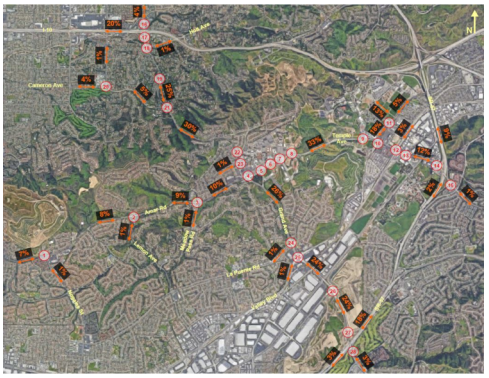
Traffic Impact Analysis for Mt. San Antonio College

Long Range Development Plan
2018 Educational and Facilities Master Plan







MT. SAC
Mt. San Antonio College

March 2019

Balancing the Natural and Built Environment

PSOMAS



TRAFFIC IMPACT ANALYSIS
FOR MT. SAN ANTONIO COLLEGE
LONG RANGE DEVELOPMENT PLAN
2018 EDUCATIONAL AND FACILITIES MASTER PLAN

Prepared For

MT. SAC
Mt. San Antonio College

Prepared By

PSOMAS

Psomas Project No. 3MTS010300

March 2019

TABLE OF CONTENTS

1. INTRODUCTION 1

1.1. STUDY AREA 4

1.2. ANALYSIS METHODOLOGY 7

1.2.1. INTERSECTION CAPACITY UTILIZATION (ICU) 7

1.2.2. HIGHWAY CAPACITY MANUAL (HCM) 8

1.2.3. CALTRANS GUIDELINES 9

2. EXISTING STUDY AREA CONDITIONS 10

2.1. ROADWAY NETWORK 10

2.2. PUBLIC TRANSIT 12

2.3. TRAFFIC VOLUMES 12

3. PROJECT DESCRIPTION 16

3.1. ASSUMPTIONS FOR THE TRAFFIC IMPACT ANALYSIS 21

4. PROJECTED TRAFFIC VOLUMES 24

4.1. INTERIM YEAR (2021) – PHASE 1A 24

4.1.1. PROJECT TRIP GENERATION 24

4.1.2. PROJECT TRIP DISTRIBUTION 24

4.1.3. PROJECT TRAFFIC VOLUMES 27

4.1.4. RELATED PROJECT TRAFFIC VOLUMES 27

4.1.5. CUMULATIVE TRAFFIC VOLUMES 35

4.1.6. CUMULATIVE PLUS PROJECT TRAFFIC VOLUMES 35

4.2. BUILDOUT YEAR (2027) 40

4.2.1. PROJECT TRIP GENERATION 40

4.2.2. PROJECT TRIP DISTRIBUTION 40

4.2.3. PROJECT TRAFFIC VOLUMES 40

4.2.4. CUMULATIVE GROWTH 43

5. OPERATIONAL ANALYSIS – EXISTING YEAR (2018) 48

5.1. EXISTING CONDITIONS 48
5.2. EXISTING PLUS PROJECT CONDITIONS 49
5.3. EXISTING PLUS PROJECT SIGNIFICANT IMPACT EVALUATION 52
5.4. EXISITNG PLUS PROJECT PRELIMINARY SIGNAL WARRANT ANALYSIS 54
5.5. MITIGATION MEASURES 54

6. OPERATIONAL ANALYSIS – INTERIM YEAR (2021) 60

6.1. 2021 CUMULATIVE CONDITIONS WITHOUT THE PROJECT 60
6.2. 2021 CUMULATIVE PLUS PROJECT CONDITIONS 61
6.3. 2021 CUMULATIVE PLUS PROJECT SIGNIFICANT IMPACT EVALUATION 61
6.4. 2021 WITH PROJECT PRELIMINARY SIGNAL WARRANT ANALYSIS 63
6.5. MITIGATION MEASURES 63

7. OPERATIONAL ANALYSIS – BUILDOUT YEAR (2027) 68

7.1. 2027 CUMULATIVE CONDITIONS 68
7.2. 2027 CUMULATIVE PLUS PROJECT CONDITIONS 69
7.3. 2027 CUMULATIVE PLUS PROJECT SIGNIFICANT IMPACT EVALUATION 69
7.4. 2027 WITH PROJECT PRELIMINARY SIGNAL WARRANT ANALYSIS 71
7.5. MITIGATION MEASURES 71

8. CALIFORNIA STATE POLYTECHNIC UNIVERSITY, POMONA 77

9. FAIR SHARE CONTRIBUTION 79

10. CONGESTION MANAGEMENT PROGRAM (CMP) ANALYSIS 80

10.1. TRANSIT IMPACT ANALYSIS 80

11. SUMMARY 81

12. REFERENCES 85

APPENDIX A – TRAFFIC VOLUME DATA
APPENDIX B – ICU SPREADSHEETS AND HCM REPORTS – EXISTING CONDITIONS
APPENDIX C – ICU SPREADSHEETS AND HCM REPORTS – 2021 CONDITIONS
APPENDIX D – ICU SPREADSHEETS AND HCM REPORTS – 2027 CONDITIONS

LIST OF TABLES

TABLE 1. SIGNIFICANT IMPACT THRESHOLDS – ICU METHODOLOGY 8
TABLE 2. FREEWAY SEGMENT CAPACITY 9
TABLE 3. INTERIM (2021) PROJECT TRIP GENERATION 24
TABLE 4. RELATED PROJECTS 30
TABLE 5. RELATED PROJECTS TRIP GENERATION 32
TABLE 6. BUILDOUT (2027) PROJECT TRIP GENERATION 40
TABLE 7. EXISTING PLUS PROJECT IMPACTS ANALYSIS 53
TABLE 8. EXISTING PLUS MITIGATED PROJECT IMPACTS ANALYSIS 59
TABLE 9. INTERIM (2021) CUMULATIVE PLUS PROJECT IMPACTS ANALYSIS 62
TABLE 10. INTERIM (2021) CUMULATIVE PLUS MITIGATED PROJECT IMPACTS ANALYSIS 67
TABLE 11. BUILDOUT (2027) CUMULATIVE PLUS PROJECT IMPACTS ANALYSIS 70
TABLE 12. BUILDOUT (2027) CUMULATIVE PLUS MITIGATED PROJECT IMPACTS ANALYSIS 75
TABLE 13. PROJECT FAIR SHARE CONTRIBUTION 79
TABLE 14. SUMMARY OF MITIGATION MEASURES 83

LIST OF FIGURES

FIGURE 1. 2018 FACILITIES MASTER PLAN ____ 3
FIGURE 2. PROJECT LOCATION AND STUDY INTERSECTIONS ____ 6
FIGURE 3. EXISTING FOOTHILL TRANSIT ROUTES ____ 13
FIGURE 4A. EXISTING TRAFFIC VOLUMES (INTERSECTIONS 1-8, 22-28) ____ 14
FIGURE 4B. EXISTING TRAFFIC VOLUMES (INTERSECTIONS 9-21, 29-30) ____ 15
FIGURE 5. 2018 EFMP PARKING AND CIRCULATION RECOMMENDATIONS ____ 17
FIGURE 6. 2018 EFMP BICYCLE CIRCULATION RECOMMENDATIONS ____ 19
FIGURE 7. 2018 EFMP PEDESTRIAN CIRCULATION RECOMMENDATIONS ____ 20
FIGURE 8. PROJECT TRIP DISTRIBUTION ____ 25
FIGURE 9. PROJECT TRIP DISTRIBUTION (INBOUND) – CAMPUS AREA ____ 26
FIGURE 10A. INTERIM (2021) PROJECT TRAFFIC VOLUMES (INTERSECTIONS 1-8, 22-28) ____ 28
FIGURE 10B. INTERIM (2021) PROJECT TRAFFIC VOLUMES (INTERSECTIONS 9-21, 29-30) ____ 29
FIGURE 11. RELATED PROJECT LOCATIONS ____ 31
FIGURE 12A. RELATED PROJECTS TRAFFIC VOLUMES (INTERSECTIONS 1-8, 22-28) ____ 33
FIGURE 12B. RELATED PROJECTS TRAFFIC VOLUMES (INTERSECTIONS 9-21, 29-30) ____ 34
FIGURE 13A. INTERIM (2021) CUMULATIVE TRAFFIC VOLUMES (INTERSECTIONS 1-8, 22-28) ____ 36
FIGURE 13B. INTERIM (2021) CUMULATIVE TRAFFIC VOLUMES (INTERSECTIONS 9-21, 29-30) ____ 37
FIGURE 14A. INTERIM (2021) CUMULATIVE PLUS PROJECT TRAFFIC VOLUMES (INTERSECTIONS 1-8, 22-28) ____ 38
FIGURE 14B. INTERIM (2021) CUMULATIVE PLUS PROJECT TRAFFIC VOLUMES (INTERSECTIONS 9-21, 29-30) ____ 39
FIGURE 15A. BUILDOUT (2027) PROJECT TRAFFIC VOLUMES (INTERSECTIONS 1-8, 22-28) ____ 41
FIGURE 15B. BUILDOUT (2027) PROJECT TRAFFIC VOLUMES (INTERSECTIONS 9-21, 29-30) ____ 42
FIGURE 16A. BUILDOUT (2027) CUMULATIVE TRAFFIC VOLUMES (INTERSECTIONS 1-8, 22-28) ____ 44
FIGURE 16B. BUILDOUT (2027) CUMULATIVE TRAFFIC VOLUMES (INTERSECTIONS 9-21, 29-30) ____ 45
FIGURE 17A. BUILDOUT (2027) CUMULATIVE PLUS PROJECT TRAFFIC VOLUMES (INTERSECTIONS 1-8, 22-28) ____ 46
FIGURE 17B. BUILDOUT (2027) CUMULATIVE PLUS PROJECT TRAFFIC VOLUMES (INTERSECTIONS 9-21, 29-30) ____ 47
FIGURE 18A. EXISTING PLUS PROJECT TRAFFIC VOLUMES (INTERSECTIONS 1-8, 22-28) ____ 50
FIGURE 18B. EXISTING PLUS PROJECT TRAFFIC VOLUMES (INTERSECTIONS 9-21, 29-30) ____ 51
FIGURE 19. EXISTING PLUS PROJECT PEAK HOUR SIGNAL WARRANT ____ 54
FIGURE 20. INTERIM (2021) CUMULATIVE PLUS PROJECT PEAK HOUR SIGNAL WARRANT ____ 63
FIGURE 21. BUILDOUT (2027) CUMULATIVE PLUS PROJECT PEAK HOUR SIGNAL WARRANT ____ 71
FIGURE 22. CAL POLY POMONA POTENTIAL BYPASS ____ 78

1. INTRODUCTION

This Traffic Impact Analysis (TIA) is part of the study to provide California Environmental Quality Act (CEQA) documentation for the Mt. San Antonio College (Mt. SAC) 2018 *Educational and Facilities Master Plan*[1] (EFMP) and associated 2017 *Parking and Circulation Master Plan*[2] (PCMP). Based on the EFMP (which is the Long Range Development Plan for the College), the construction of planned new buildings and parking structures, infrastructure facilities, site improvements, and renovation of existing buildings is expected to be completed in phases between 2019 and 2027. This study evaluates conditions at the completion of Phase 1A in 2021 and Phases 1B and 2 in 2027.

It should also be noted that certain projects included in the proposed EFMP have been evaluated in previous project-specific level environmental documents pursuant to CEQA, and do not require further approval from the Mt. San Antonio Community College District Board of Trustees. These projects include the following:

- Physical Education Project (Phase 1, 2)
    - Phase 1- Athletic Complex East, currently under construction
    - Phase 2- Physical Education Complex, included in this EFMP
    - Both phases were evaluated at a project-specific level in the *Physical Education Project (Phase 1, 2) Final Subsequent Project EIR to 2015 Facilities Master Plan Update and Physical Education Projects Final Program/Project EIR (SCH No. 2002041161)* certified by the Board of Trustees in August 2017
- West Parcel Site Improvements project
    - Currently under construction
    - Evaluated in the *West Parcel Solar Project Tiered Project EIR to the 2012 Facilities Master Plan Program EIR (SCH 2002041161*) and certified by the Board of Trustees in October 2017
- Additionally, project-specific level evaluation of the proposed Transit Center and associated circulation improvements has been conducted separately in coordination with Foothill Transit. On December 12, 2018, the Board of Trustees of the Mt. San Antonio Community College District adopted and certified the Final Initial Study/Mitigated Negative Declaration for the Mt. SAC Transit Center (SCH 2018091026) and approved the Transit Center project via Resolution No. 18-13.

These projects are addressed in this TIA to the extent that they are part of the larger "program" being evaluated.

Figure 1, taken from the EFMP, shows the planned facilities. Additional information about the specific buildings and parking structures can be found in the EFMP.

The estimation of project traffic generated by the implementation of the proposed EFMP and the associated traffic impact analysis in this study are based on student headcount. However, certain proposed facilities are relevant to the analysis of traffic conditions and potential project impacts. Notably, the new parking structures included with the project are considered in this traffic analysis because they are expected to influence the distribution of new trips around the campus.

With respect to headcount, the EFMP anticipates an increase in the campus headcount from 37,864 students in fall 2017 to between 40,802 and 42,745 students in fall 2027 (based on the estimated medium and high growth rates). To be conservative, this study considers the high growth rate of 1.22% (refer to the discussion provided in Section 4, Projected Traffic Volumes).

For this study, traffic impact analyses were conducted for existing conditions (2018), the interim Phase 1A (2021), and buildout (2027) to assess potential traffic impacts near Mt. SAC. In summary, the following scenarios were evaluated in this study:

- Existing Conditions
- Existing Plus Project (full EFMP buildout through Phase 2) Conditions
- 2021 Cumulative Conditions (Existing plus Related Projects)
- 2021 Cumulative Plus Project (Phase 1A) Conditions
- 2027 Cumulative Conditions
- 2027 Cumulative Plus Project (full EFMP buildout through Phase 2) Conditions

The project boundaries, the study area, and the traffic impact analysis methodology used in this study are described in the following sections, and Section 4 provides more information about the EFMP and the assumptions for each study scenario.

Figure 1. 2018 Facilities Master Plan



1.1. STUDY AREA

The 28 study intersections listed below were selected based on their inclusion in the 2015 Traffic Impact Study[3] and requests from the Cities of Walnut, Pomona, and West Covina. In addition, major intersections which directly serve Mt. SAC which were not included in the 2015 study were added. The jurisdiction in which each intersection is located is shown in parentheses, and Caltrans intersections are indicated as such.

1. Nogales Street and Amar Road (West Covina)
2. Lemon Avenue and Amar Road (Walnut)
3. Meadow Pass Road and Amar Road (Walnut)
4. Grand Avenue and Temple Avenue/Amar Road (Walnut) – will be referred to as Grand Avenue and Temple Avenue throughout this report
5. Mt. SAC Way and Temple Avenue (Walnut)
6. Proposed Transit Center Access and Temple Avenue (Walnut)
7. Bonita Drive and Temple Avenue (Walnut)
8. Lot F Entrance and Temple Avenue (Walnut)
9. University Drive and Temple Avenue (Pomona)
10. Campus Drive and Temple Avenue (Pomona)
11. Campus Drive and Kellogg Drive (Pomona)
12. Valley Boulevard and Temple Avenue (Pomona)
13. Pomona Boulevard and Temple Avenue (Pomona)
14. SR-57 SB Ramps and Temple Avenue (Pomona, Caltrans)
15. SR-57 NB Ramps and Temple Avenue (Pomona, Caltrans)
16. Grand Avenue and I-10 WB Ramp (West Covina, Caltrans)
17. Grand Avenue and I-10 EB Ramp (West Covina, Caltrans)
18. Grand Avenue and Holt Avenue (West Covina)
19. Grand Avenue and Cortez Street (West Covina)
20. Barranca Street and Cameron Avenue (West Covina)
21. Grand Avenue and Cameron Avenue (Los Angeles County)
22. Grand Avenue and Mountaineer Road (Walnut)
23. Grand Avenue and San Jose Hills Road (Walnut)
24. Grand Avenue and La Puente Road (Walnut)
25. Grand Avenue and Valley Boulevard (Walnut)

26. Grand Avenue and Baker Parkway (Industry)
27. Grand Avenue and SR-60 WB Ramps (Industry, Caltrans)
28. Grand Avenue and SR-60 EB Ramps (Diamond Bar, Caltrans)

After the initial draft of this study was completed, Mt. SAC was contacted by California State Polytechnic University, Pomona (Cal Poly Pomona) with a request to provide a preliminary discussion about a possible campus bypass which would include the following intersections:

29. I-10 eastbound off-ramp/East Campus Drive and Kellogg Drive (Los Angeles County, Caltrans)
30. East Campus Drive and South Campus Drive (Los Angeles County)

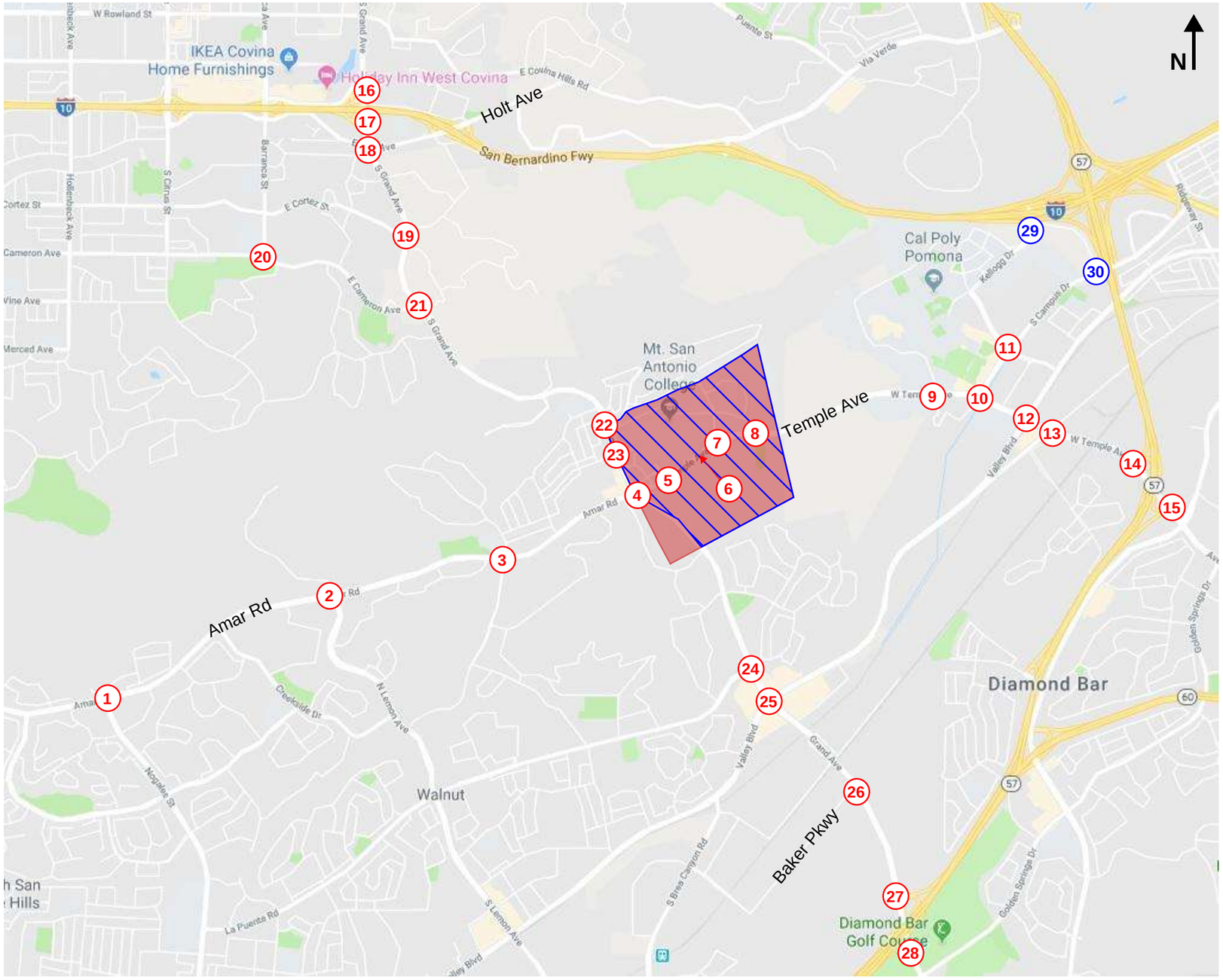
Although these two intersections are outside the study area for this document and were therefore not analyzed, traffic volume information for both (given the existing geometry and circulation) is provided throughout for reference. The potential plans for the area, along with the discussion and evaluation of these two intersections, are provided in Section 8 of this document.

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

- I-10, Citrus Street to Holt Avenue
- SR-57, Grand Avenue to SR-60

The *2010 Congestion Management Program (CMP) for Los Angeles County*[4] provides guidelines to evaluate the potential impact of local growth on the regional transportation system. Although there are some CMP facilities in the project vicinity, the project trips are not expected to meet thresholds for analysis of any of the facilities and CMP analysis is therefore not required.

Figure 2 shows the project vicinity and the study intersections as well as the two intersections included for evaluation as requested by Cal Poly Pomona.



1. Nogales Street and Amar Road
2. Lemon Avenue and Amar Road
3. Meadow Pass Road and Amar Road
4. 4.Grand Avenue and Temple Avenue/Amar Road – will be referred to as Grand Avenue and Temple Avenue throughout this report
5. Mt. SAC Way and Temple Avenue
6. Proposed Transit Center Access and Temple Avenue
7. Bonita Drive and Temple Avenue
8. Lot F Entrance and Temple Avenue
9. University Drive and Temple Avenue
10. Campus Drive and Temple Avenue
11. Campus Drive and Kellogg Drive
12. Valley Boulevard and Temple Avenue
13. Pomona Boulevard and Temple Avenue
14. SR-57 SB Ramps and Temple Avenue
15. SR-57 NB Ramps and Temple Avenue
16. Grand Avenue and I-10 WB Ramp
17. Grand Avenue and I-10 EB Ramp
18. Grand Avenue and Holt Avenue
19. Grand Avenue and Cortez Street
20. Barranca Street and Cameron Avenue
21. Grand Avenue and Cameron Avenue
22. Grand Avenue and Mountaineer Road
23. Grand Avenue and San Jose Hills Road
24. Grand Avenue and La Puente Road
25. Grand Avenue and Valley Boulevard
26. Grand Avenue and Baker Parkway
27. Grand Avenue and SR-60 WB Ramps
28. Grand Avenue and SR-60 EB Ramps
29. I-10 eastbound off-ramp/East Campus Drive and Kellogg Drive
30. East Campus Drive and South Campus Drive

LEGEND

- XX Study Intersection
- XX Additional Intersection (Reference Only)
- Mt. SAC Campus
- Project Area (2018 EFMP)

Traffic Impact Analysis
Mt. San Antonio College
2018 EFMP

Figure 2.
Project Location and Study Intersections

PSOMAS
March 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 growth of the student population and the addition of new parking structures, and due to background traffic growth and related projects, the following scenarios were evaluated:

- Existing Conditions
- Existing Plus Project (full EFMP buildout through Phase 2) Conditions
- 2021 Cumulative Conditions (Existing plus Related Projects)
- 2021 Cumulative Plus Project (Phase 1A) Conditions
- 2027 Cumulative Conditions
- 2027 Cumulative Plus Project (full EFMP buildout through Phase 2) Conditions

This TIA follows the *Los Angeles County Traffic Impact Analysis Report Guidelines*[5]. Non-freeway ramp intersections were evaluated based on the LA County guidelines, which apply the Intersection Capacity Utilization (ICU) methodology at signalized intersections and the Highway Capacity Manual (HCM) methodology at unsignalized intersections. For the intersections operated under Caltrans' jurisdiction, operational analyses were based on the HCM methodology. 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 time (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 (HCM)

The LA County guidelines do not refer to significant impacts at unsignalized intersections. However, this study applied the *HCM*[6] methodology to evaluate unsignalized intersections, which defines LOS based on delay. The analyses for the unsignalized intersections were conducted using the software *Synchro*.

