS	B	-	-	B	-	-	F	D
HCM 95th %tile Q(veh)	0.1	-	-	2.3	-	-	10.2	5.4

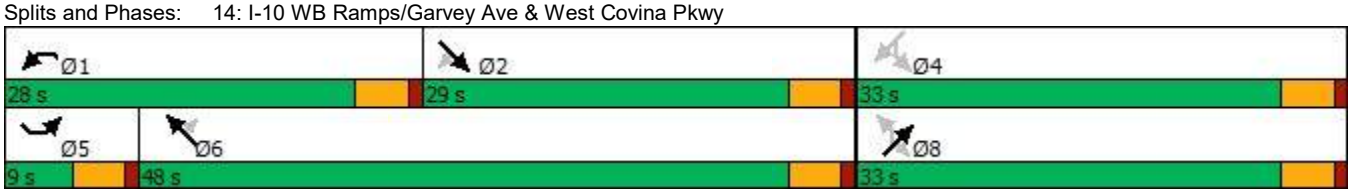
Notes

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

Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT
Lane Configurations											
Traffic Volume (vph)	16	666	665	490	266	144	142	16	236	81	437
Future Volume (vph)	16	666	665	490	266	144	142	16	236	81	437
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	custom	NA
Protected Phases	5	2		1	6			8			
Permitted Phases			2			6	8		8	4	4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4
Switch Phase											
Minimum Initial (s)	1.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	32.5	32.5	9.5	28.5	28.5	32.5	32.5	32.5	32.5	32.5
Total Split (s)	9.0	29.0	29.0	28.0	48.0	48.0	33.0	33.0	33.0	33.0	33.0
Total Split (%)	10.0%	32.2%	32.2%	31.1%	53.3%	53.3%	36.7%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.5	3.5	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	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	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?											
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	4.5	24.5	24.5	23.5	48.9	48.9		28.5	28.5		28.5
Actuated g/C Ratio	0.05	0.27	0.27	0.26	0.54	0.54		0.32	0.32		0.32
v/c Ratio	0.20	0.76	1.38	1.12	0.15	0.16		1.49	0.47		1.13
Control Delay	46.7	36.1	209.3	111.0	11.2	2.7		280.4	5.0		112.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	46.7	36.1	209.3	111.0	11.2	2.7		280.4	5.0		112.0
LOS	D	D	F	F	B	A		F	A		F
Approach Delay		121.7			64.2			115.6			112.0
Approach LOS		F			E			F			F

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Natural Cycle: 130	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.49	
Intersection Signal Delay: 103.9	Intersection LOS: F
Intersection Capacity Utilization 108.4%	ICU Level of Service G
Analysis Period (min) 15	

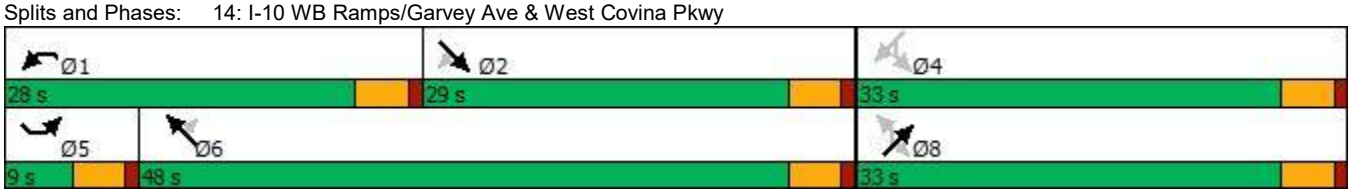
Splits and Phases: 14: I-10 WB Ramps/Garvey Ave & West Covina Pkwy



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT
Lane Configurations											
Traffic Volume (vph)	16	666	665	525	268	144	142	16	311	81	437
Future Volume (vph)	16	666	665	525	268	144	142	16	311	81	437
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	custom	NA
Protected Phases	5	2		1	6			8			
Permitted Phases			2			6	8		8	4	4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4
Switch Phase											
Minimum Initial (s)	1.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	32.5	32.5	9.5	28.5	28.5	32.5	32.5	32.5	32.5	32.5
Total Split (s)	9.0	29.0	29.0	28.0	48.0	48.0	33.0	33.0	33.0	33.0	33.0
Total Split (%)	10.0%	32.2%	32.2%	31.1%	53.3%	53.3%	36.7%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.5	3.5	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	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	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?											
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	4.5	24.5	24.5	23.5	48.9	48.9		28.5	28.5		28.5
Actuated g/C Ratio	0.05	0.27	0.27	0.26	0.54	0.54		0.32	0.32		0.32
v/c Ratio	0.20	0.76	1.40	1.20	0.15	0.16		1.49	0.56		1.13
Control Delay	46.7	36.1	214.1	140.0	11.3	2.7		280.4	5.4		112.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	46.7	36.1	214.1	140.0	11.3	2.7		280.4	5.4		112.0
LOS	D	D	F	F	B	A		F	A		F
Approach Delay		124.1			82.1			98.2			112.0
Approach LOS		F			F			F			F