Although no thresholds are available for significant impacts at unsignalized intersections, several jurisdictions recommend evaluation methodologies. For example, the LADOT guidelines[7] recommend that if an unsignalized intersection has a LOS E or F in the "future with project" scenario, a signal warrant analysis should be conducted.

For this study, the LOS for unsignalized intersections is shown for each scenario. For intersections with LOS E or F, a preliminary peak hour signal warrant evaluation was conducted. However, the construction of a signal is not considered a mitigation measure, and the preliminary warrant analysis is provided for information only. Further, it is recommended that a full signal warrant analysis be conducted before a new traffic signal is installed at any location.

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. To be consistent with previous studies conducted for Mt. SAC and 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 roadways in the project traffic study area, as discussed below:

Grand Avenue is an existing four-lane divided roadway in the project vicinity, widening to six lanes further south in the study area. There are bike lanes along some portions of the roadway, and on-street parking is prohibited. The roadway is classified as a major arterial by the City of Walnut[8], and has a posted speed limit of 40 mph in the campus vicinity, increasing to 45 mph north of campus and 50 mph south of Temple Avenue.

Amar Road/Temple Avenue is a four-lane divided roadway through the campus area, widening to a six-lane facility to the east. On-street parking is generally prohibited along the roadway, except for the segment between Mt. SAC Way and Bonita Drive. The roadway is classified by the City of Walnut as a major arterial east of Grand Avenue and as a minor arterial west of Grand Avenue with a posted speed limit of 40 mph in the campus vicinity, increasing to 45 mph west of Heidelberg Avenue and 50 mph east of Bonita Drive.

Mountaineer Road is a two-lane divided roadway located on the northern boundary of the campus between Grand Avenue and Edinger Way and is classified as an important local street by the City of Walnut. Near the Grand Avenue intersection, the roadway is wider, providing four turn lanes onto Grand Avenue and two egress lanes from Grand Avenue. Mountaineer Road provides direct access to campus parking and facilities via Edinger Way. On-street parking is prohibited in this segment, and the posted speed limit is 30 mph.

Cameron Avenue is a four-lane undivided roadway with bike lanes which provides access to the area between I-10 and Grand Avenue via Citrus Street and Barranca Street. The roadway is classified as a principal arterial by the City of West Covina and has a posted speed limit of 45 mph.

La Puente Road is a four-lane divided roadway west of Grand Avenue; east of Grand Avenue, the roadway narrows to a two-lane undivided roadway and serves a large residential area. West of Grand Avenue, the roadway is classified as a secondary street by the City of Walnut and has a posted speed limit of 40 mph.

Valley Boulevard is a four- to six-lane divided roadway and is classified as a major arterial by the City of Walnut. South of Pomona Boulevard, the roadway has a raised median, and north of Pomona Boulevard, there is a two-way left turn lane. On-street parking is prohibited in the study area, and the roadway has a posted speed limit of 50 mph.

Nogales Street is a four-lane divided roadway with bike lanes south of Amar Road, and becomes the two-lane undivided Walnut Vista Way north of Amar Road. The portion of the roadway south of Amar Road is classified as a minor arterial by the City of Walnut and has a posted speed limit of 45 mph.

Lemon Avenue is a four-lane divided roadway south of Amar Road, narrowing to a two-lane undivided roadway north of Amar Road. The southern portion of the roadway is classified as a minor arterial by the City of Walnut and has a posted speed limit of 35 mph.

Meadow Pass Road is a two-lane divided roadway with a separate multi-use path south of Amar Road, and becomes the two-lane undivided Country Hollow Drive north of Amar Road. The portion of the roadway south of Amar Road is classified as an important local street by the City of Walnut and has a posted speed limit of 30 mph.

Campus Drive is a four-lane generally undivided roadway that passes through the Cal Poly Pomona campus, but also provides access between Temple Avenue and I-10 via Ridgeway Street. Between Temple Avenue and Kellogg Drive, the roadway is divided by either a raised median or left turn lanes. The roadway is classified as a collector by the City of Pomona[9] and has a posted speed limit of 45 mph.

2.2. PUBLIC TRANSIT

The Mt. SAC campus is currently served by five Foothill Transit routes, all of which travel along Temple Avenue from Grand Avenue to the east[10]. Routes 190 and 480 travel to/from the north along Grand Avenue, route 486 travels to/from the west on Amar Road, and routes 194 and 289 travel to/from the south along Grand Avenue. Figure 3 shows the existing routes as of December 2018 in a regional context and along the Mt. SAC frontage.

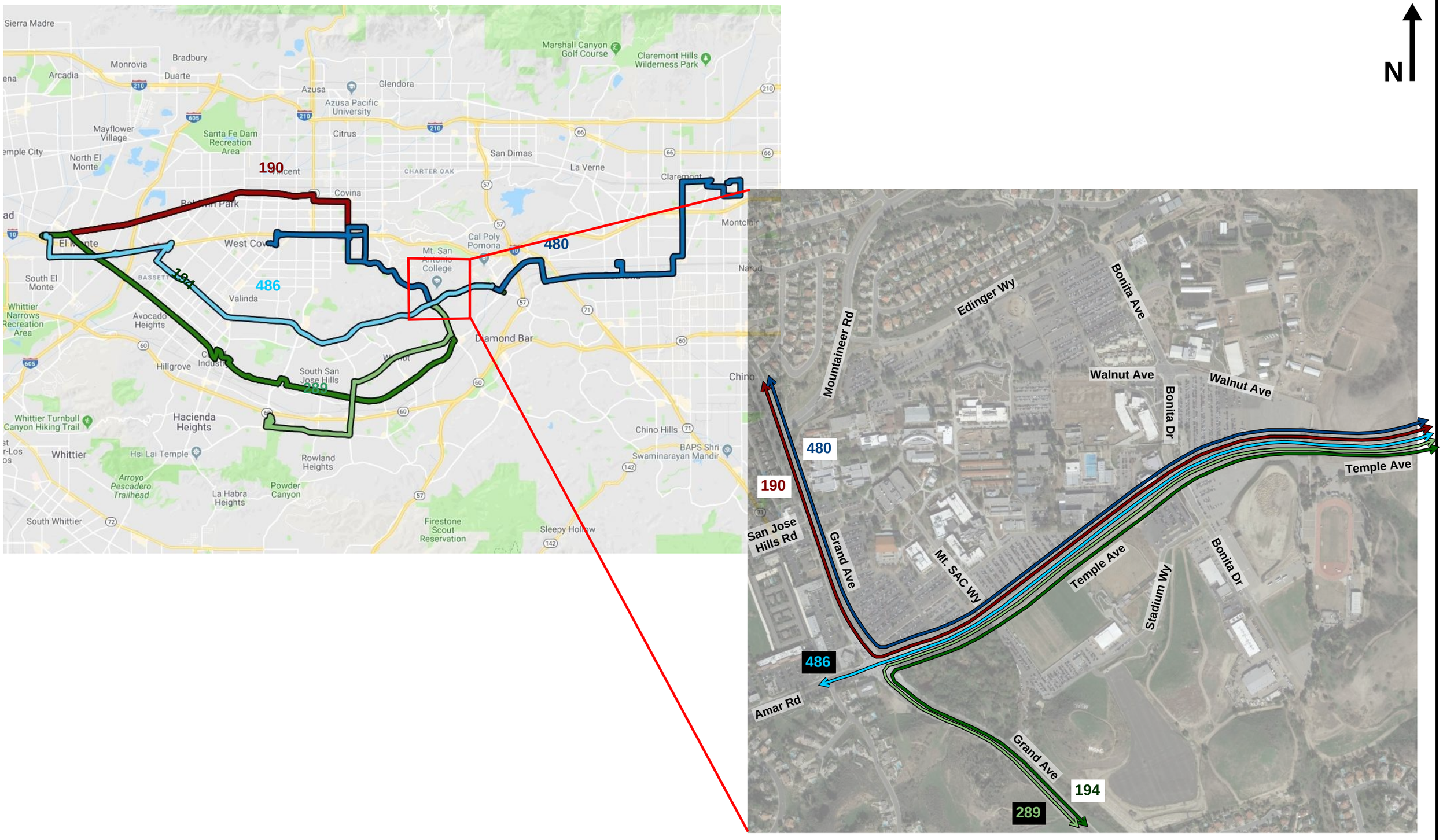
Further, on December 12, 2018, the Board of Trustees of the Mt. San Antonio Community College District adopted and certified the Final Initial Study/Negative Declaration for the Mt. San Antonio College Transit Center (SCH 2018091026) and approved the Transit Center project via Resolution No. 18-13. The proposed transit center will be located on the north side of Temple Avenue, just west of Bonita Drive.

2.3. TRAFFIC VOLUMES

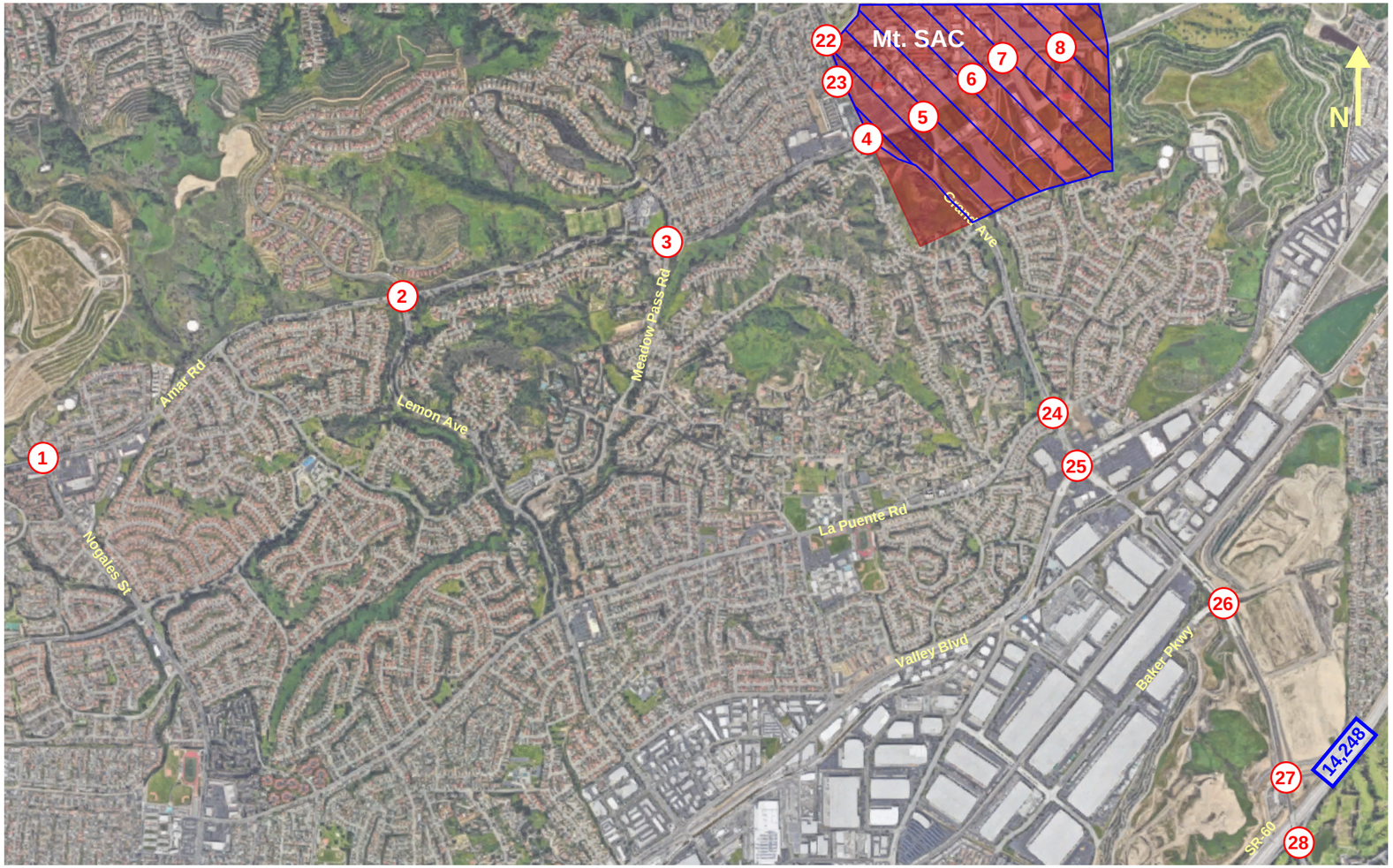
Traffic volume data was collected at most study intersections in May 2018 by National Data & Surveying Services for Psomas from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM. Traffic volume data at the Proposed Transit Center Access and Temple Avenue intersection was also collected in March 2018 for a 24-hour period. 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.

The volumes along I-10 and SR-57 are from 2016 Caltrans data[11]. Traffic volume data for the two intersections added after the initial draft of this report (I-10 eastbound off ramp/East Campus Drive/Kellogg Drive and East Campus Drive/South Campus Drive) was collected in October 2018. Recall that these two intersections (numbers 29 and 30 in the figures) are not part of the study area and are not included in the detailed traffic analysis for this project; however, the volumes will be shown throughout for reference.

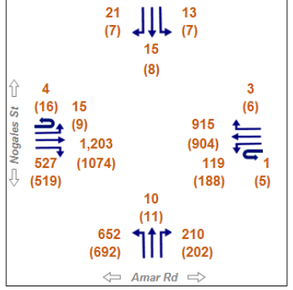
Figures 4A and 4B show the peak hour traffic volumes. All collected traffic volume data is included in Appendix A.



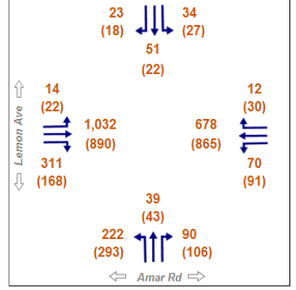
Traffic Impact Analysis Mt. San Antonio College 2018 EFMP	*Figure 3.* *Existing Foothill Transit Routes*	P S O M A S March 2019



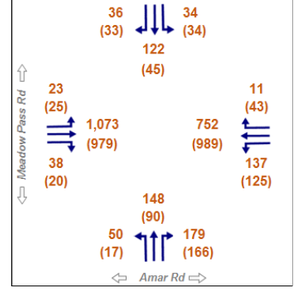
1 Amar Rd / Nogales St



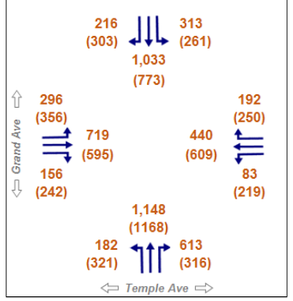
2 Amar Rd / Lemon Ave



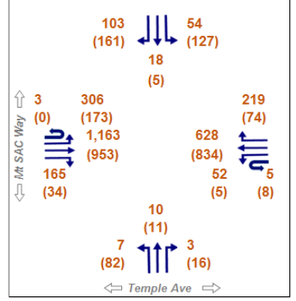
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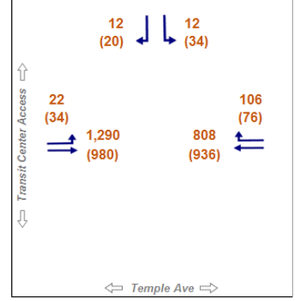
4 Temple Ave / Grand Ave



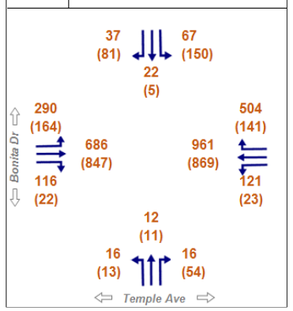
5 Temple Ave / Mt SAC Way



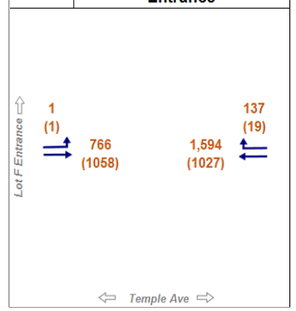
6 Temple Ave / Transit Center Access



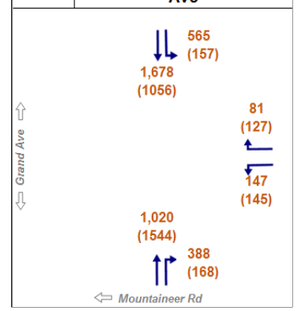
7 Temple Ave / Bonita Dr



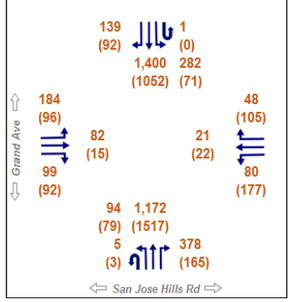
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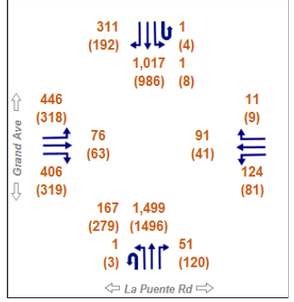
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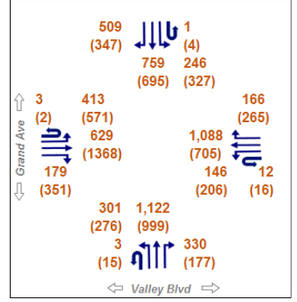
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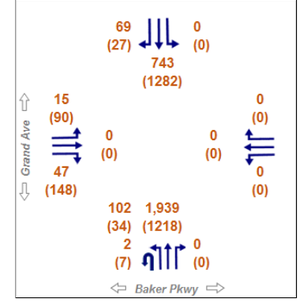
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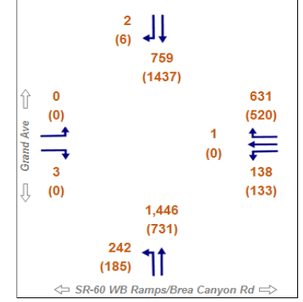
25 Valley Blvd / Grand Ave



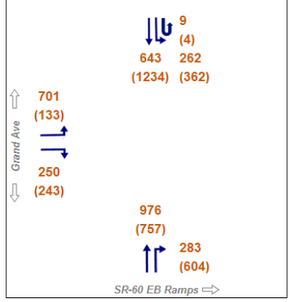
26 Baker Pkwy / Grand Ave



27 SR-60 WB Ramps / Grand Ave



28 SR-60 EB Ramps / Grand Ave



LEGEND

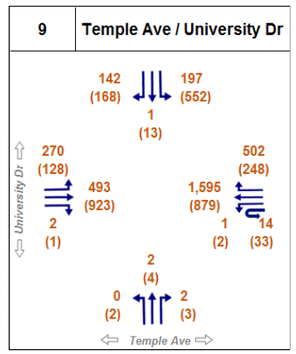
- XX — Intersection Number
- XX — AM Peak Hour Traffic Volume (veh/hr)
- (XX) — PM Peak Hour Traffic Volume (veh/hr)
- XX,XXX — Segment Peak Hour Traffic Volume (pc/hr)
- Mt. SAC Campus
- Project Area (2018 EFMP)

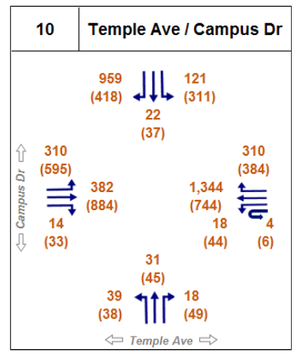
Traffic Impact Analysis
Mt. San Antonio College
2018 EFMP

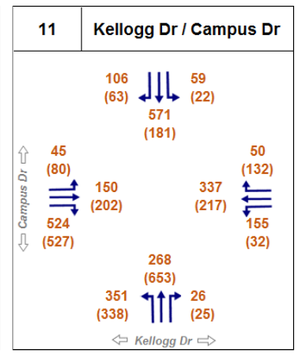
Figure 4A.
Existing Traffic Volumes (Intersections 1-8, 22-28)

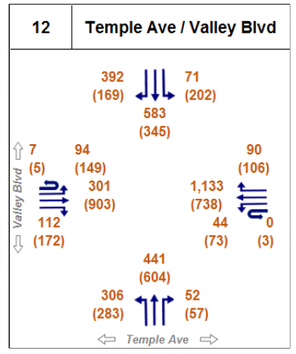
PSOMAS
March 2019

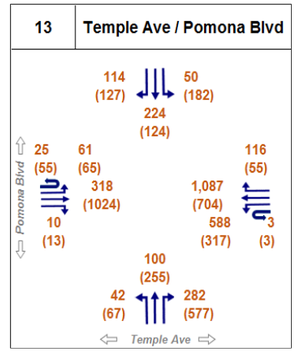


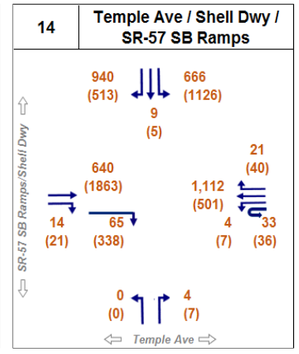


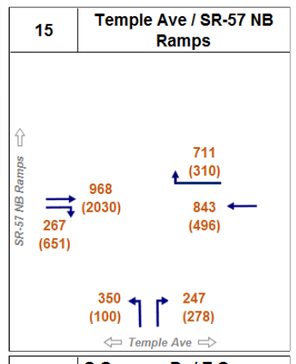


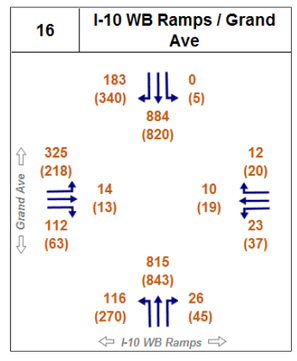


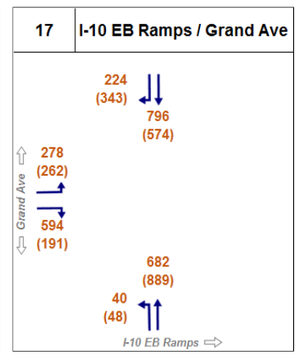


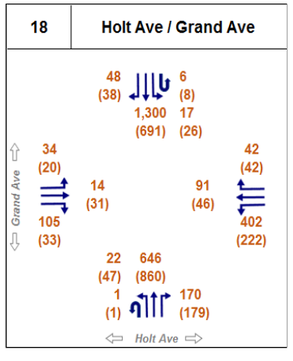


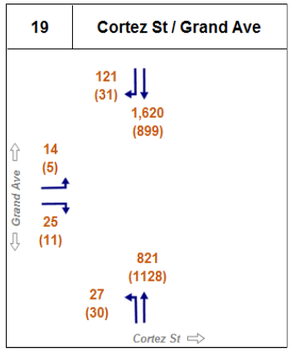


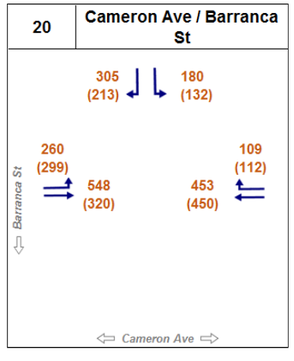


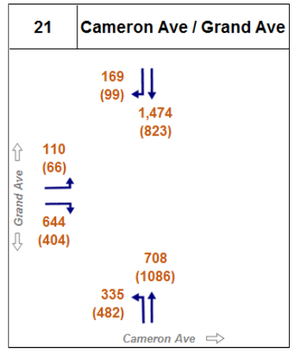


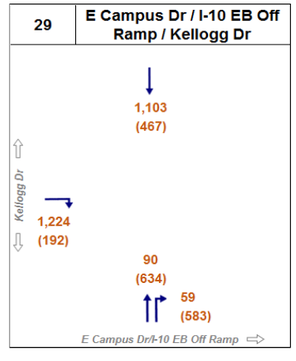


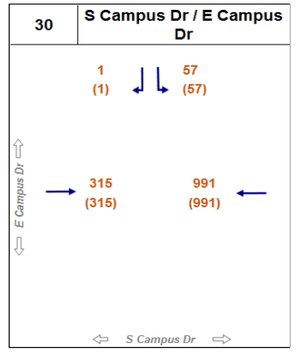












LEGEND

- XX — Intersection Number
- XX — AM Peak Hour Traffic Volume (veh/hr)
- (XX) — PM Peak Hour Traffic Volume (veh/hr)
- XX,XXX — Segment Peak Hour Traffic Volume (pc/hr)
- Mt. SAC Campus
- Project Area (2018 EFMP)