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.49	
Intersection Signal Delay: 106.3	Intersection LOS: F
Intersection Capacity Utilization 110.4%	ICU Level of Service H
Analysis Period (min) 15	

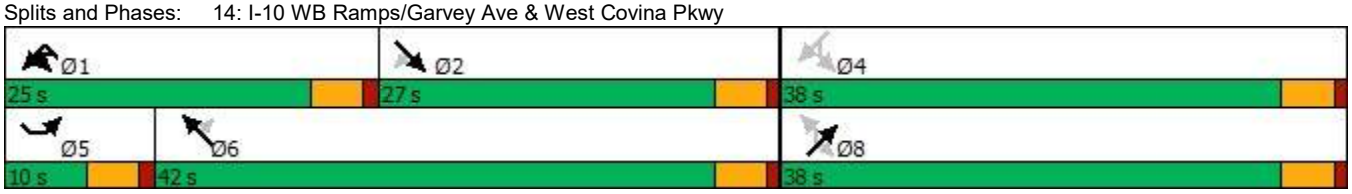
Splits and Phases: 14: I-10 WB Ramps/Garvey Ave & West Covina Pkwy



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT
Lane Configurations											
Traffic Volume (vph)	58	1001	391	461	445	180	241	61	503	86	377
Future Volume (vph)	58	1001	391	461	445	180	241	61	503	86	377
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	custom	NA
Protected Phases	5	2		1	6			8			
Permitted Phases			2			6	8		8	4	4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4
Switch Phase											
Minimum Initial (s)	1.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	32.5	32.5	9.5	28.5	28.5	32.5	32.5	32.5	32.5	32.5
Total Split (s)	10.0	27.0	27.0	25.0	42.0	42.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	11.1%	30.0%	30.0%	27.8%	46.7%	46.7%	42.2%	42.2%	42.2%	42.2%	42.2%
Yellow Time (s)	3.5	3.5	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	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	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?											
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	5.5	22.5	22.5	20.5	39.5	39.5		33.5	33.5		33.5
Actuated g/C Ratio	0.06	0.25	0.25	0.23	0.44	0.44		0.37	0.37		0.37
v/c Ratio	0.56	1.19	0.84	1.23	0.31	0.24		1.26	0.59		1.05
Control Delay	62.2	129.8	38.9	157.4	17.7	3.4		175.6	6.8		82.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	62.2	129.8	38.9	157.4	17.7	3.4		175.6	6.8		82.8
LOS	E	F	D	F	B	A		F	A		F
Approach Delay		102.6			74.7			70.0			82.8
Approach LOS		F			E			E			F

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.26	
Intersection Signal Delay: 85.3	Intersection LOS: F
Intersection Capacity Utilization 125.5%	ICU Level of Service H
Analysis Period (min) 15	

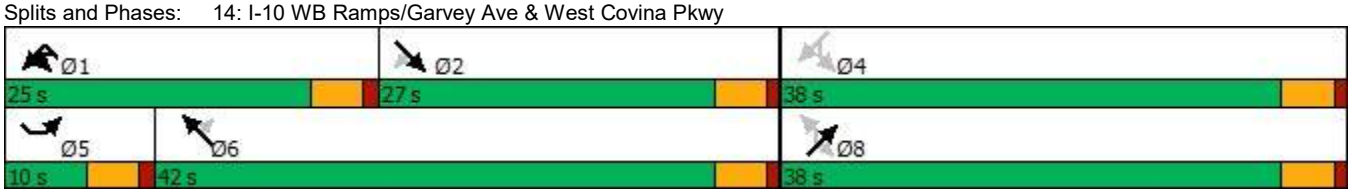
Splits and Phases: 14: I-10 WB Ramps/Garvey Ave & West Covina Pkwy



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT
Lane Configurations											
Traffic Volume (vph)	58	1001	391	595	453	180	241	61	523	86	377
Future Volume (vph)	58	1001	391	595	453	180	241	61	523	86	377
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA	Perm	custom	NA
Protected Phases	5	2		1	6			8			
Permitted Phases			2			6	8		8	4	4
Detector Phase	5	2	2	1	6	6	8	8	8	4	4
Switch Phase											
Minimum Initial (s)	1.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	32.5	32.5	9.5	28.5	28.5	32.5	32.5	32.5	32.5	32.5
Total Split (s)	10.0	27.0	27.0	25.0	42.0	42.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	11.1%	30.0%	30.0%	27.8%	46.7%	46.7%	42.2%	42.2%	42.2%	42.2%	42.2%
Yellow Time (s)	3.5	3.5	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	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	Lag	Lead	Lag	Lag					
Lead-Lag Optimize?											
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None
Act Effct Green (s)	5.5	22.5	22.5	20.5	39.5	39.5		33.5	33.5		33.5
Actuated g/C Ratio	0.06	0.25	0.25	0.23	0.44	0.44		0.37	0.37		0.37
v/c Ratio	0.56	1.19	0.84	1.59	0.31	0.24		1.26	0.62		1.05
Control Delay	62.2	129.8	38.9	305.0	17.7	3.4		175.6	7.6		82.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	62.2	129.8	38.9	305.0	17.7	3.4		175.6	7.6		82.8
LOS	E	F	D	F	B	A		F	A		F
Approach Delay		102.6			154.9			69.1			82.8
Approach LOS		F			F			E			F

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Natural Cycle: 130	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.59	
Intersection Signal Delay: 109.6	Intersection LOS: F
Intersection Capacity Utilization 134.1%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 14: I-10 WB Ramps/Garvey Ave & West Covina Pkwy



With Mitigations

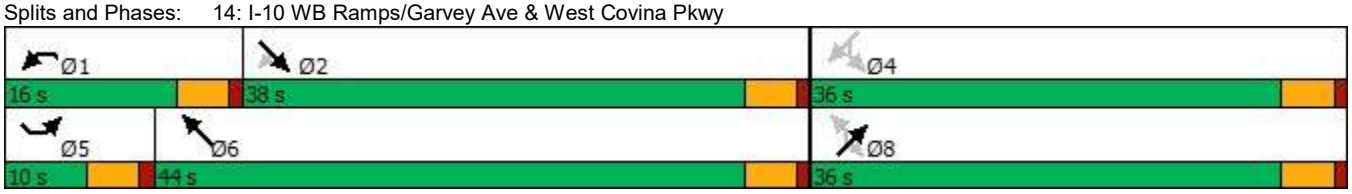
Timings
14: I-10 WB Ramps/Garvey Ave & West Covina Pkwy

11/05/2018

Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	NER	SWL	SWT
Lane Configurations										
Traffic Volume (vph)	16	666	665	525	268	142	16	311	81	437
Future Volume (vph)	16	666	665	525	268	142	16	311	81	437
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	custom	NA
Protected Phases	5	2		1	6		8			
Permitted Phases			2			8		8	4	4
Detector Phase	5	2	2	1	6	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	1.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	32.5	32.5	9.5	28.5	32.5	32.5	32.5	32.5	32.5
Total Split (s)	10.0	38.0	38.0	16.0	44.0	36.0	36.0	36.0	36.0	36.0
Total Split (%)	11.1%	42.2%	42.2%	17.8%	48.9%	40.0%	40.0%	40.0%	40.0%	40.0%
Yellow Time (s)	3.5	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	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	Lag	Lead	Lag					
Lead-Lag Optimize?										
Recall Mode	None	Min	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	5.5	33.5	33.5	11.5	45.5		31.5	31.5		31.5
Actuated g/C Ratio	0.06	0.37	0.37	0.13	0.51		0.35	0.35		0.35
v/c Ratio	0.17	0.56	1.05	1.26	0.25		1.21	0.64		0.97
Control Delay	43.8	24.3	72.0	170.2	9.4		164.3	14.9		62.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	43.8	24.3	72.0	170.2	9.4		164.3	14.9		62.0
LOS	D	C	E	F	A		F	B		E
Approach Delay		48.1			99.5		65.4			62.0
Approach LOS		D			F		E			E

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.26	
Intersection Signal Delay: 67.1	Intersection LOS: E
Intersection Capacity Utilization 96.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 14: I-10 WB Ramps/Garvey Ave & West Covina Pkwy