Traffic Impact Analysis
Mt. San Antonio College
2018 EFMP

Figure 4B.
Existing Traffic Volumes (Intersections 9-21, 29-30)

PSOMAS
March 2019

3. PROJECT DESCRIPTION

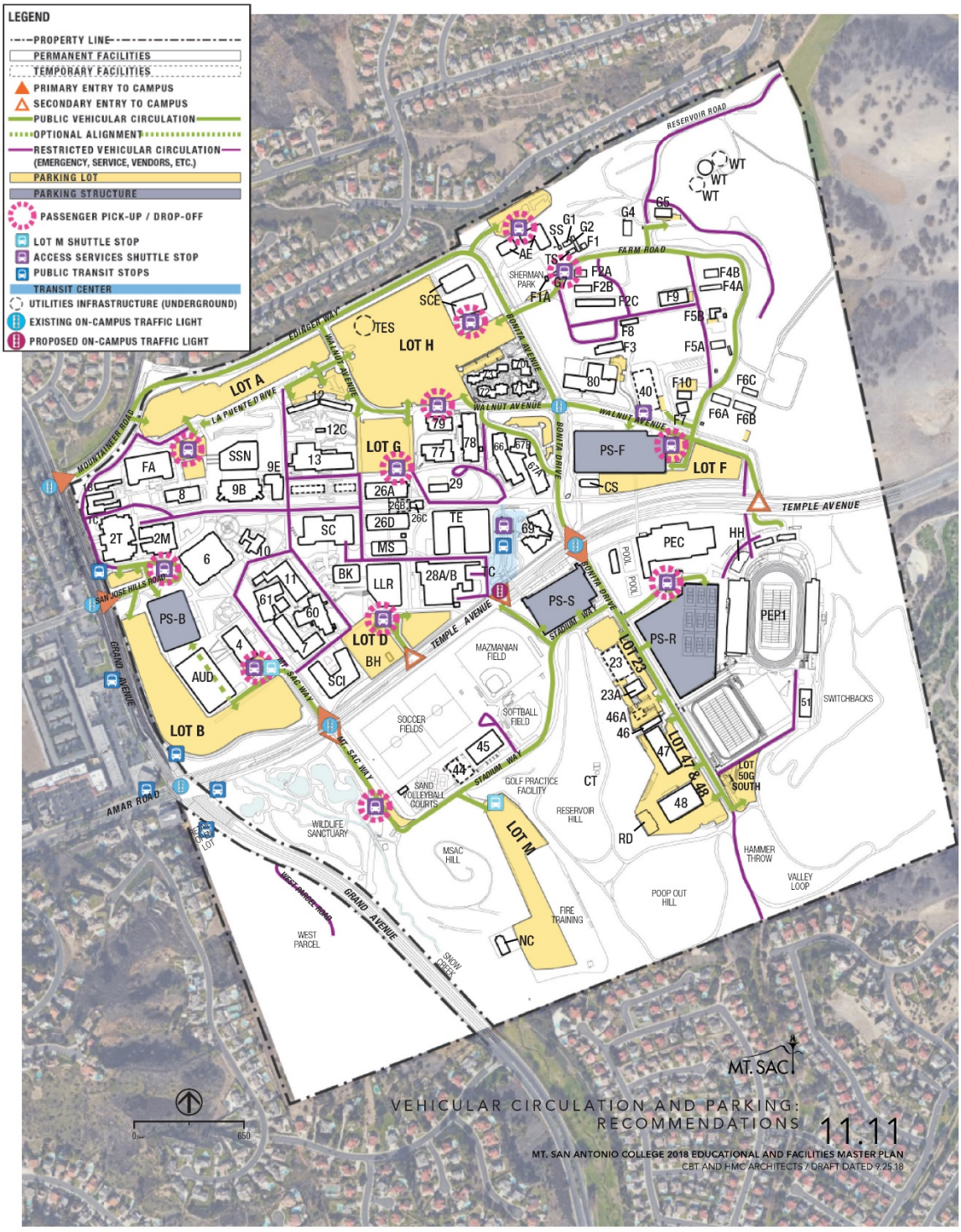
The *2018 Educational and Facilities Master Plan* (EFMP) is the subject of this TIA. Prior to the EFMP, the *2017 Parking and Circulation Master Plan* (PCMP) for Mt. SAC was completed in November 2017 and included recommendations for providing parking through the 2025-2026 school year. The projections were based on an annual increase in the student headcount of 0.75%, with an additional 5% buffer included in each year to ensure adequate parking was provided. The PCMP included distribution of new trips generated by the growth at the College and provided recommendations for the construction of four new parking structures by 2026. The final recommended parking improvements are shown in Figure 5 (taken from the EFMP).

The EFMP considers the assumptions in the PCMP, but also provides a higher potential student growth rate of 1.22% per year to be conservative. Per the EFMP, the parking structures recommended in the PCMP for lots R and S should be constructed with Phase 1A. The recommended parking structures in Lot B and Lot F are assumed to be constructed in Phase 2, with Lot B assumed to be constructed first. The plan also includes recommendations for numerous new educational buildings, with a 10-year horizon period. The overall master plan is shown in Figure 1 (page 3, taken from the EFMP).

The PCMP also introduced the proposed Transit Center to be constructed on campus by Foothill Transit (shown in Figure 5 across Temple Avenue from the parking structure in Lot S). The Final Initial Study/Mitigated Negative Declaration for the Transit Center was adopted and certified on December 12, 2018. Mt. SAC is committed to continuing its Class Pass program, which provides students with unlimited access to Foothill Transit buses as part of their student fees to help encourage more students and employees to commute to campus by bus. Mt. SAC also hopes to encourage transit agencies to expand their service to the campus. Lastly, the Transit Center will help prepare for possible bus connections to Los Angeles County's planned Metro Gold Line stations in La Verne and Pomona. The Gold Line connects Los Angeles Union Station to Azusa, and is planned to extend through Glendora, San Dimas, La Verne, Pomona, Claremont, and Montclair.

The focus on transit as well as the commitment to bicycle and pedestrian facilities all serve as Travel Demand Management (TDM) strategies which are part of the project.

Figure 5. 2018 EFMP Parking and Circulation Recommendations



Recommendations to improve bicycle, pedestrian, and transit facilities are also included in the EFMP. The complete details can be found in Chapter 11 of the EFMP, but the major ideas are listed below:

- Bicycle Circulation (see Figure 6, from the EFMP)
    - Provide safe access to campus
        - Includes continuous, protected bike lanes along Temple Avenue and Grand Avenue to provide a direct connection between Mt. SAC and two potential Class I greenway paths (one along Walnut Creek and one along San Jose Creek)
    - Provide service and convenient bicycle storage
        - Ensure adequate lighting and visibility
    - Encourage bicycle commuting by participating in and supporting a regional bicycle network
    - Provide bike share services on campus
- Pedestrian Circulation (see Figure 7, from the EFMP)
    - Connect all points of arrival and departure with campus destinations and nearby residential communities and businesses
    - Provide universally accessible circulation routes whenever possible
    - Complete and reinforce Miracle Mile as the primary east/west pedestrian route on campus
    - Provide enhanced pedestrian facilities along Mt. SAC Way and Bonita Drive (including wide pedestrian walkways, shade trees, seating, lighting, waste receptacles, and electrical outlets)
    - Replace the Bonita Drive Pedestrian Bridge
    - Develop the Healthy Living Loop as a publicly-accessible route around campus to encourage walking, jogging, and cycling
    - Provide sidewalks along both sides of Temple Avenue along the entire Mt. SAC frontage as part of the Temple Avenue Green Corridor
    - Complete the Grand Avenue sidewalk between San Jose Hills Road and Mountaineer Road
    - Reinforce pedestrian circulation hierarchy

Figure 6. 2018 EFMP Bicycle Circulation Recommendations

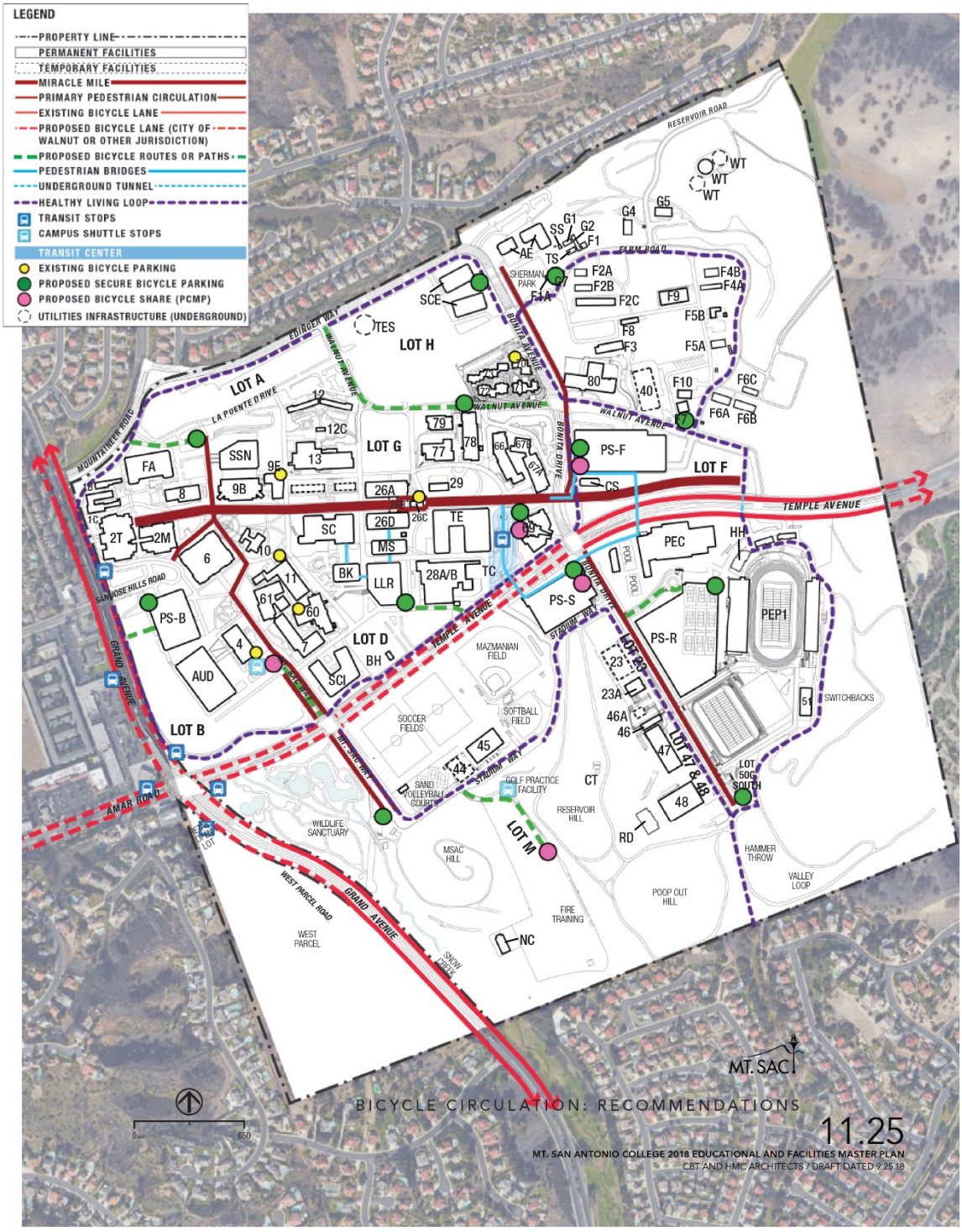
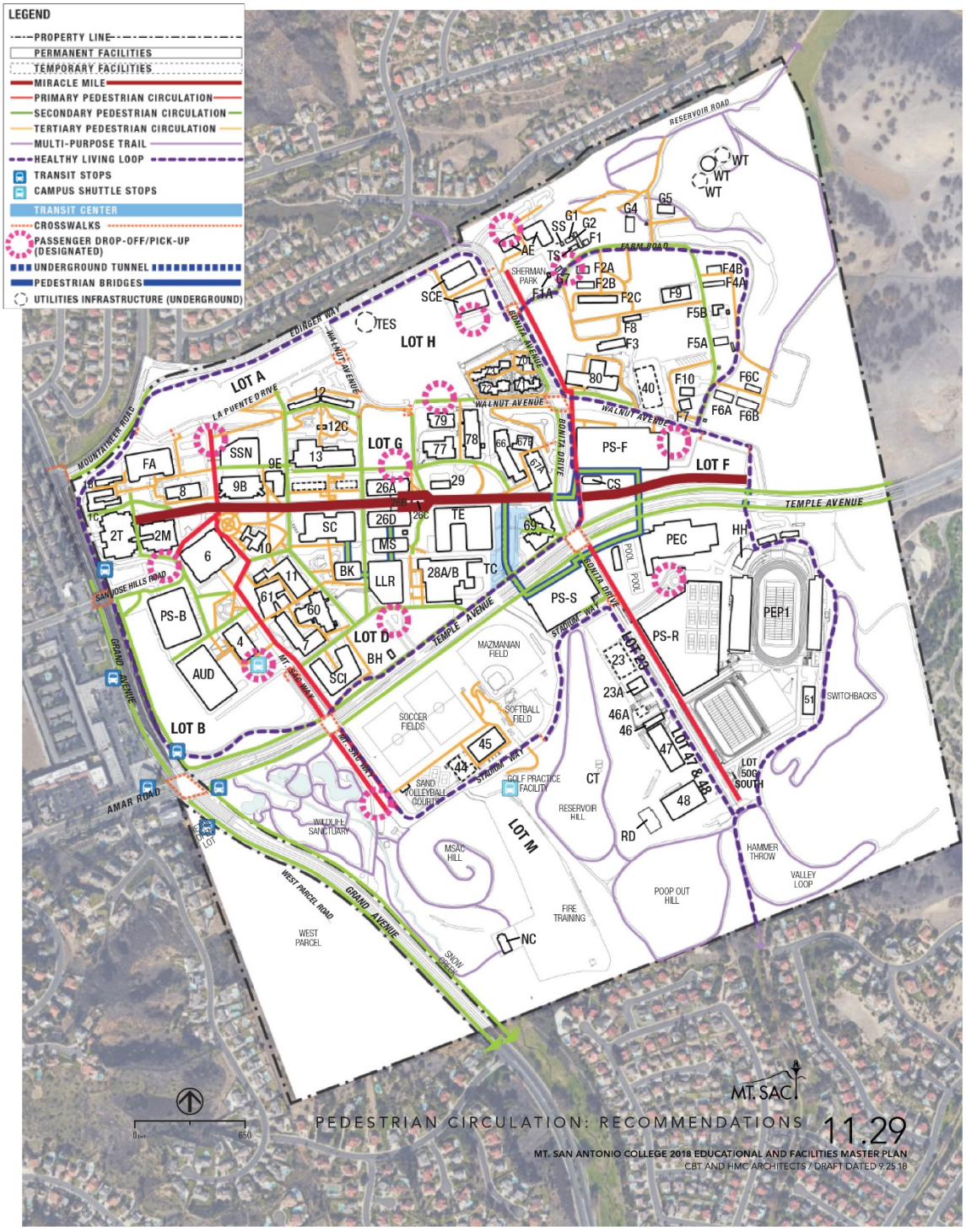


Figure 7. 2018 EFMP Pedestrian Circulation Recommendations



3.1. ASSUMPTIONS FOR THE TRAFFIC IMPACT ANALYSIS

The anticipated growth for this study was assumed to be 1.22% per year, which is the most conservative growth rate presented in the EFMP. The interim study year is at the completion of Phase 1A (assumed to be in 2021) and the buildout year is 2027, which is consistent with the 10-year horizon for buildout of Phase 2 of the EFMP.

Because parking needs may change over time due to the construction of the Transit Center and the general shift of trips away from personal vehicles, the structure in Lot F may not be needed when initially indicated, if at all. Therefore, it is recommended that parking demand data be collected in the third week (census week) of the fall semester on a regular basis (i.e. every year, every other year). A parking generation rate should be calculated as the total demand divided by the total number of students, and the rate should be compared to previous years to determine how the parking rate per student is changing over time.

Along with the EFMP growth, other ongoing development and roadway improvement projects (which have been previously approved and studied) must be accounted for in the appropriate study years. While specific educational facilities, the Physical Education Project (Phase 1,2), and the Transit Center (among others) are specified developments in the EFMP, this traffic study provided analyses based on the anticipated number of new students. The number of students is not necessarily tied to specific new buildings on campus; instead, the campus population is anticipated to grow as it has in the past, being served by the planned new and improved facilities. Therefore, the physical projects listed in the assumptions below are only those which influence traffic, such as new parking structures.

The project assumptions for each analysis scenario are listed below:

- Existing Conditions
    - Existing geometry at all intersections, including recently completed construction on Grand Avenue at Baker Parkway and at the SR-60 WB Ramps

- Existing + Project
    - School population increase of 4,881 students (42,745 total students, buildout conditions)
    - New developments include Transit Center and parking structures in Lots R, S, B, and F (buildout conditions)
    - Roadway geometry changes include:
        - New exclusive eastbound and westbound right turn lanes at Temple Avenue/Bonita Drive associated with the Physical Education Project (Phase 1,2)
        - New traffic signal at Temple Avenue/Transit Center access
        - New south leg (for parking structure S) at Temple Avenue/Transit Center access
        - Exclusive eastbound and westbound right turn lanes at Temple Avenue/Transit Center access
    - An additional possible improvement includes extending the existing westbound left turn lane storage length at the intersection of Temple Avenue and Bonita Drive
        - Mt. SAC and the City of Walnut are discussing this potential construction
        - The possible extension of the left turn lane does not have any effect on the analyses in this report
- Phase 1A (2021) Cumulative Conditions
    - Includes Transit Center
    - Roadway geometry changes include:
        - New exclusive eastbound right turn lane at Temple Avenue/Bonita Drive associated with the Physical Education Project (Phase 1,2)
        - New traffic signal at Temple Avenue/Transit Center access
        - New south leg at Temple Avenue/Transit Center access
        - Exclusive eastbound and westbound right turn lanes at Temple Avenue/Transit Center access
- Phase 1A (2021) Cumulative Conditions Plus Project
    - School population increase of 1,882 students (39,746 total students)
    - In addition to 2021 Cumulative Conditions, includes parking structures in Lots R and S

- Buildout (2027) Cumulative Conditions
    - Includes Transit Center
    - Roadway geometry changes include:
        - New exclusive eastbound right turn lane at Temple Avenue/Bonita Drive associated with the Physical Education Project (Phase 1,2)
        - New traffic signal at Temple Avenue/Transit Center access
        - New south leg at Temple Avenue/Transit Center access
        - Exclusive eastbound and westbound right turn lanes at Temple Avenue/Transit Center access
- Buildout (2027) Cumulative Conditions Plus Project
    - School population increase of 4,881 students (42,745 total students)
    - In addition to 2027 Cumulative Conditions, includes parking structures in Lots R, S, B, and F

4. PROJECTED TRAFFIC VOLUMES

4.1. INTERIM YEAR (2021) – PHASE 1A

4.1.1. Project Trip Generation

The EFMP provides low, medium, and high approximations for student population growth at Mt. SAC. To be conservative, the high annual growth rate (1.22% per year) was assumed in this study. Based on that growth rate, the student population is expected to grow from 37,864 students in the fall of 2017 to 39,746 students in 2021, a growth of 1,882 students.

The trip generation for the project was calculated using the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*[12]. The resulting trip generation is shown in Table 3. As seen in the table, the project is expected to generate 2,164 new daily trips at the completion of Phase 1A, including 207 peak hour trips in each of the AM and PM peak hours.

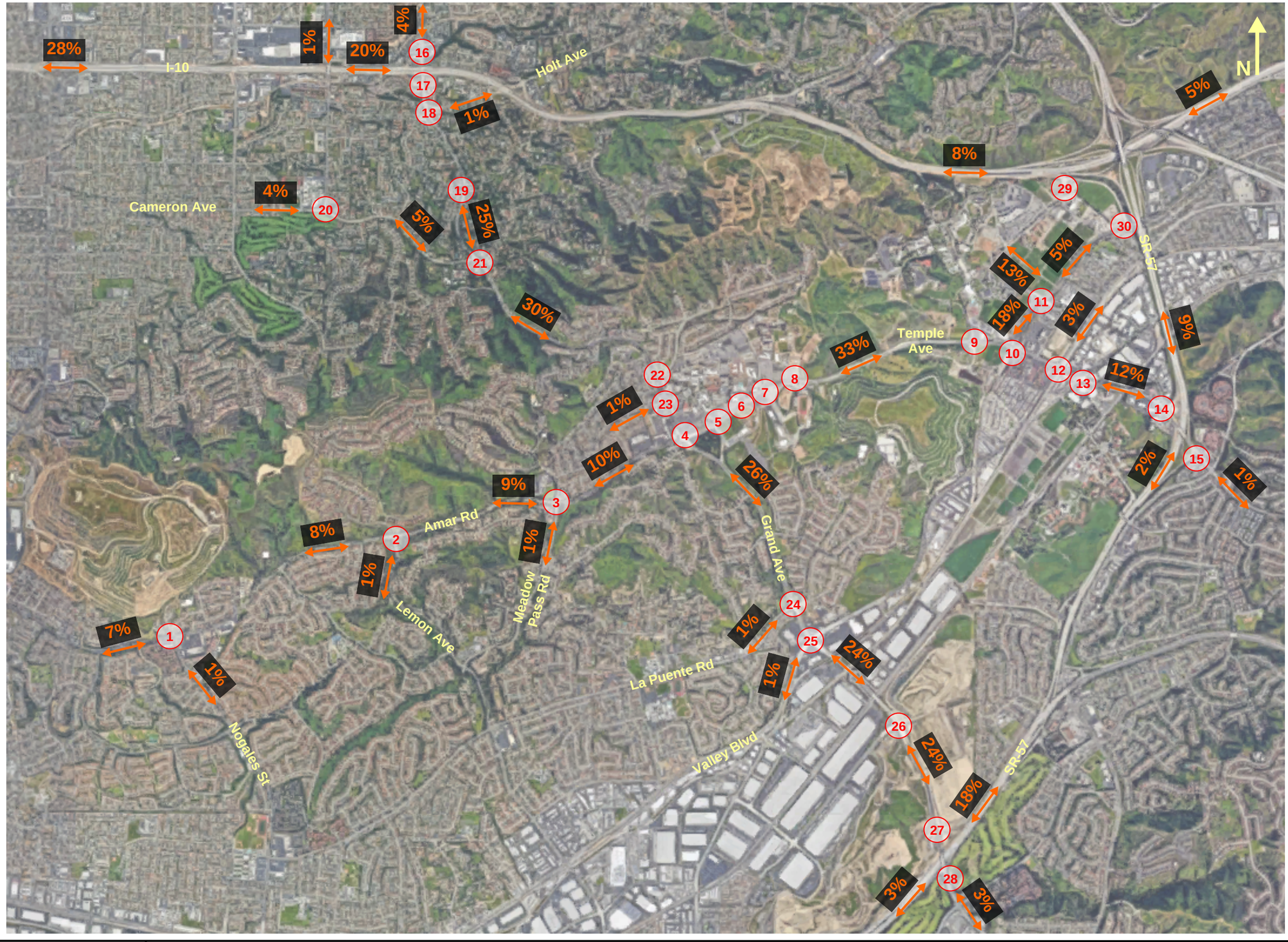
Table 3. Interim (2021) Project Trip Generation

ITE LU 540 (10th Edition) - Junior/Community College						
Students			1,882			
Period	Trips/Unit	Trips	% In	% Out	Trips In	Trips Out
AM Peak	0.11	207	81%	19%	168	39
PM Peak	0.11	207	56%	44%	116	91
Daily	1.15	2,164	50%	50%	1,082	1,082

4.1.2. Project Trip Distribution

The project trip distribution was estimated as shown in Figures 8 and 9. Figure 8 shows the distribution for the outlying intersections, while Figure 9 shows the inbound distribution at the campus access points.

Note that the distribution of traffic exiting campus is expected to be the same as the inbound percentages shown in Figure 9 with the exceptions of intersections 7 and 8; traffic which enters Lot F at intersection 8 is assumed to exit campus from Bonita Drive at intersection 7.



Traffic Impact Analysis Mt. San Antonio College 2018 EFMP	*Figure 8.* *Project Trip Distribution*	PSOMAS March 2019



Traffic Impact Analysis Mt. San Antonio College 2018 EFMP	*Figure 9.* *Project Trip Distribution (Inbound) - Campus Area*	PSOMAS March 2019

4.1.3. 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 10A and 10B.

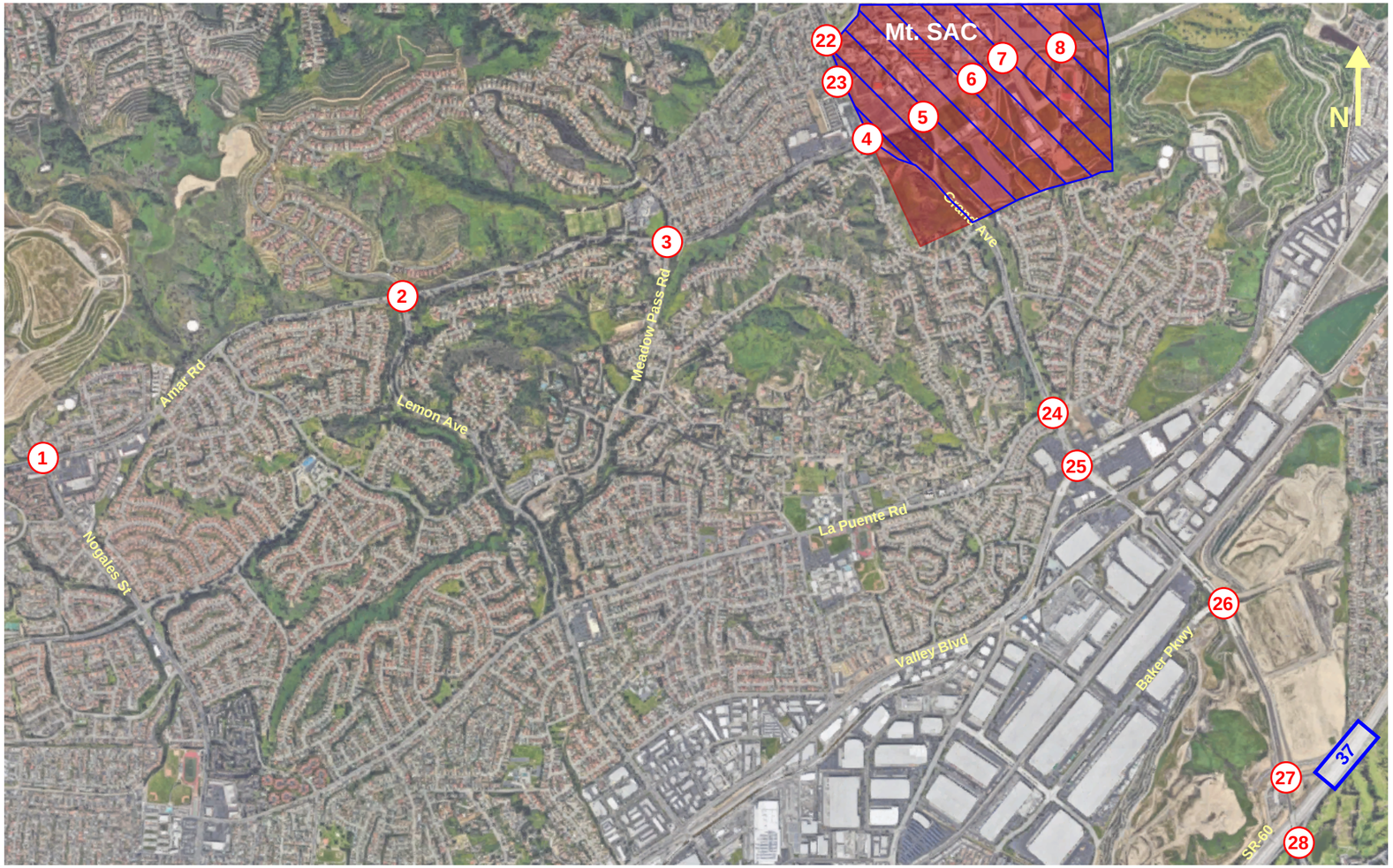
4.1.4. Related Project Traffic Volumes

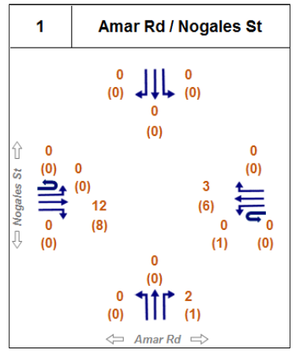
The Cities of Walnut, Pomona, Diamond Bar, Industry, and West Covina were contacted about any potential development projects located in the region of influence, which is bounded by I-10 to the north, State Route 60 to the south, State Route 71 to the east, and Azusa Avenue to the west. Note that this region is somewhat larger than the overall study area because trips generated outside the study area may still travel through the study intersections.

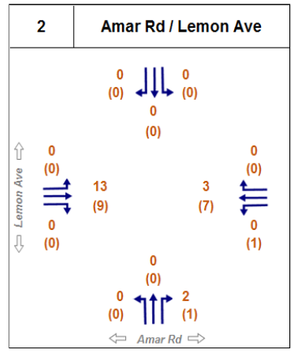
West Covina stated that they did not have any upcoming development projects in the study area. In addition, the City of Industry provided a land use plan for a large development north of Valley Boulevard on either side of Grand Avenue; however, the project is not expected to start construction until 2020 at the earliest. Therefore, that project was not included in this analysis for the interim year of 2021. A total of 13 related projects were included for consideration in this study, as listed in Table 4 and as shown in Figure 11. The figure also shows the study corridors for reference.

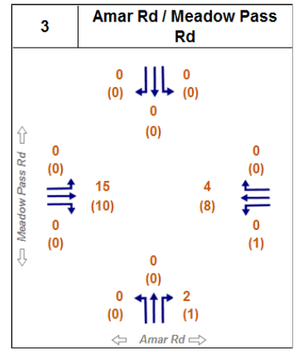
Trip generation for the related projects was based on the ITE *Trip Generation Manual*, and the trip distribution was estimated separately for each project based on their location and type of project (i.e. residential, commercial, etc.). No project-specific TIAs were provided. Where applicable, pass-by trips and internal capture trips were subtracted from the total. Further, if the project was replacing an existing active use, the existing trips were estimated using the *Trip Generation* Manual and were subtracted from the total.

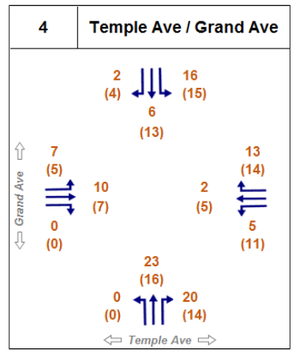
Table 5 shows the related project gross trips, pass-by and internal capture trips, replaced trips from existing developments, and the total new trips expected to be generated by the related projects in 2021. As seen in the table, the related projects are expected to generate nearly 3,000 new daily trips, including 340 trips in the AM peak hour and 211 trips in the PM peak hour. Based on the trip generation and trip distribution for each of the projects, the resulting peak hour traffic volumes at each of the study intersections was calculated and are shown in Figures 12A and 12B.

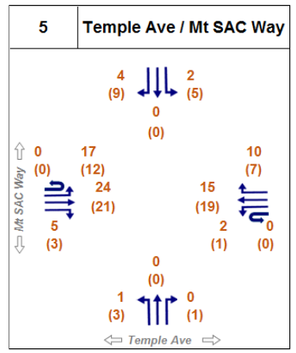


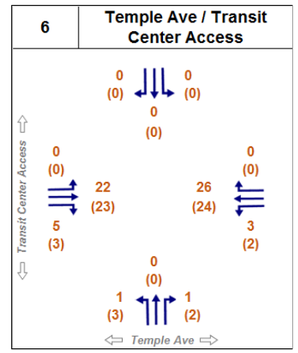


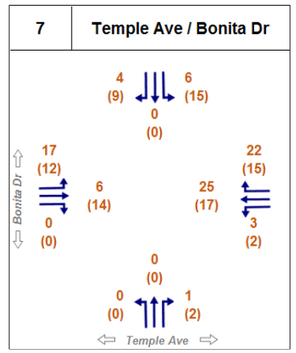


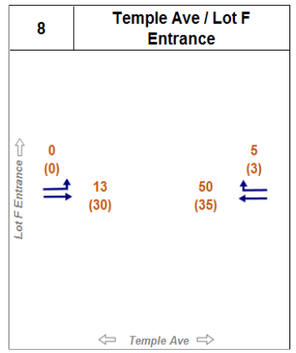


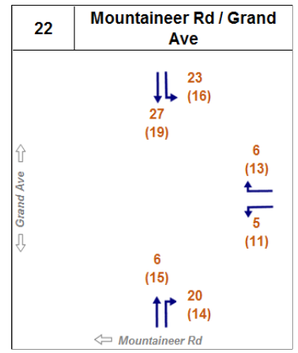


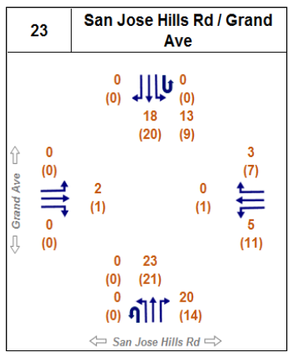


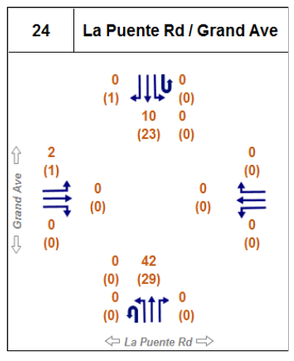


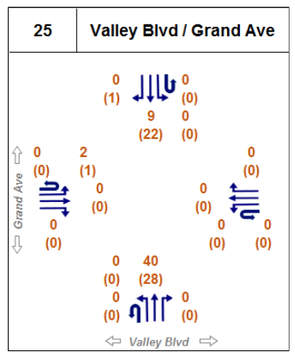


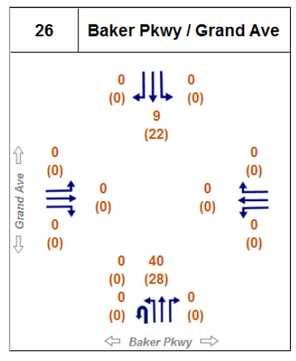


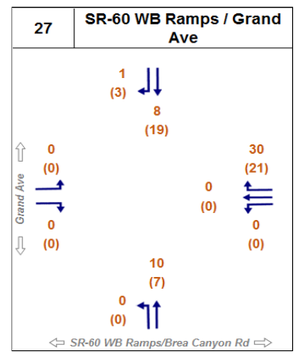


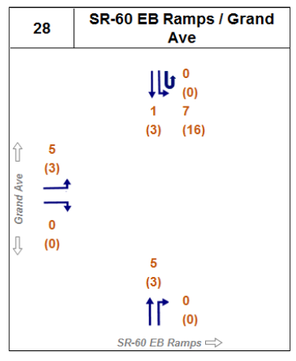












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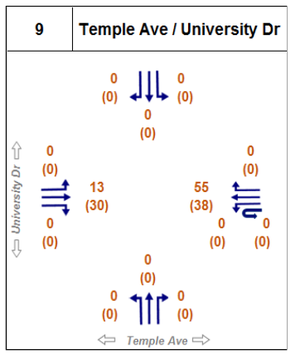
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- (XX) — PM Peak Hour Traffic Volume (veh/hr)
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- Mt. SAC Campus
- Project Area (2018 EFMP)

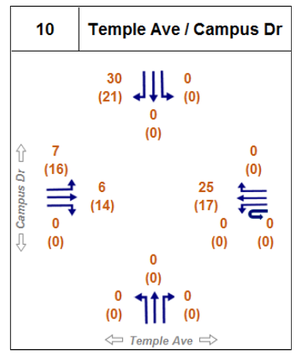
Traffic Impact Analysis
Mt. San Antonio College
2018 EFMP

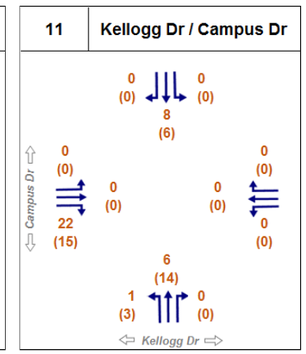
Figure 10A.
Interim (2021) Project Traffic Volumes (Intersections 1-8, 22-28)

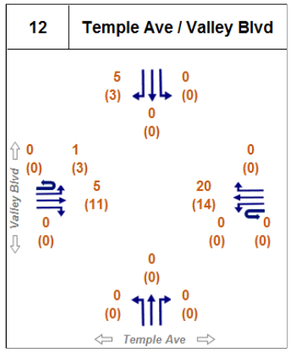
PSOMAS
March 2019

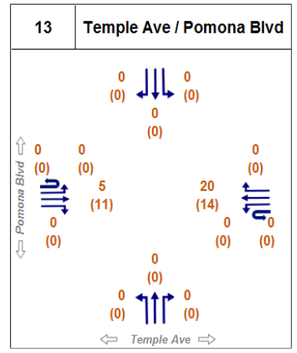


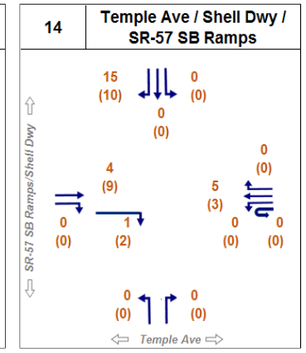


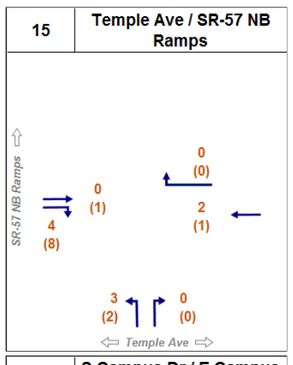


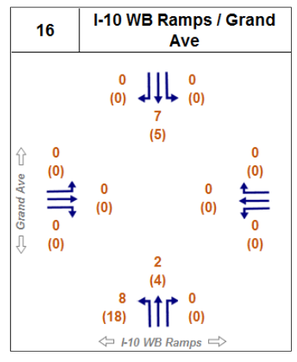


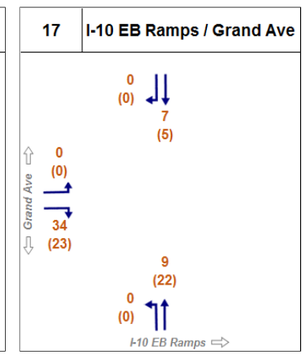


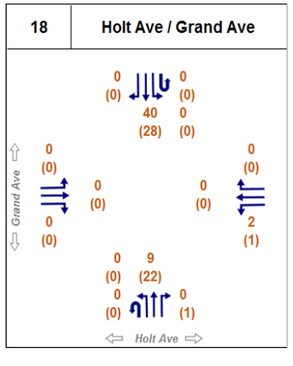


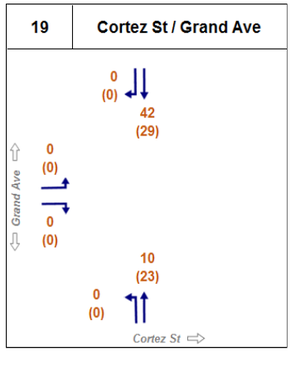


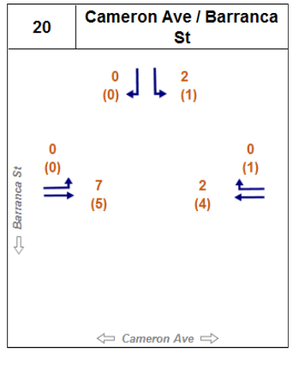


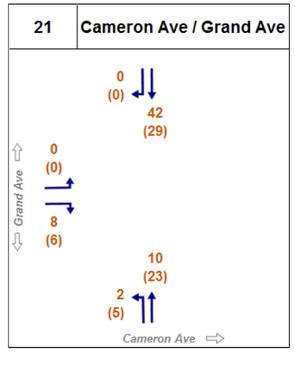


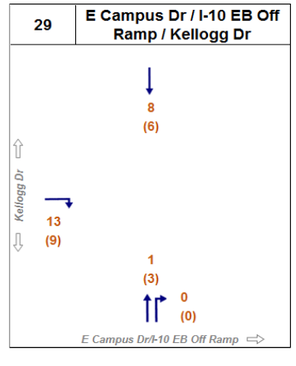


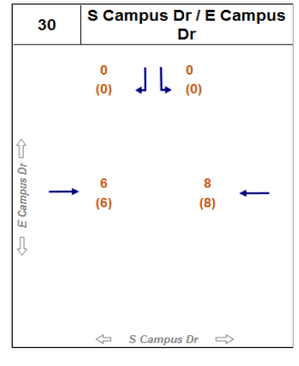












LEGEND

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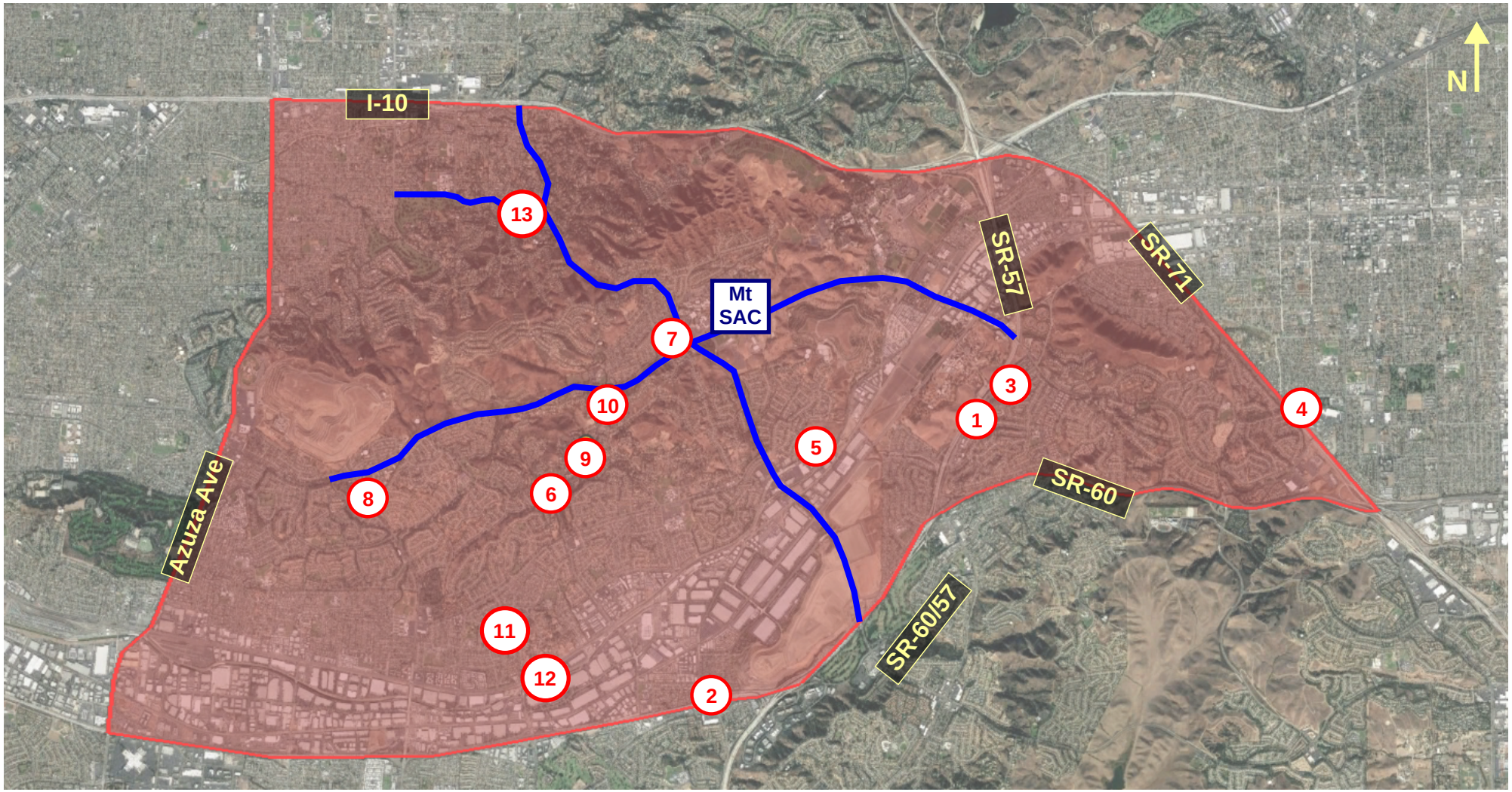
Traffic Impact Analysis
Mt. San Antonio College
2018 EFMP

Figure 10B.
Interim (2021) Project Traffic Volumes (Intersections 9-21, 29-30)

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March 2019

Table 4. Related Projects

Project	City	Project	
		Location	Description
1	Diamond Bar	888 Diamond Bar	Demolition of two neighborhood commercial centers (Oak Tree Plaza and Ranch Center), construction of 146 condos and 4,300 sq.ft. of commercial retail
2	Diamond Bar	850 Brea Canyon Road (Brea Canyon Road, north of 60 freeway)	Redevelopment of boat and RV storage to include 109-room hotel, 48,000 sq.ft. of office, and 9,500 sq.ft. of retail
3	Diamond Bar	1111 N. Diamond Bar (north side between Soltaire Street and Highland Valley Road)	Single-family residence on vacant lot, approximately 4,000 sq.ft.
4	Pomona	SW Corner of White Ave and Lexington Ave	110 single-family residential units
5	Walnut	1,300 feet east of Valley/Grand intersection	Specific Plan. Single-family residences (12 units), low-rise multifamily housing (277 units), public park (17 acres), shopping center (50,000 sq.ft.)
6	Walnut	800 Meadow Pass Road	28 single-family residential units
7	Walnut	20650 San Jose Hills Road	22 single-family homes
8	Walnut	Francesca Drive, east of Nogales St	36 low-rise multifamily housing units
9	Walnut	Pierre and Meadow Pass	6 single-family homes
10	Walnut	1521 Meadow Pass Road	13 single-family homes
11	Walnut	360 Camino de Teordoro	4 single-family homes
12	Walnut	19901 Valley Boulevard	Two buildings - one with 2 residential units, one with approximately 1,000 sq.ft. commercial on 1st floor and residence on second floor
13	West Covina	3501 E. Cameron Avenue	2 single-family homes



LEGEND

1. Mixed-Use (Residential and Commercial)
2. Business Park (Hotel, Office, and Retail)
3. Single-Family Housing
4. Single-Family Housing
5. Specific Plan (Residential, Park, Retail)
6. Single-Family Housing
7. Single-Family Housing
8. Multifamily Housing
9. Single-Family Housing
10. Single-Family Housing
11. Single-Family Housing
12. Mixed-Use (Residential and Commercial)
13. Single-Family Housing