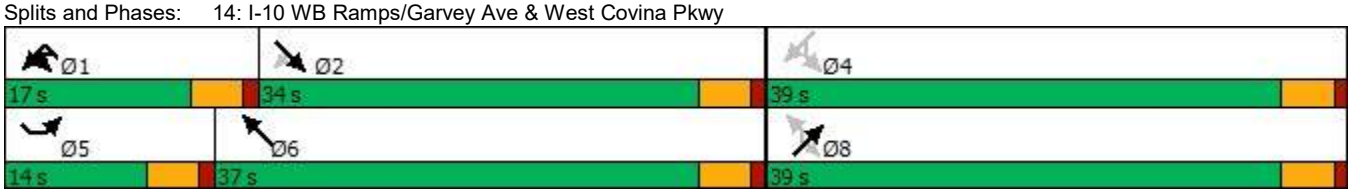
Timings
14: I-10 WB Ramps/Garvey Ave & West Covina Pkwy

11/05/2018

Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	NER	SWL	SWT
Lane Configurations										
Traffic Volume (vph)	58	1001	391	595	453	241	61	523	86	377
Future Volume (vph)	58	1001	391	595	453	241	61	523	86	377
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	custom	NA
Protected Phases	5	2		1	6		8			
Permitted Phases			2			8		8	4	4
Detector Phase	5	2	2	1	6	8	8	8	4	4
Switch Phase										
Minimum Initial (s)	1.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	32.5	32.5	9.5	28.5	32.5	32.5	32.5	32.5	32.5
Total Split (s)	14.0	34.0	34.0	17.0	37.0	39.0	39.0	39.0	39.0	39.0
Total Split (%)	15.6%	37.8%	37.8%	18.9%	41.1%	43.3%	43.3%	43.3%	43.3%	43.3%
Yellow Time (s)	3.5	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	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	Lag	Lead	Lag					
Lead-Lag Optimize?										
Recall Mode	None	Min	Min	None	Min	None	None	None	None	None
Act Effct Green (s)	8.0	29.5	29.5	12.5	35.9		34.5	34.5		34.5
Actuated g/C Ratio	0.09	0.33	0.33	0.14	0.40		0.38	0.38		0.38
v/c Ratio	0.39	0.91	0.67	1.35	0.49		1.21	0.70		1.00
Control Delay	45.4	41.9	22.9	202.2	20.1		151.9	16.5		68.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	45.4	41.9	22.9	202.2	20.1		151.9	16.5		68.0
LOS	D	D	C	F	C		F	B		E
Approach Delay		36.9			108.4		66.0			68.0
Approach LOS		D			F		E			E

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.35	
Intersection Signal Delay: 69.0	Intersection LOS: E
Intersection Capacity Utilization 118.1%	ICU Level of Service H
Analysis Period (min) 15	

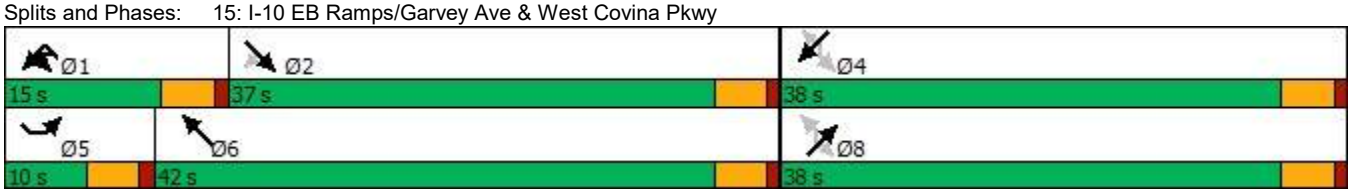
Splits and Phases: 14: I-10 WB Ramps/Garvey Ave & West Covina Pkwy



Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations											
Traffic Volume (vph)	30	408	576	232	650	108	44	175	20	9	92
Future Volume (vph)	30	408	576	232	650	108	44	175	20	9	92
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6		8			4	
Permitted Phases			2			8		8	4		4
Detector Phase	5	2	2	1	6	8	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	9.5	9.5	9.5	29.5	37.5	37.5	37.5	37.5	37.5	37.5
Total Split (s)	10.0	37.0	37.0	15.0	42.0	38.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	11.1%	41.1%	41.1%	16.7%	46.7%	42.2%	42.2%	42.2%	42.2%	42.2%	42.2%
Yellow Time (s)	3.5	3.5	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	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	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	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag						
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	Min	None	None	None	None	None	None
Act Effct Green (s)	5.8	17.4	17.4	9.3	28.2	11.4	11.4	11.4	11.4	11.4	11.4
Actuated g/C Ratio	0.11	0.33	0.33	0.18	0.54	0.22	0.22	0.22	0.22	0.22	0.22
v/c Ratio	0.17	0.40	0.68	0.44	0.40	0.42	0.13	0.41	0.08	0.02	0.24
Control Delay	29.1	14.8	5.6	24.3	9.5	24.1	19.0	6.3	19.1	18.4	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.1	14.8	5.6	24.3	9.5	24.1	19.0	6.3	19.1	18.4	4.9
LOS	C	B	A	C	A	C	B	A	B	B	A
Approach Delay		10.0			13.3		13.9			8.2	
Approach LOS		B			B		B			A	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 52.3	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 11.7	Intersection LOS: B
Intersection Capacity Utilization 57.8%	ICU Level of Service B
Analysis Period (min) 15	

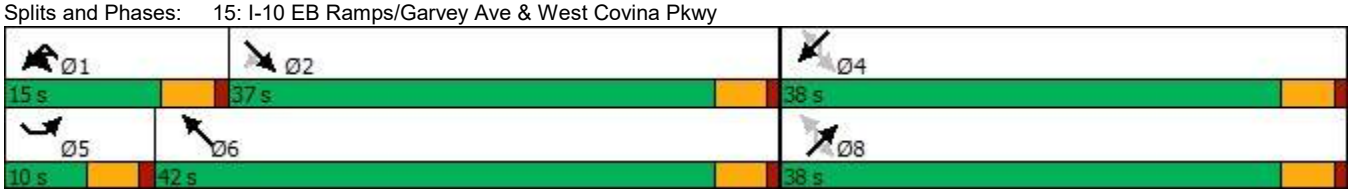
Splits and Phases: 15: I-10 EB Ramps/Garvey Ave & West Covina Pkwy



Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations											
Traffic Volume (vph)	30	483	576	252	687	108	44	175	20	9	92
Future Volume (vph)	30	483	576	252	687	108	44	175	20	9	92
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6		8			4	
Permitted Phases			2			8		8	4		4
Detector Phase	5	2	2	1	6	8	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	9.5	9.5	9.5	29.5	37.5	37.5	37.5	37.5	37.5	37.5
Total Split (s)	10.0	37.0	37.0	15.0	42.0	38.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	11.1%	41.1%	41.1%	16.7%	46.7%	42.2%	42.2%	42.2%	42.2%	42.2%	42.2%
Yellow Time (s)	3.5	3.5	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	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	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	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag						
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	Min	None	None	None	None	None	None
Act Effct Green (s)	5.8	19.2	19.2	9.7	30.3	11.5	11.5	11.5	11.5	11.5	11.5
Actuated g/C Ratio	0.11	0.35	0.35	0.18	0.55	0.21	0.21	0.21	0.21	0.21	0.21
v/c Ratio	0.18	0.45	0.67	0.47	0.41	0.44	0.13	0.42	0.08	0.03	0.25
Control Delay	30.5	15.1	5.3	25.8	9.4	25.6	20.2	6.6	20.2	19.4	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.5	15.1	5.3	25.8	9.4	25.6	20.2	6.6	20.2	19.4	5.1
LOS	C	B	A	C	A	C	C	A	C	B	A
Approach Delay		10.3			13.7		14.7			8.6	
Approach LOS		B			B		B			A	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 54.6	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 12.1	Intersection LOS: B
Intersection Capacity Utilization 58.4%	ICU Level of Service B
Analysis Period (min) 15	

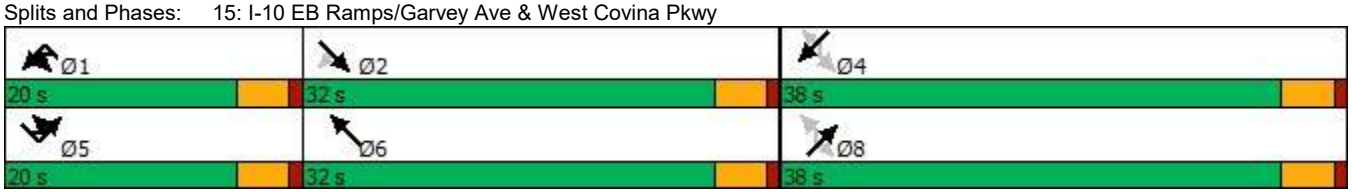
Splits and Phases: 15: I-10 EB Ramps/Garvey Ave & West Covina Pkwy



Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations											
Traffic Volume (vph)	190	814	590	265	776	70	66	168	33	44	280
Future Volume (vph)	190	814	590	265	776	70	66	168	33	44	280
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6		8			4	
Permitted Phases			2			8		8	4		4
Detector Phase	5	2	2	1	6	8	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	9.5	9.5	9.5	29.5	37.5	37.5	37.5	37.5	37.5	37.5
Total Split (s)	20.0	32.0	32.0	20.0	32.0	38.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	22.2%	35.6%	35.6%	22.2%	35.6%	42.2%	42.2%	42.2%	42.2%	42.2%	42.2%
Yellow Time (s)	3.5	3.5	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	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	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	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag						
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	Min	None	None	None	None	None	None
Act Effct Green (s)	12.1	25.2	25.2	11.1	24.2	9.8	9.8	9.8	9.8	9.8	9.8
Actuated g/C Ratio	0.20	0.42	0.42	0.18	0.40	0.16	0.16	0.16	0.16	0.16	0.16
v/c Ratio	0.56	0.57	0.60	0.50	0.69	0.38	0.26	0.47	0.18	0.17	0.62
Control Delay	30.1	15.7	4.3	26.4	18.4	29.5	25.8	8.3	25.5	24.6	9.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.1	15.7	4.3	26.4	18.4	29.5	25.8	8.3	25.5	24.6	9.0
LOS	C	B	A	C	B	C	C	A	C	C	A
Approach Delay		13.2			20.4		17.0			12.4	
Approach LOS		B			C		B			B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 60	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 16.0	Intersection LOS: B
Intersection Capacity Utilization 70.3%	ICU Level of Service C
Analysis Period (min) 15	

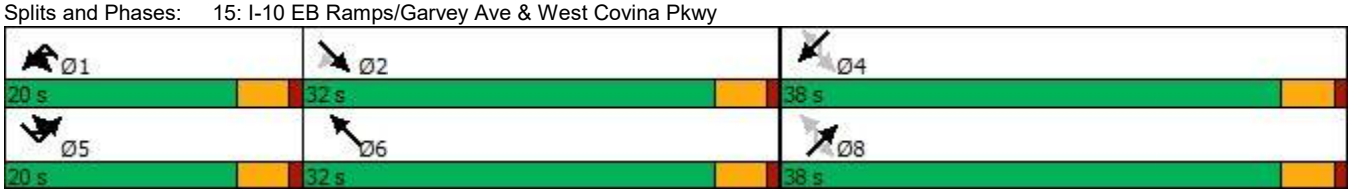
Splits and Phases: 15: I-10 EB Ramps/Garvey Ave & West Covina Pkwy



Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations											
Traffic Volume (vph)	190	834	590	342	917	70	66	168	33	44	280
Future Volume (vph)	190	834	590	342	917	70	66	168	33	44	280
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6		8			4	
Permitted Phases			2			8		8	4		4
Detector Phase	5	2	2	1	6	8	8	8	4	4	4
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	9.5	9.5	9.5	29.5	37.5	37.5	37.5	37.5	37.5	37.5
Total Split (s)	20.0	32.0	32.0	20.0	32.0	38.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	22.2%	35.6%	35.6%	22.2%	35.6%	42.2%	42.2%	42.2%	42.2%	42.2%	42.2%
Yellow Time (s)	3.5	3.5	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	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	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	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag						
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	Min	None	None	None	None	None	None
Act Effct Green (s)	12.1	27.5	27.5	12.4	27.8	9.8	9.8	9.8	9.8	9.8	9.8
Actuated g/C Ratio	0.19	0.43	0.43	0.20	0.44	0.15	0.15	0.15	0.15	0.15	0.15
v/c Ratio	0.59	0.57	0.59	0.61	0.74	0.40	0.28	0.49	0.19	0.18	0.63
Control Delay	31.9	16.3	4.2	27.9	19.9	30.5	26.5	8.5	25.9	25.0	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.9	16.3	4.2	27.9	19.9	30.5	26.5	8.5	25.9	25.0	9.3
LOS	C	B	A	C	B	C	C	A	C	C	A
Approach Delay		13.7			22.0		17.5			12.8	
Approach LOS		B			C		B			B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 63.3	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 17.2	Intersection LOS: B
Intersection Capacity Utilization 74.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 15: I-10 EB Ramps/Garvey Ave & West Covina Pkwy



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