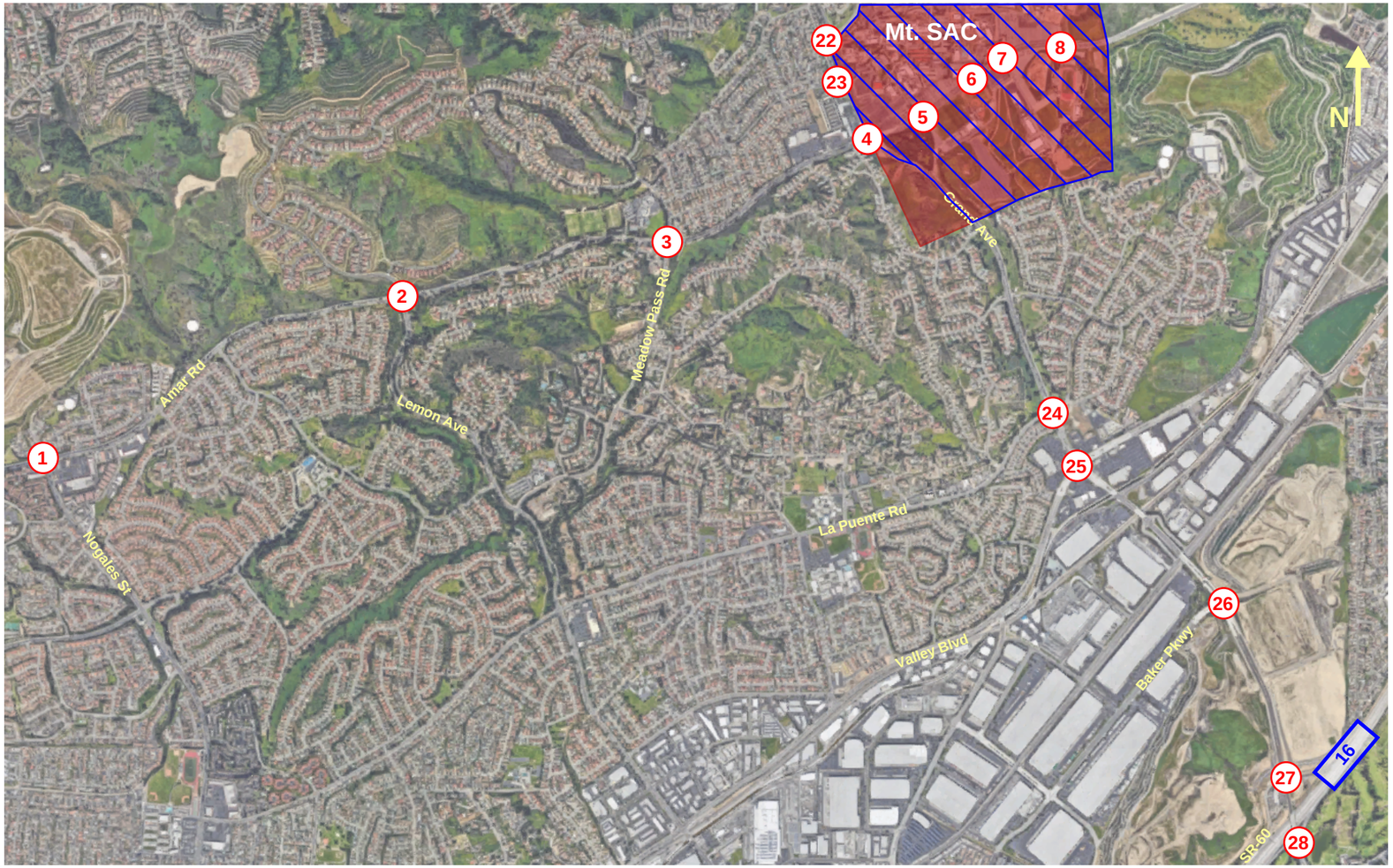
Region of Influence

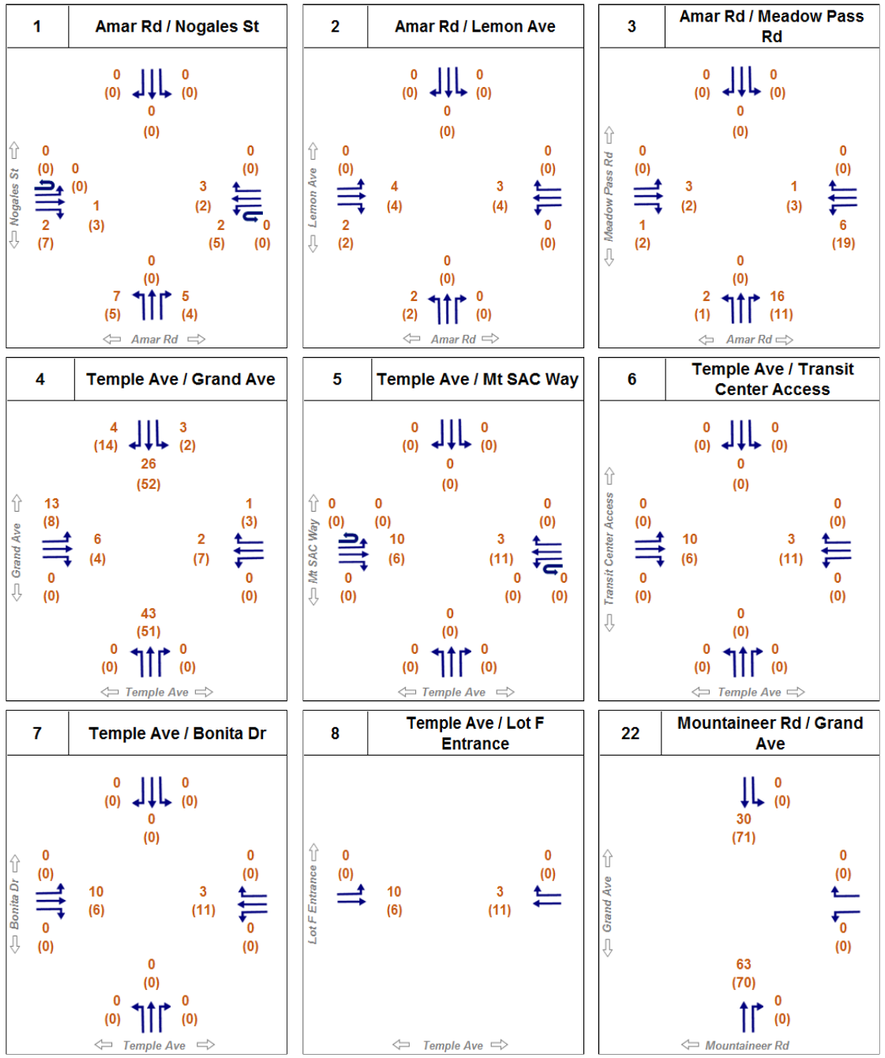
Study Corridors

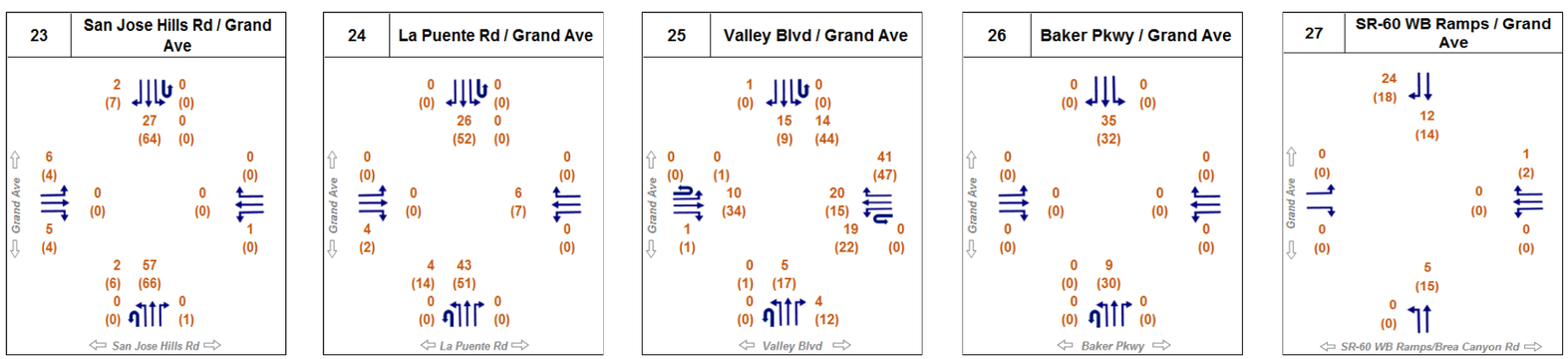
Traffic Impact Analysis Mt. San Antonio College 2018 EFMP	*Figure 11.* *Related Project Locations*	PSOMAS March 2019

Table 5. Related Projects Trip Generation

Related Projects Gross Trips			
Period	**Total Trips**	**Trips In**	**Trips Out**
AM Peak	527	202	326
PM Peak	825	449	376
Daily	9,096	4,548	4,548
Pass-By/Internal Capture Trips			
Period	**Total Trips**	**Trips In**	**Trips Out**
AM Peak	-49	-22	-28
PM Peak	-113	-58	-55
Daily	-1,247	-624	-624
Trips from Existing/Replaced Developments			
Period	**Total Trips**	**Trips In**	**Trips Out**
AM Peak	-139	-41	-97
PM Peak	-501	-309	-192
Daily	-4,917	-2,458	-2,458
Total Related Project New Trips			
Period	**Total Trips**	**Trips In**	**Trips Out**
AM Peak	**340**	**139**	**201**
PM Peak	**211**	**82**	**129**
Daily	**2,931**	**1,466**	**1,466**







LEGEND

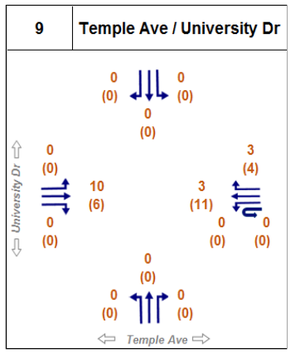
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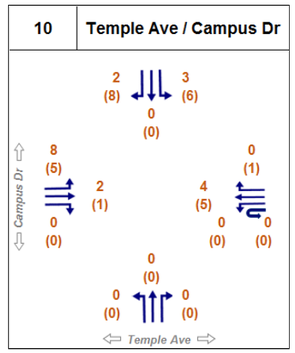
Traffic Impact Analysis
Mt. San Antonio College
2018 EFMP

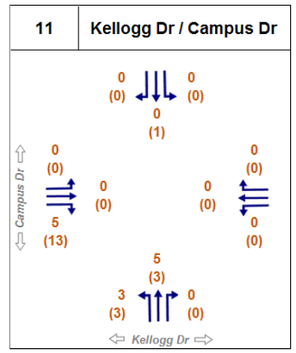
Figure 12A.
Related Projects Traffic Volumes (Intersections 1-8, 22-28)

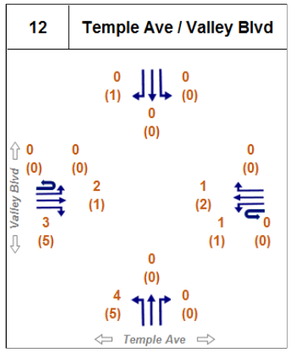
PSOMAS
March 2019

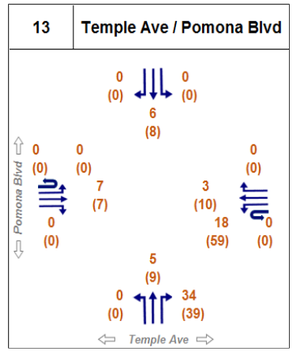


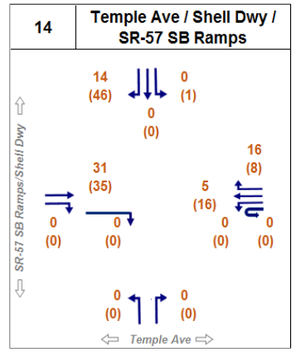


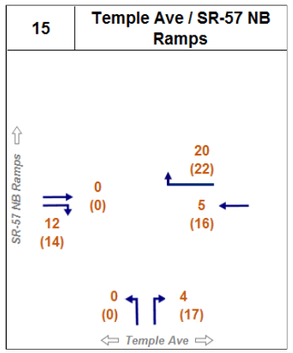


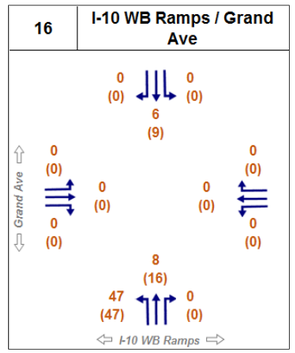


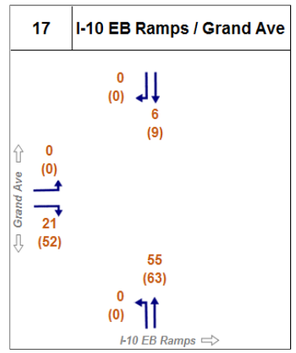


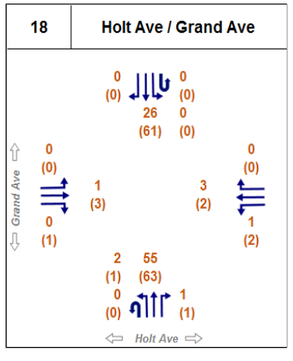


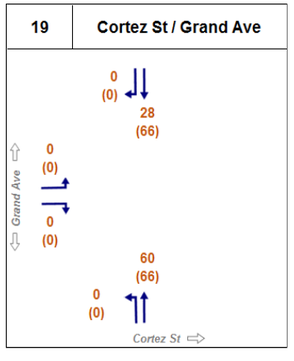


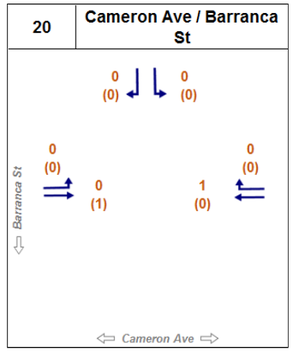


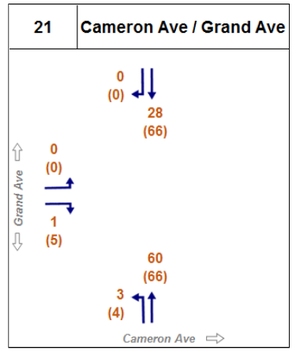


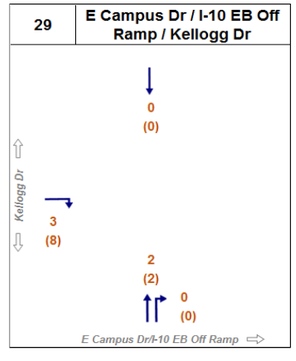


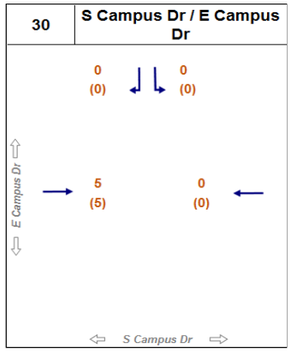












LEGEND

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- Project Area (2018 EFMP)

Traffic Impact Analysis
Mt. San Antonio College
2018 EFMP

Figure 12B.
Related Projects Traffic Volumes (Intersections 9-21, 29-30)

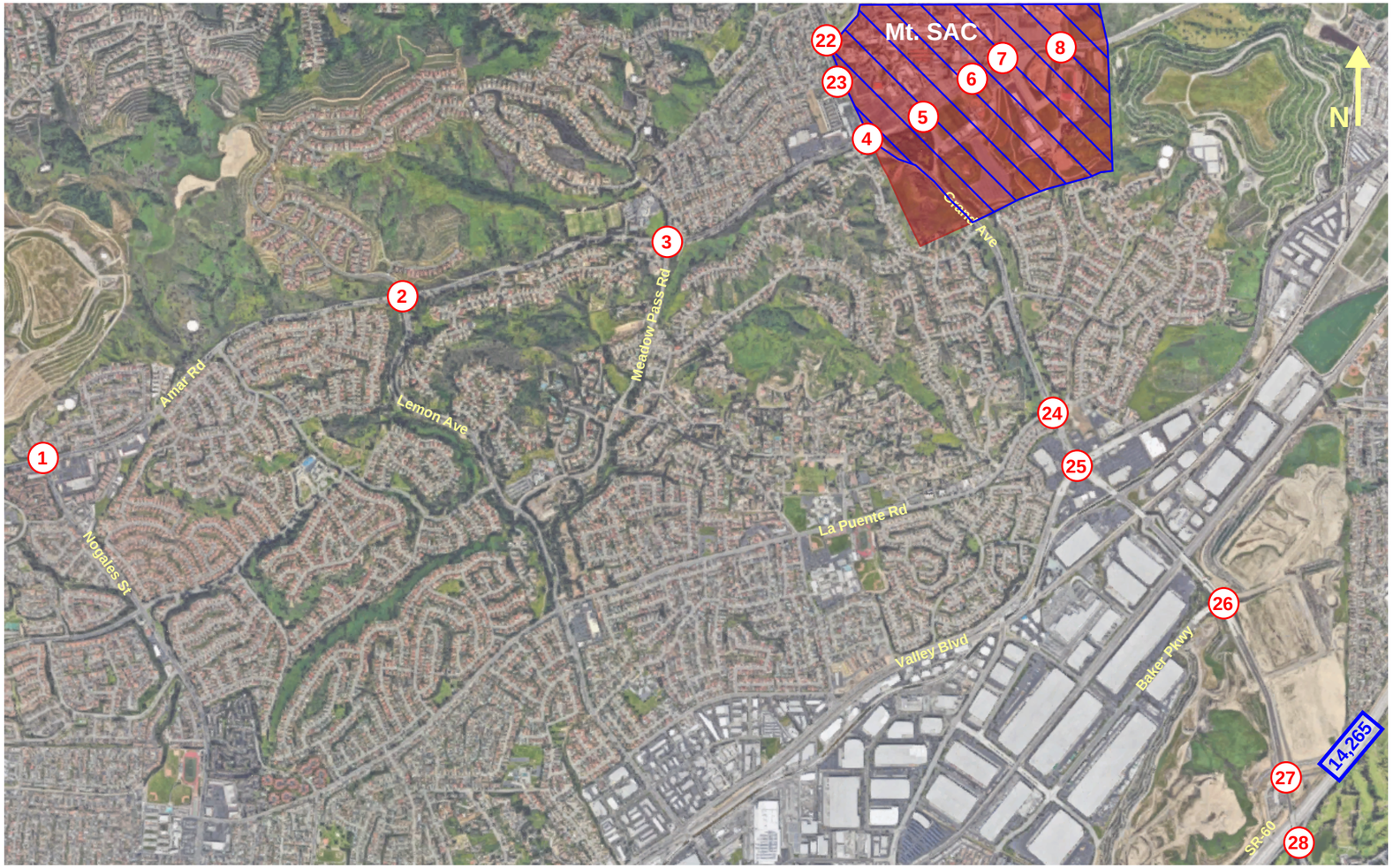
PSOMAS
March 2019

4.1.5. Cumulative Traffic Volumes

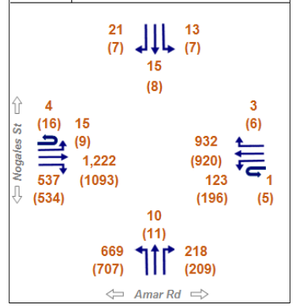
The cumulative traffic volumes are the anticipated traffic volumes in 2021 without the project, which include the existing traffic volumes and the related project volumes. In addition to the related project-specific volumes, a 0.5% annual growth rate was applied to existing traffic volumes to account for any additional growth not generated by the provided related projects (i.e. traffic from projects which are not yet in the planning process, but which would be constructed by 2021). The cumulative traffic volumes are shown in Figures 13A and 13B.

4.1.6. Cumulative Plus Project Traffic Volumes

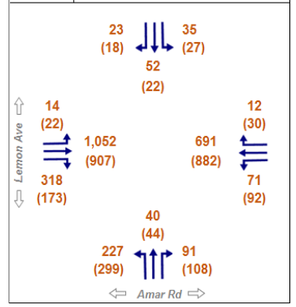
Figures 14A and 14B show the cumulative plus project traffic volumes in 2021 at each of the study intersections.



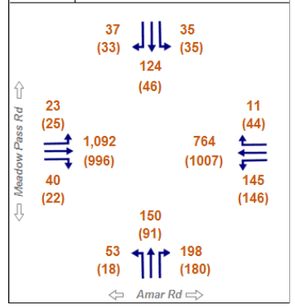
1	Amar Rd / Nogales St



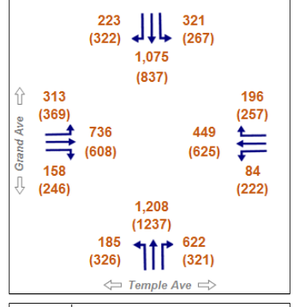
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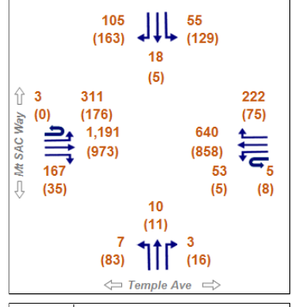
3	Amar Rd / Meadow Pass Rd



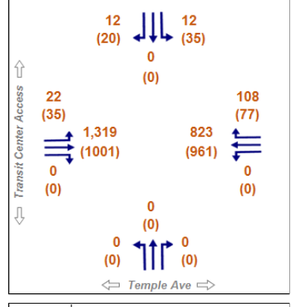
4	Temple Ave / Grand Ave



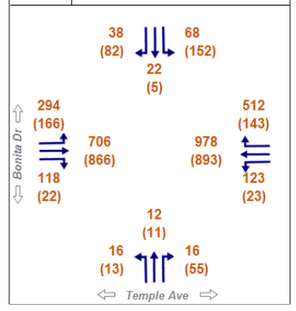
5	Temple Ave / Mt SAC Way



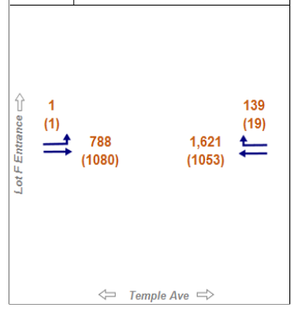
6	Temple Ave / Transit Center Access



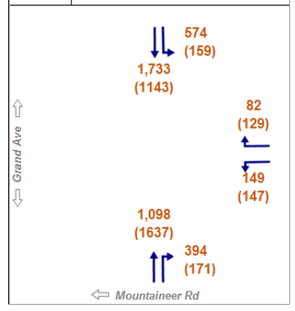
7	Temple Ave / Bonita Dr



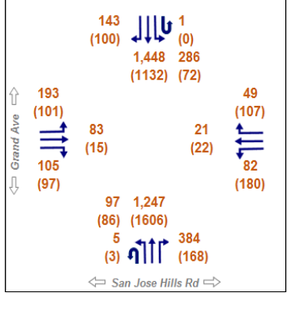
8	Temple Ave / Lot F Entrance



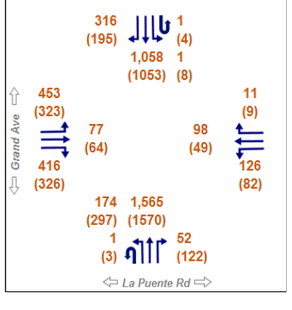
22	Mountaineer Rd / Grand Ave



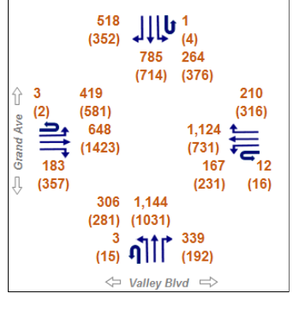
23	San Jose Hills Rd / Grand Ave



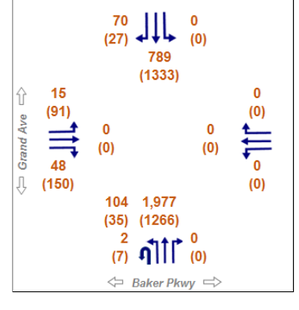
24	La Puente Rd / Grand Ave



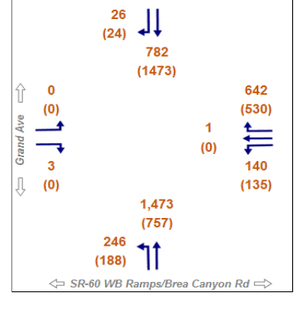
25	Valley Blvd / Grand Ave



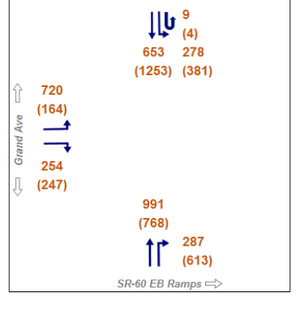
26	Baker Pkwy / Grand Ave



27	SR-60 WB Ramps / Grand Ave



28	SR-60 EB Ramps / Grand Ave



LEGEND

- XX — Intersection Number
- XX — AM Peak Hour Traffic Volume (veh/hr)
- (XX) — PM Peak Hour Traffic Volume (veh/hr)
- XX,XXX — Segment Peak Hour Traffic Volume (pc/hr)
- Mt. SAC Campus
- Project Area (2018 EFMP)

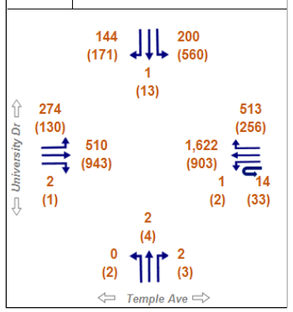
Traffic Impact Analysis
Mt. San Antonio College
2018 EFMP

Figure 13A.
Interim (2021) Cumulative Traffic Volumes (Intersections 1-8, 22-28)

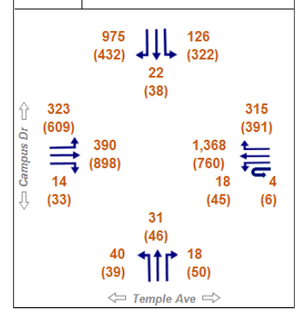
PSOMAS
March 2019



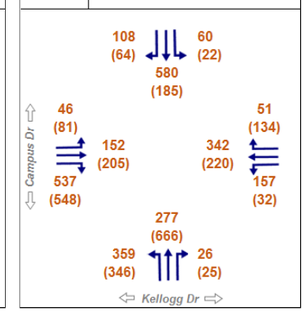
9	Temple Ave / University Dr



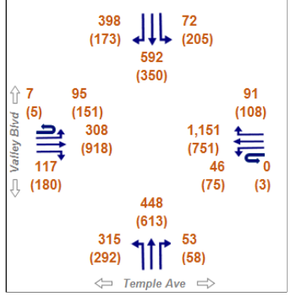
10	Temple Ave / Campus Dr



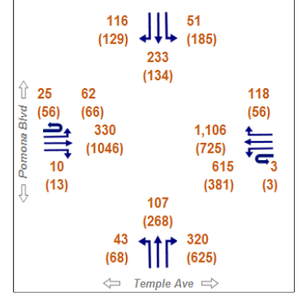
11	Kellogg Dr / Campus Dr



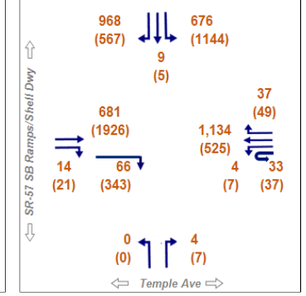
12	Temple Ave / Valley Blvd



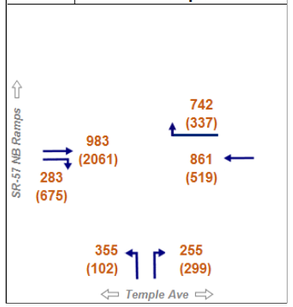
13	Temple Ave / Pomona Blvd



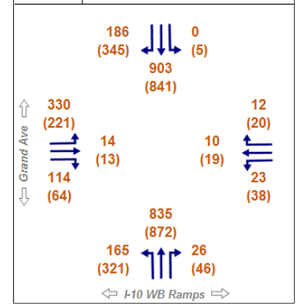
14	Temple Ave / Shell Dwy / SR-57 SB Ramps



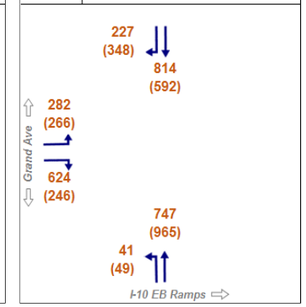
15	Temple Ave / SR-57 NB Ramps



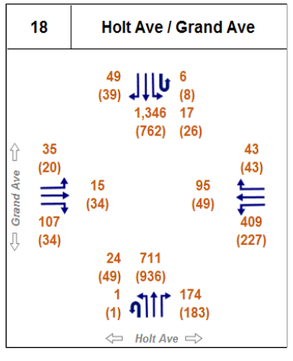
16	I-10 WB Ramps / Grand Ave



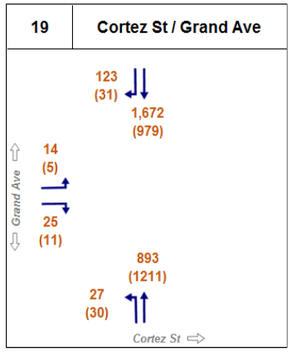
17	I-10 EB Ramps / Grand Ave



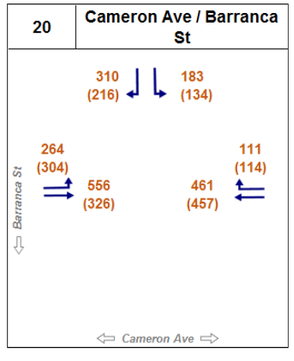
18	Holt Ave / Grand Ave



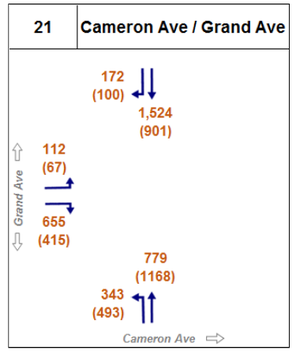
19	Cortez St / Grand Ave



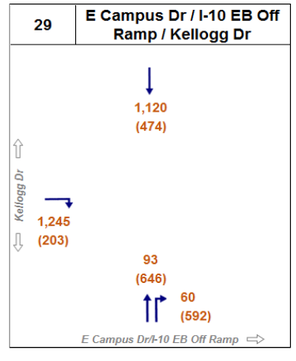
20	Cameron Ave / Barranca St



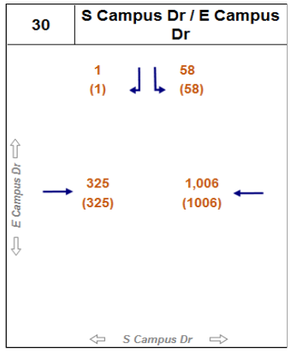
21	Cameron Ave / Grand Ave



29	E Campus Dr / I-10 EB Off Ramp / Kellogg Dr



30	S Campus Dr / E Campus Dr



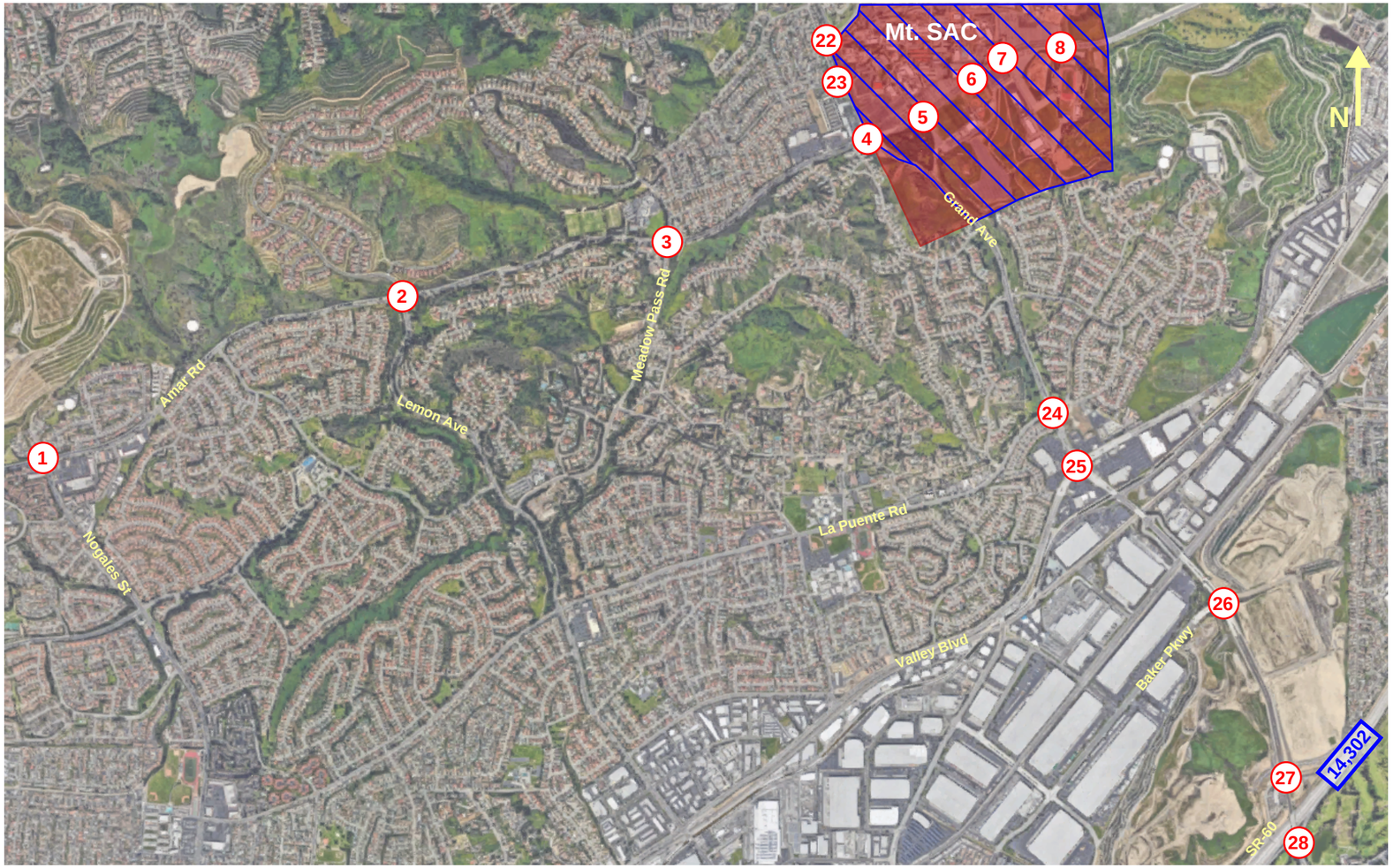
LEGEND

- XX — Intersection Number
- XX — AM Peak Hour Traffic Volume (veh/hr)
- (XX) — PM Peak Hour Traffic Volume (veh/hr)
- XX,XXX — Segment Peak Hour Traffic Volume (pc/hr)
- Mt. SAC Campus
- Project Area (2018 EFMP)

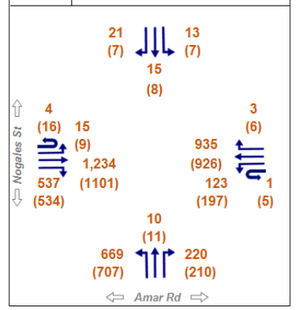
Traffic Impact Analysis
Mt. San Antonio College
2018 EFMP

Figure 13B.
Interim (2021) Cumulative Traffic Volumes (Intersections 9-21, 29-30)

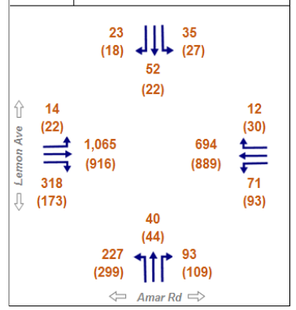
PSOMAS
March 2019



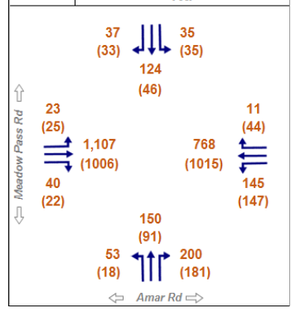
1	Amar Rd / Nogales St



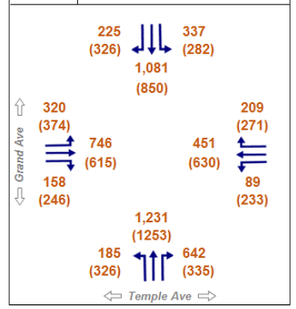
2	Amar Rd / Lemon Ave



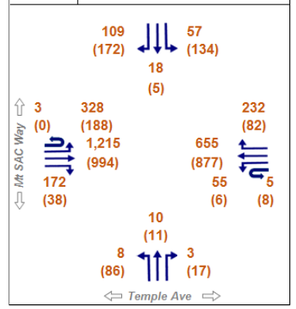
3	Amar Rd / Meadow Pass Rd



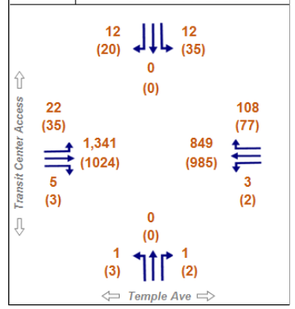
4	Temple Ave / Grand Ave



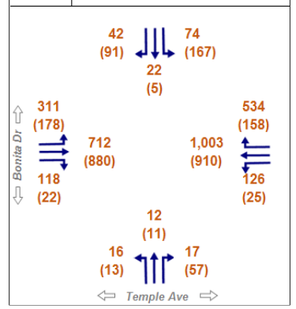
5	Temple Ave / Mt SAC Way



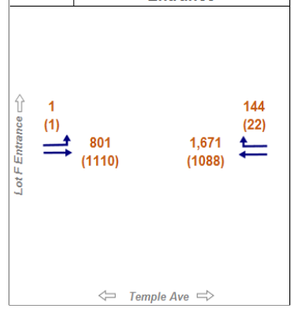
6	Temple Ave / Transit Center Access



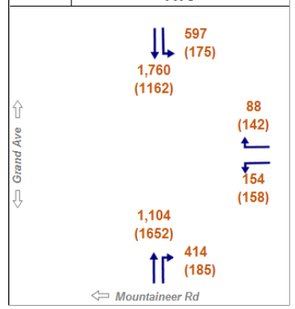
7	Temple Ave / Bonita Dr



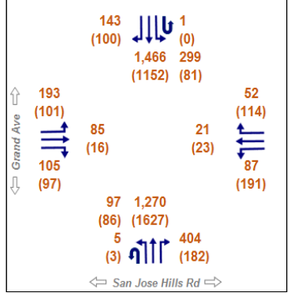
8	Temple Ave / Lot F Entrance



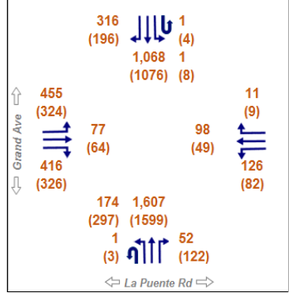
22	Mountaineer Rd / Grand Ave



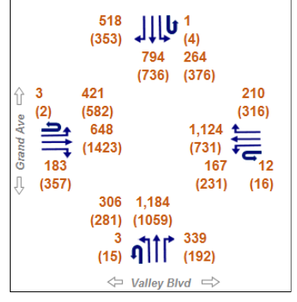
23	San Jose Hills Rd / Grand Ave



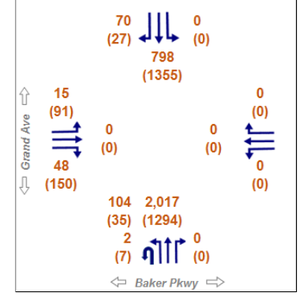
24	La Puente Rd / Grand Ave



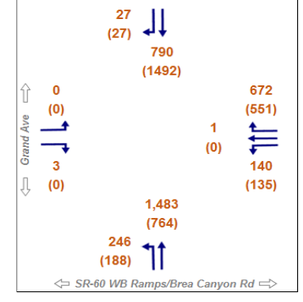
25	Valley Blvd / Grand Ave



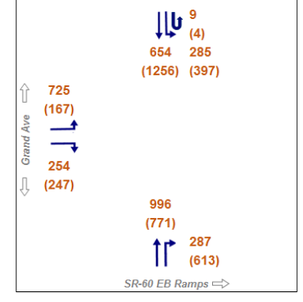
26	Baker Pkwy / Grand Ave



27	SR-60 WB Ramps / Grand Ave



28	SR-60 EB Ramps / Grand Ave



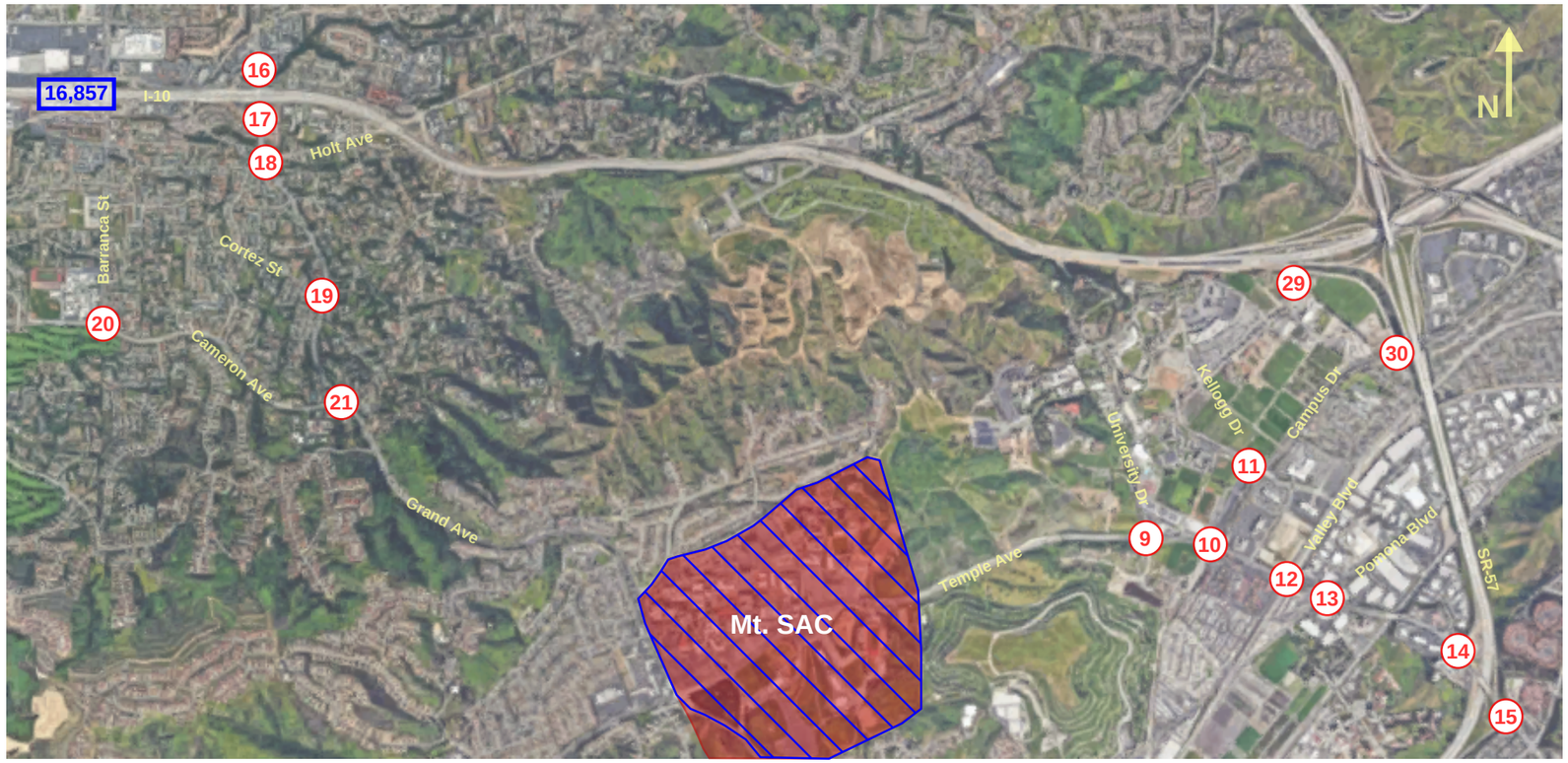
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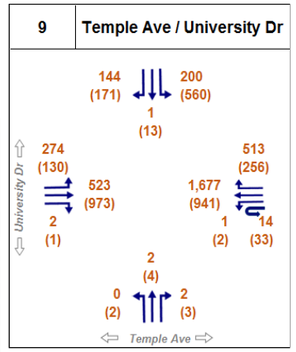
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- Mt. SAC Campus
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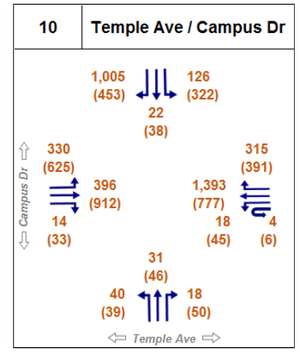
Traffic Impact Analysis
Mt. San Antonio College
2018 EFMP

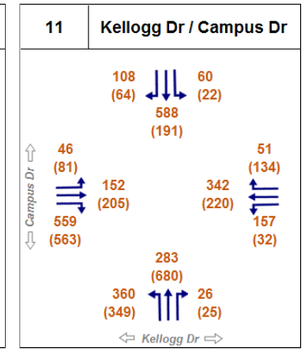
Figure 14A.
Interim (2021) Cumulative Plus Project Traffic Volumes (Intersections 1-8, 22-28)

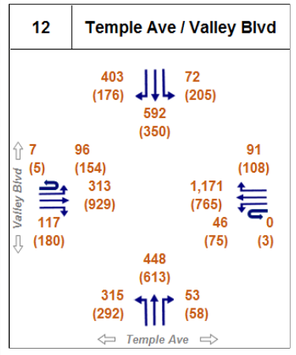
PSOMAS
March 2019

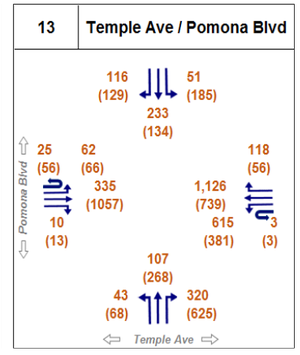


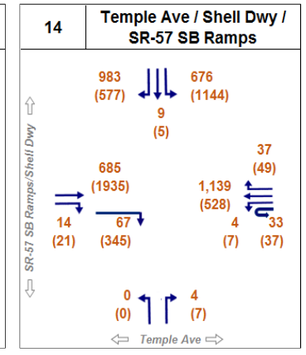


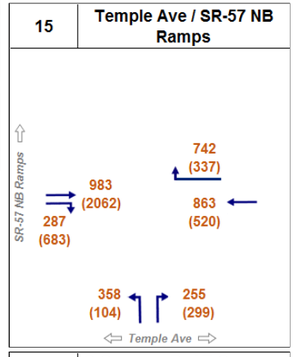


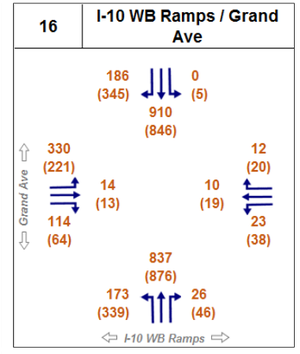


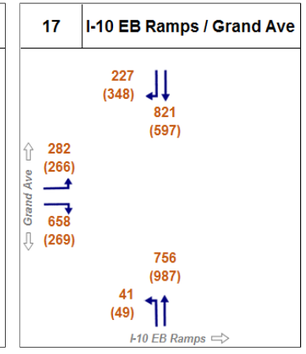


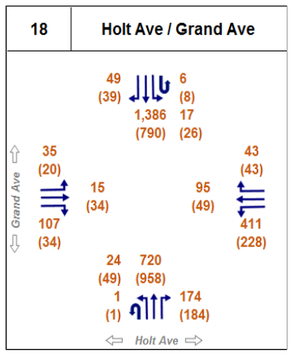


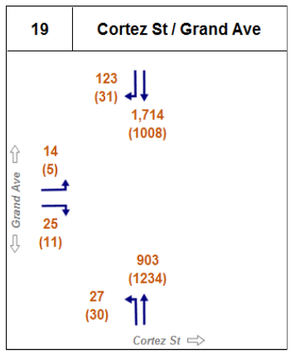


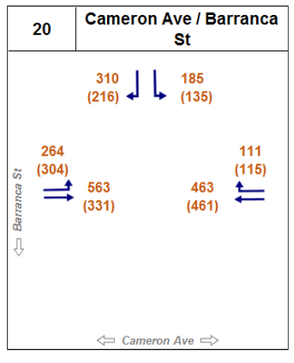


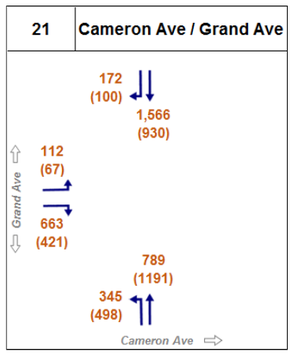


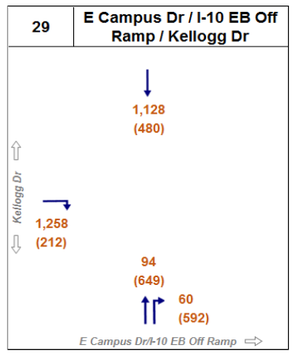


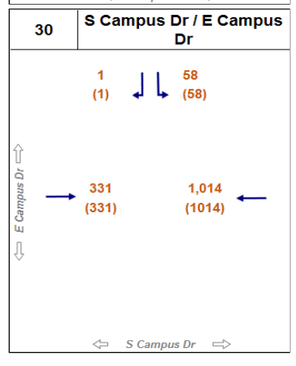












LEGEND

- XX — Intersection Number
- XX — AM Peak Hour Traffic Volume (veh/hr)
- (XX) — PM Peak Hour Traffic Volume (veh/hr)
- XX,XXX — Segment Peak Hour Traffic Volume (pc/hr)
- Mt. SAC Campus
- Project Area (2018 EFMP)

Traffic Impact Analysis
Mt. San Antonio College
2018 EFMP

Figure 14B.
Interim (2021) Cumulative Plus Project Traffic Volumes (Intersections 9-21, 29-30)

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March 2019

4.2. BUILDOUT YEAR (2027)

4.2.1. Project Trip Generation

As with Phase 1A conditions, the trip generation for the project was calculated based on the anticipated daily student headcount in the horizon year of the EFMP (2027). The student population is expected to grow from the fall 2017 count of 37,864 to 42,745 students in 2027, an increase of 4,881 students. Table 6 shows the trip generation for the 2027 horizon year for the new students. As shown in the table, 5,613 new daily trips are anticipated in the buildout year due to the project, including 537 trips in each peak hour.

Table 6. Buildout (2027) Project Trip Generation

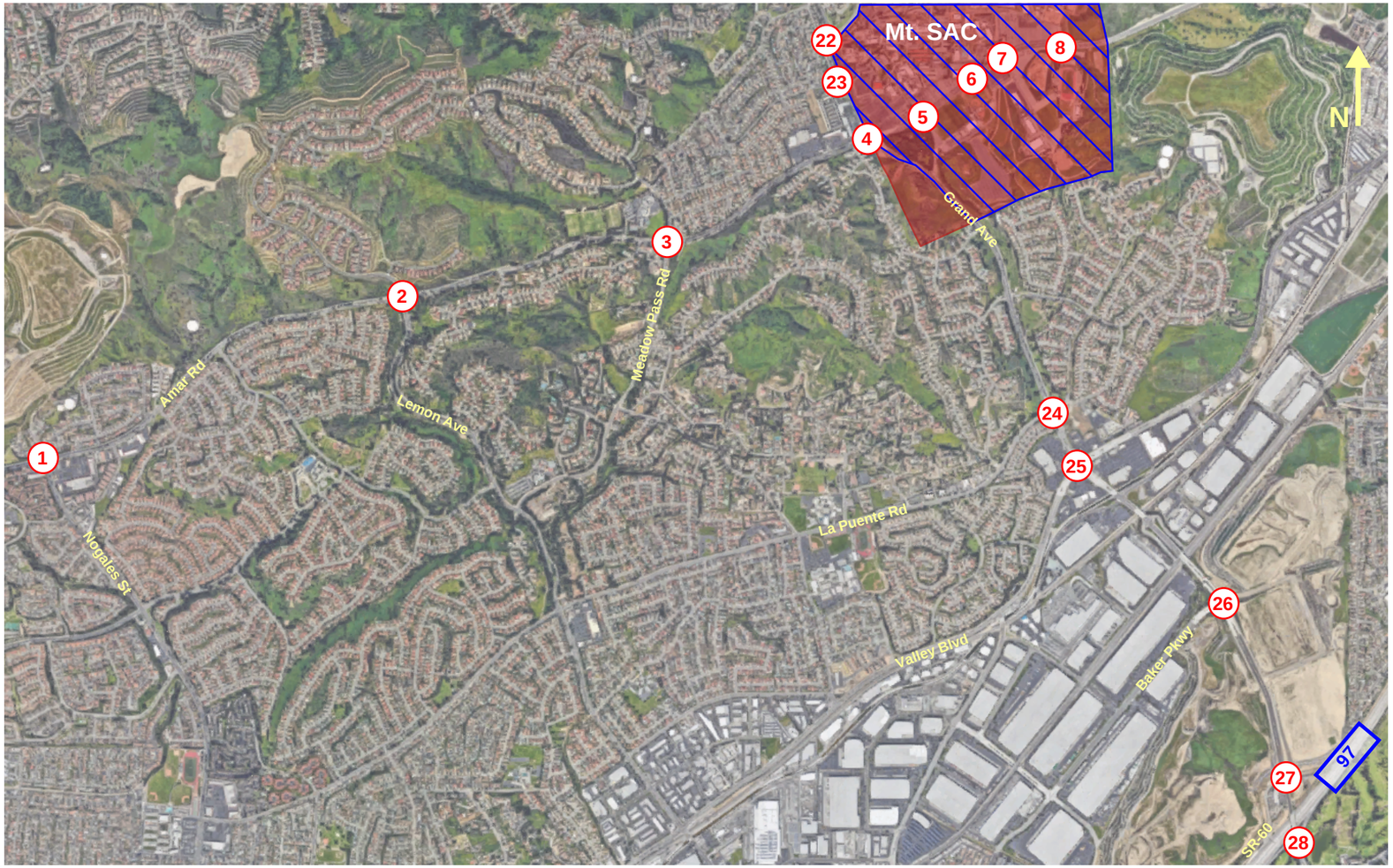
ITE LU 540 (10th Edition) - Junior/Community College						
Students			4,881			
Period	Trips/Unit	Trips	% In	% Out	Trips In	Trips Out
AM Peak	0.11	537	81%	19%	435	102
PM Peak	0.11	537	56%	44%	301	236
Daily	1.15	5,613	50%	50%	2,807	2,807

4.2.2. Project Trip Distribution

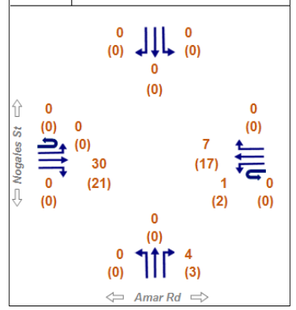
The distribution of project trips is shown in Figures 8 and 9 (Section 3.2.2). As seen in Figure 9, the distribution is expected to shift slightly between Phase 1A and the buildout year (2027). The shift is due to the anticipated construction of the parking structures in Lots B and F during that time. This is a conservative analysis and, as noted previously, parking needs may change over time due to the construction of the Transit Center and the general shift away from personal vehicles. The structure in Lot F may not be needed when initially indicated, if at all.

4.2.3. Project Traffic Volumes

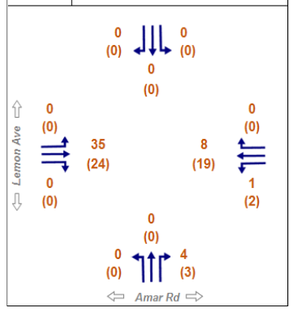
Based on the project trip generation and trip distribution, the project traffic volumes were calculated for each of the study intersections and are shown in Figures 15A and 15B.



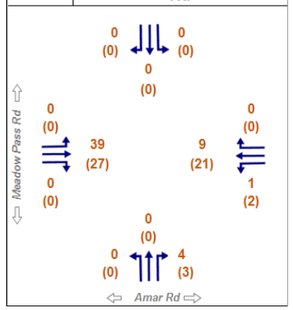
1	Amar Rd / Nogales St



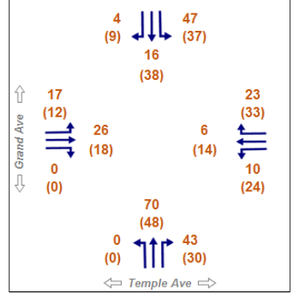
2	Amar Rd / Lemon Ave



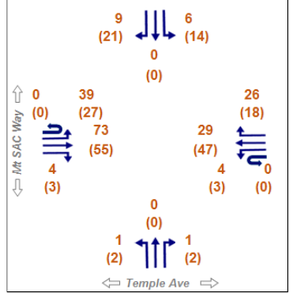
3	Amar Rd / Meadow Pass Rd



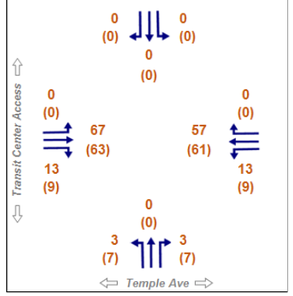
4	Temple Ave / Grand Ave



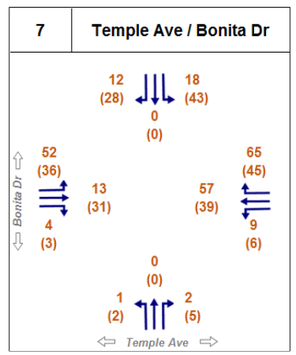
5	Temple Ave / Mt SAC Way



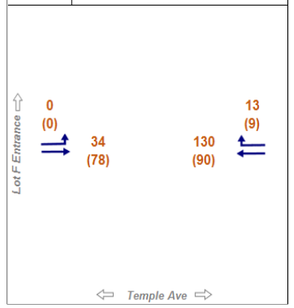
6	Temple Ave / Transit Center Access



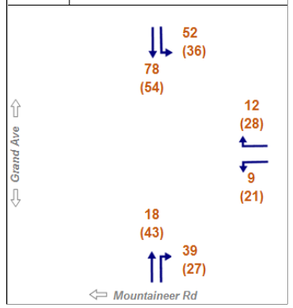
7	Temple Ave / Bonita Dr



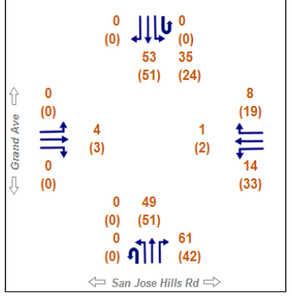
8	Temple Ave / Lot F Entrance



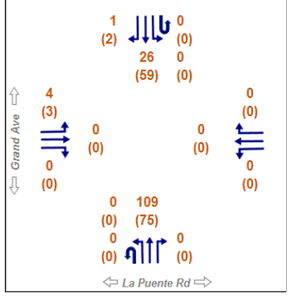
22	Mountaineer Rd / Grand Ave



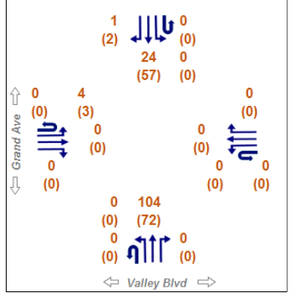
23	San Jose Hills Rd / Grand Ave



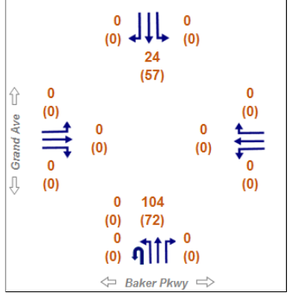
24	La Puente Rd / Grand Ave



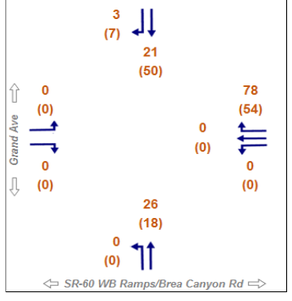
25	Valley Blvd / Grand Ave



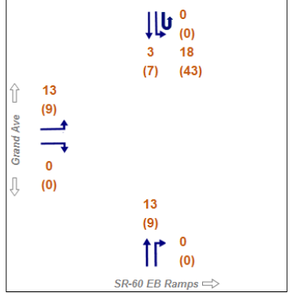
26	Baker Pkwy / Grand Ave



27	SR-60 WB Ramps / Grand Ave



28	SR-60 EB Ramps / Grand Ave



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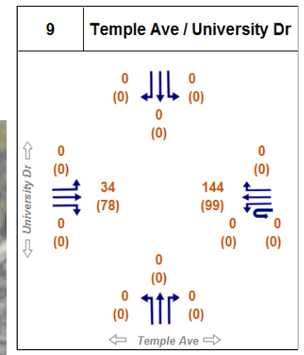
- XX — Intersection Number
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- Mt. SAC Campus
- Project Area (2018 EFMP)

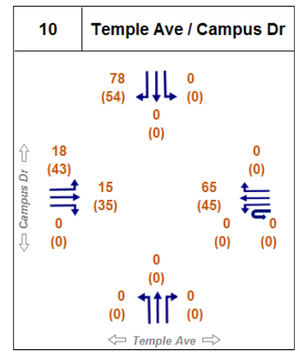
Traffic Impact Analysis
Mt. San Antonio College
2018 EFMP

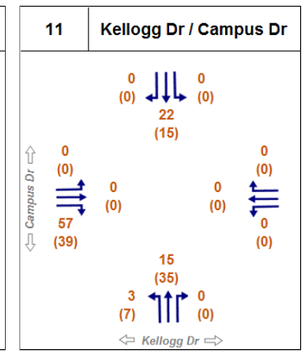
Figure 15A.
Buildout (2027) Project Traffic Volumes (Intersections 1-8, 22-28)

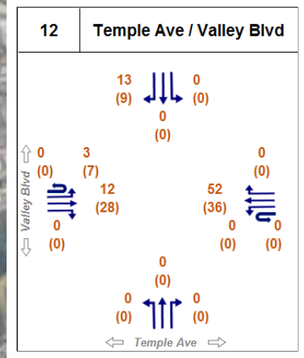
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March 2019

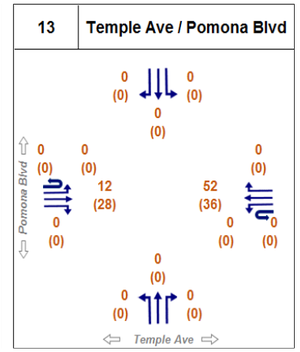


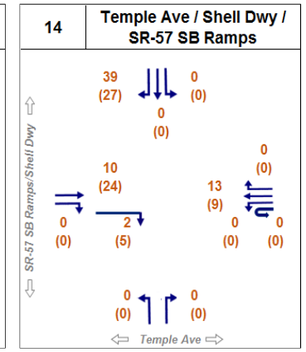


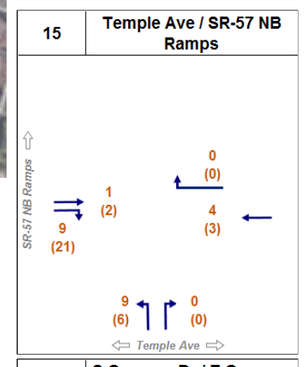


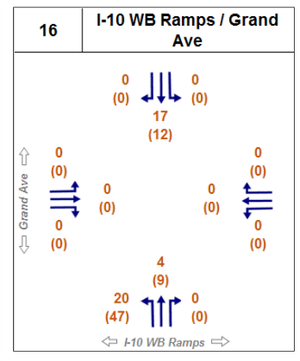


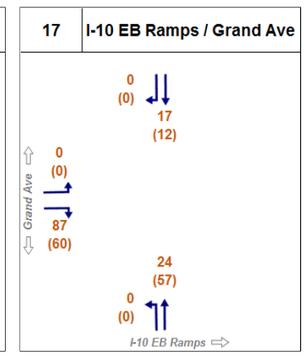


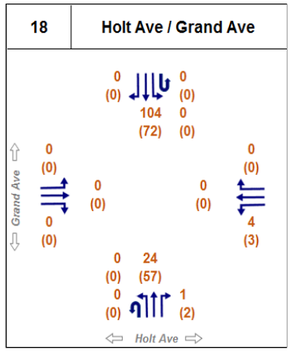


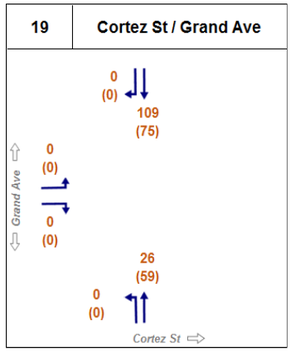


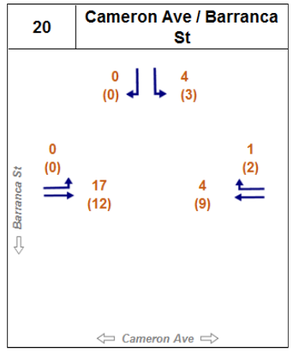


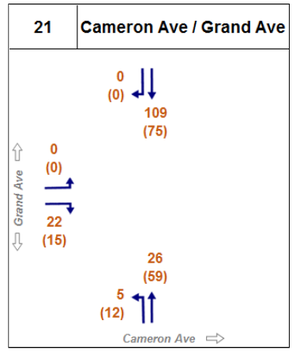


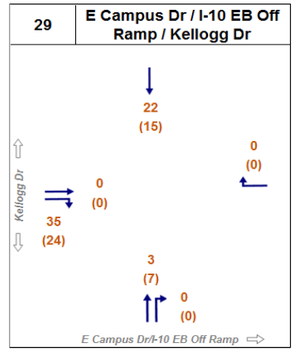


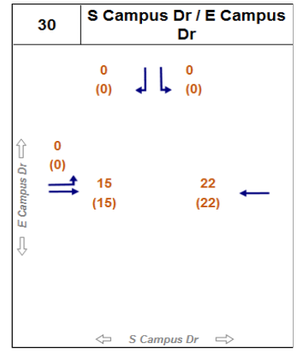












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- XX — Intersection Number
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Traffic Impact Analysis
Mt. San Antonio College
2018 EFMP

Figure 15B.
Buildout (2027) Project Traffic Volumes (Intersections 9-21, 29-30)

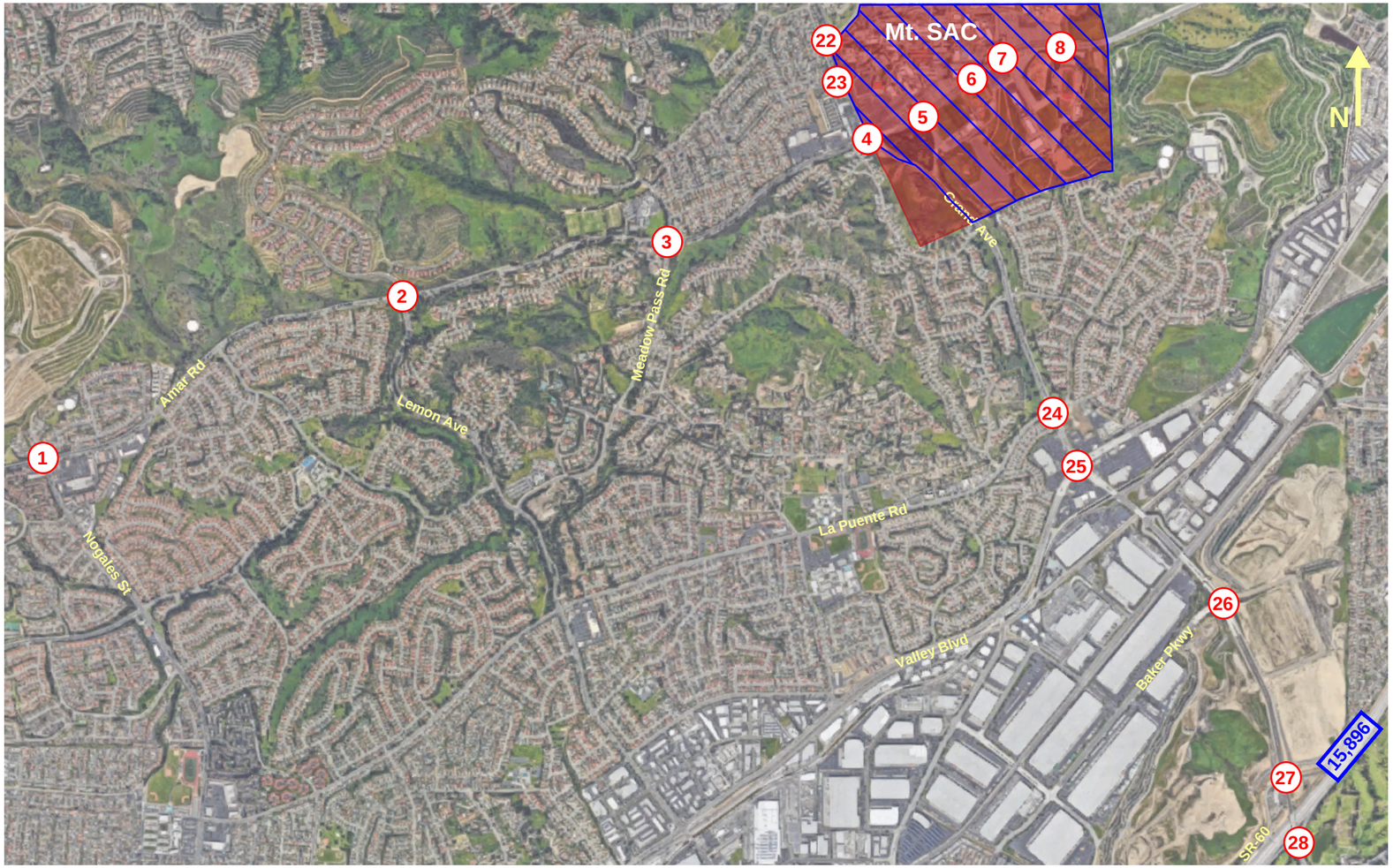
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March 2019

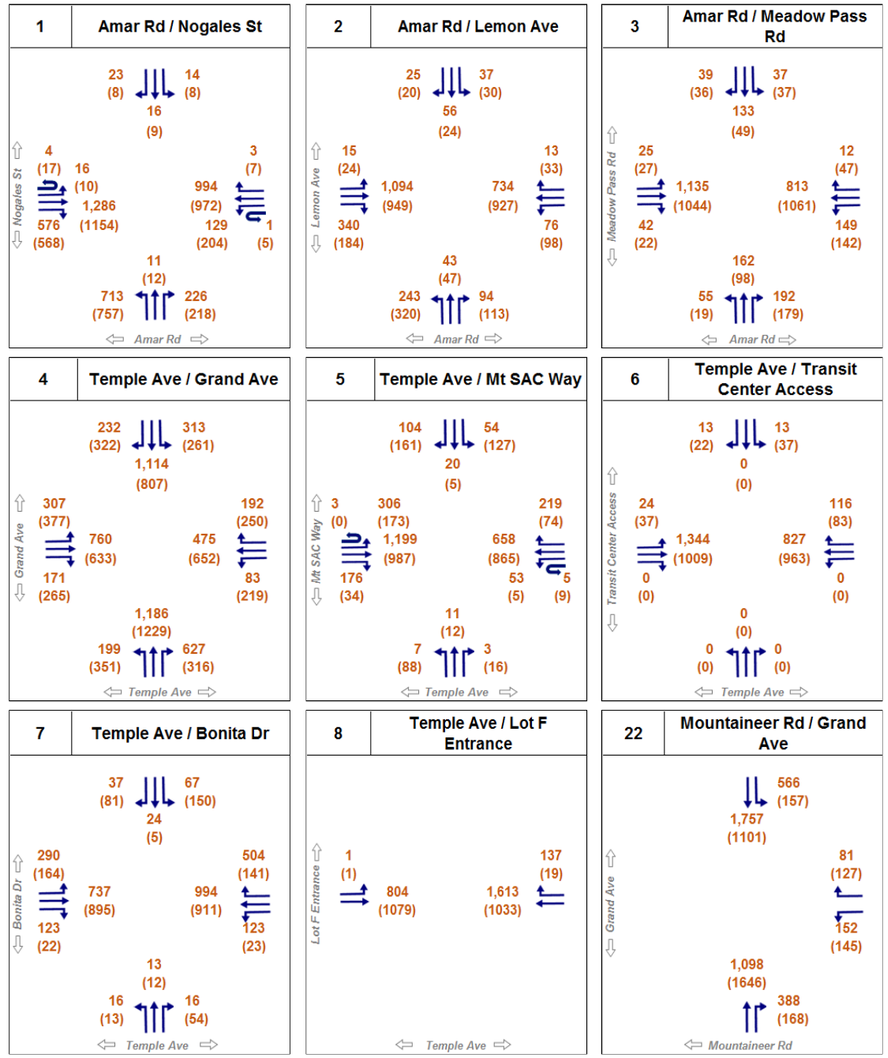
4.2.4. Cumulative Growth

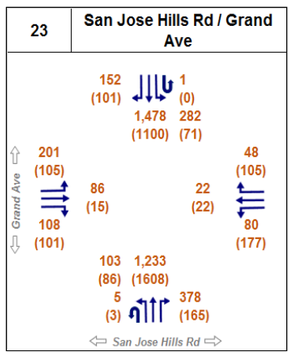
Originally, traffic volumes for 2027 were to be estimated based on information provided by the Southern California Association of Governments (SCAG), who maintains a long-term traffic model. However, the model showed 2035 traffic volumes which were lower than the existing traffic volumes in the project area.

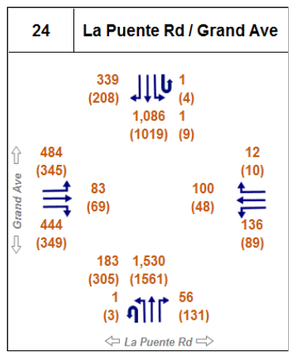
The project area is included in the *2010 Congestion Management Program (CMP) for Los Angeles County*, which includes estimated growth for various areas in the county. Based on the CMP, the annual growth rates from 2017 and 2027 are estimated to be 0.4% per year for West Covina and 0.8% per year for Pomona. The CMP does not explicitly provide growth projections for the City of Walnut, where Mt. SAC is located. Therefore, based on discussions with the City of Walnut traffic engineer, it was determined that 1.0% per year growth rate be used to calculate the projected traffic volumes for 2027 for this study. Based on the CMP, the 1.0% per year growth is conservative for the neighboring cities and was therefore used to calculate background growth for all the study intersections. By using this conservative growth rate, the traffic volume projections in this report are more likely to account for shorter periods of growth which may exceed the CMP projections due to fluctuations in the economy and development community.

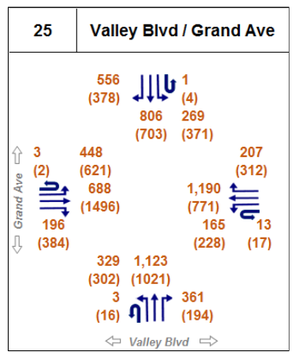
However, the project traffic volumes were assumed to be included within the 1.0% per year growth rate, so those volumes were subtracted to obtain 2027 traffic volumes without the project. In a few cases, generally near Mt. SAC, the project traffic growth was calculated to be greater than the growth calculated based on the annual growth rate. These differences are likely due to the anticipated redistribution of traffic near the campus due to the project. To be conservative, for movements where the project traffic resulted a larger increase than was generated by the assumed growth rate, the additional project traffic volume was added to the movement for conditions with the project. Figures 16A and 16B show the 2027 cumulative traffic volumes (without the project), and Figures 17A and 17B show the 2027 cumulative plus project traffic volumes.

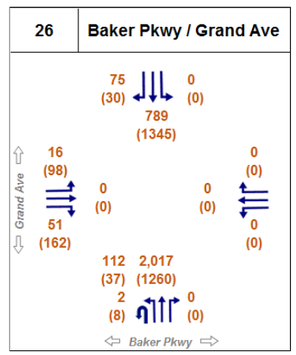


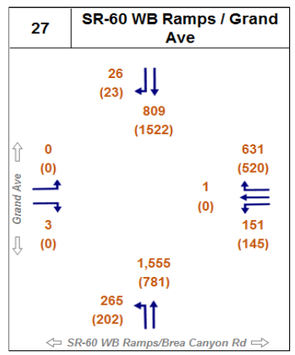


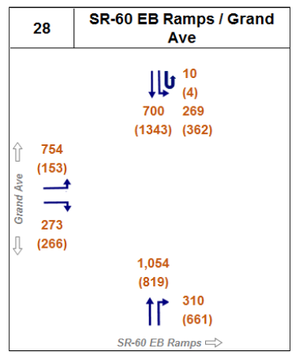












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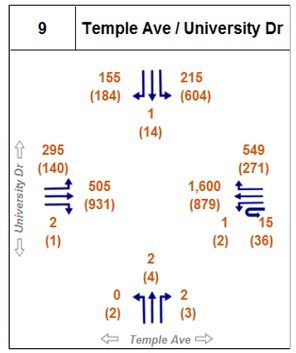
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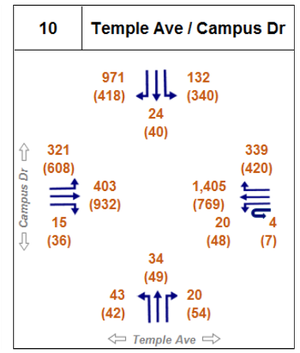
Traffic Impact Analysis
Mt. San Antonio College
2018 EFMP

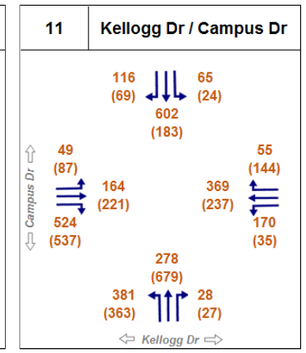
Figure 16A.
Buildout (2027) Cumulative Traffic Volumes (Intersections 1-8, 22-28)

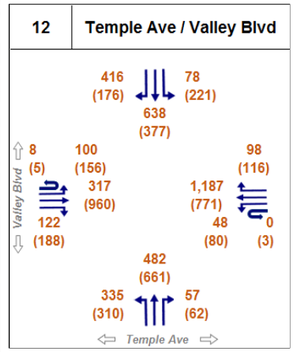
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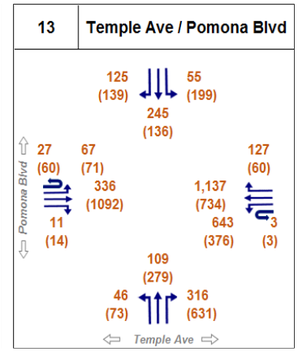


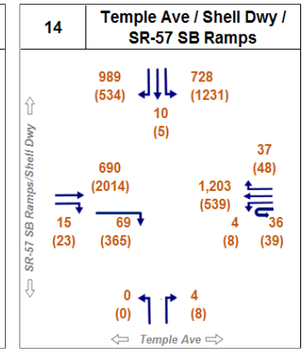


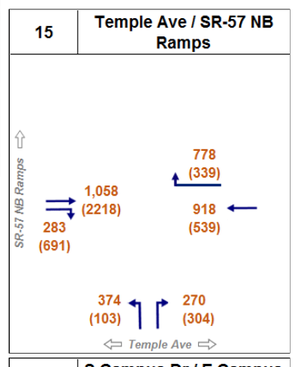


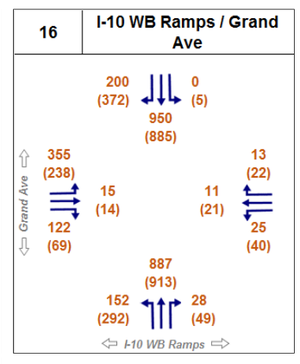


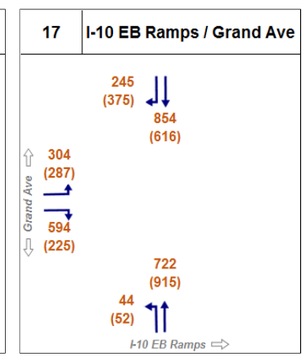


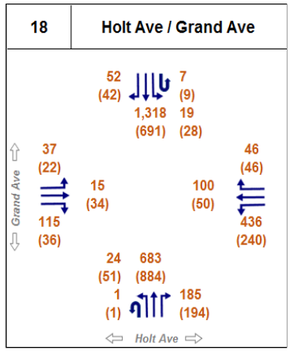


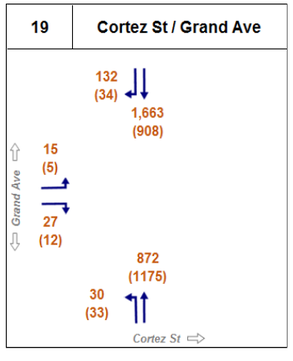


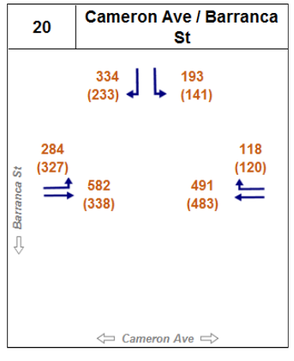


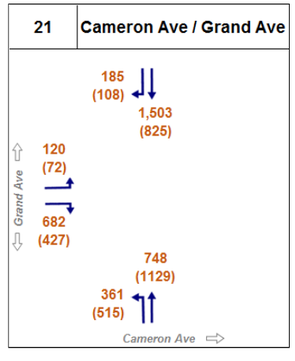


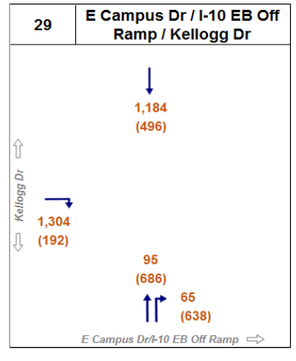


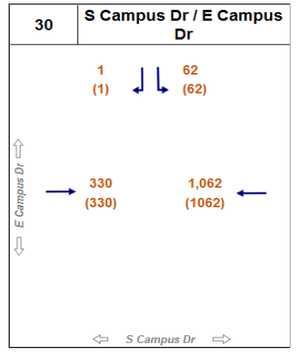












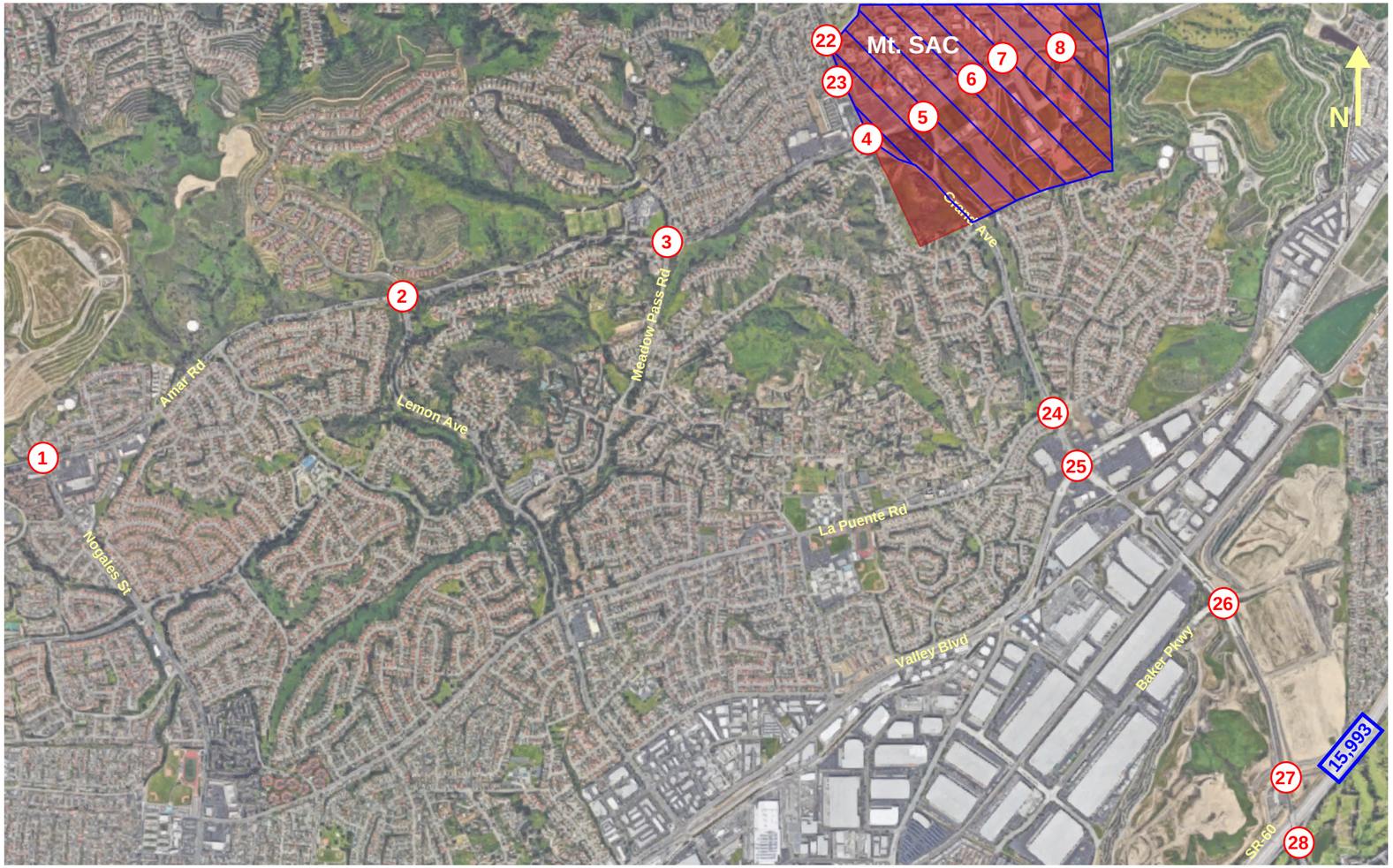
LEGEND

- XX — Intersection Number
- XX — AM Peak Hour Traffic Volume (veh/hr)
- (XX) — PM Peak Hour Traffic Volume (veh/hr)
- XX,XXX — Segment Peak Hour Traffic Volume (pc/hr)
- Mt. SAC Campus
- Project Area (2018 EFMP)

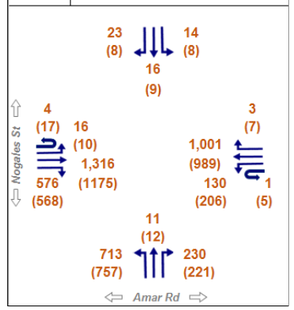
Traffic Impact Analysis
Mt. San Antonio College
2018 EFMP

Figure 16B.
Buildout (2027) Cumulative Traffic Volumes (Intersections 9-21, 29-30)

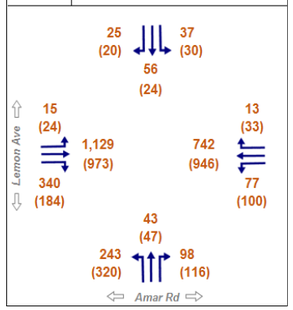
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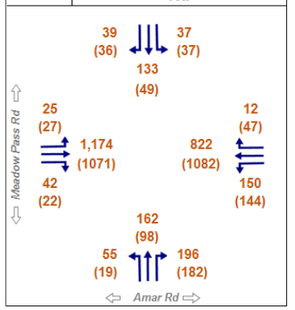
1 Amar Rd / Nogales St



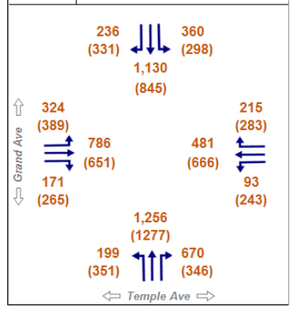
2 Amar Rd / Lemon Ave



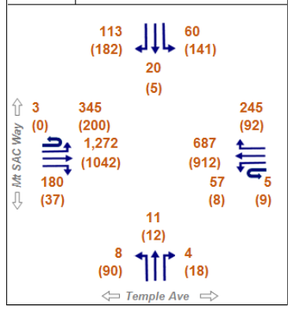
3 Amar Rd / Meadow Pass Rd



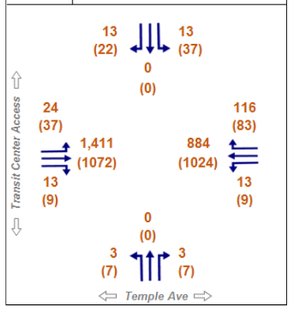
4 Temple Ave / Grand Ave



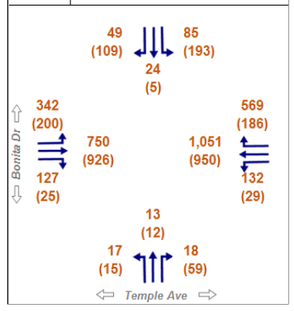
5 Temple Ave / Mt SAC Way



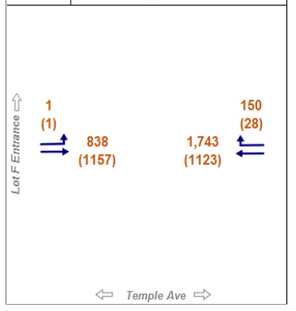
6 Temple Ave / Transit Center Access



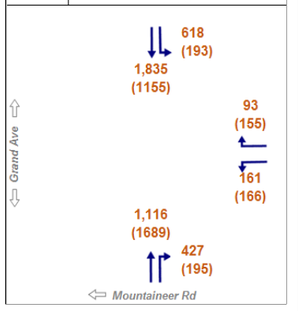
7 Temple Ave / Bonita Dr



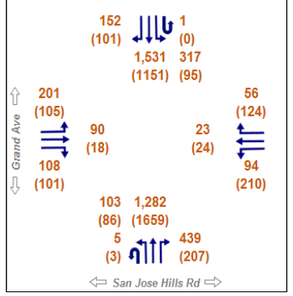
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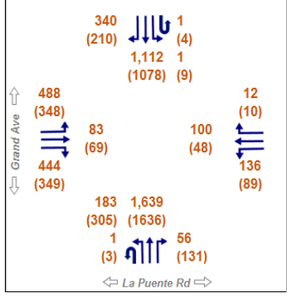
22 Mountaineer Rd / Grand Ave



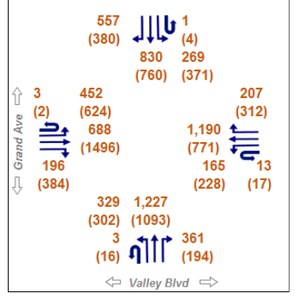
23 San Jose Hills Rd / Grand Ave



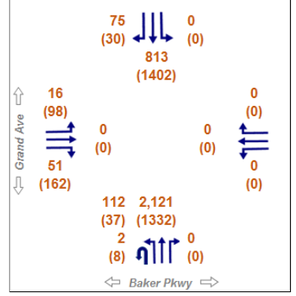
24 La Puente Rd / Grand Ave



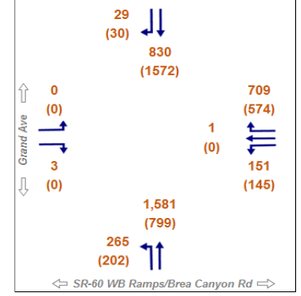
25 Valley Blvd / Grand Ave



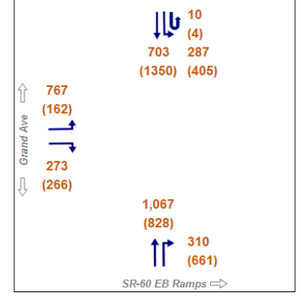
26 Baker Pkwy / Grand Ave



27 SR-60 WB Ramps / Grand Ave



28 SR-60 EB Ramps / Grand Ave



LEGEND

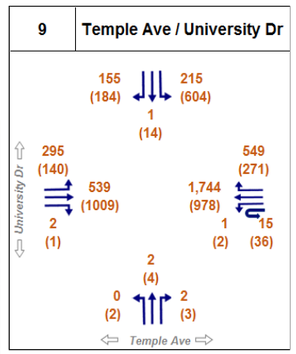
- XX — Intersection Number
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- Mt. SAC Campus
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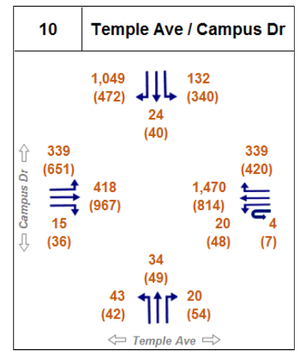
Traffic Impact Analysis
Mt. San Antonio College
2018 EFMP

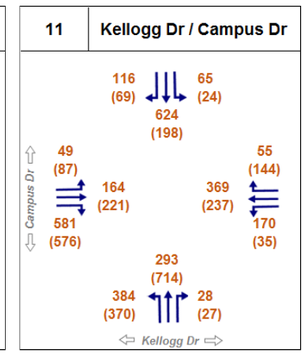
Figure 17A.
Buildout (2027) Cumulative Plus Project Traffic Volumes (Intersections 1-8, 22-28)

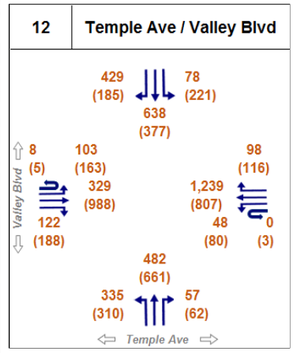
PSOMAS
March 2019

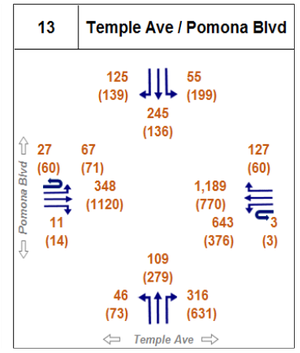


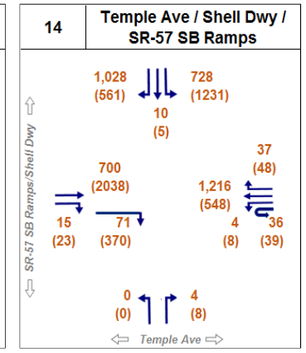


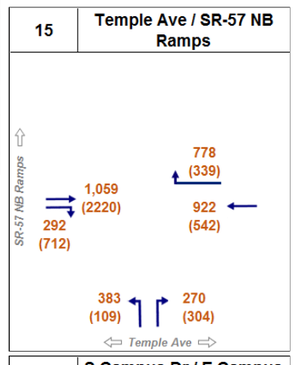


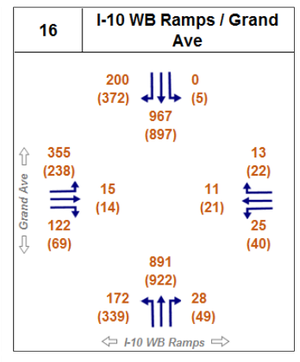


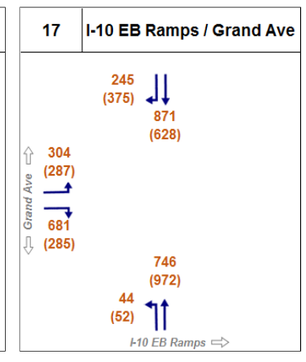


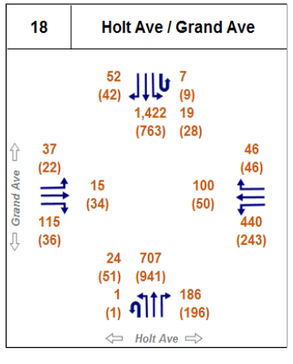


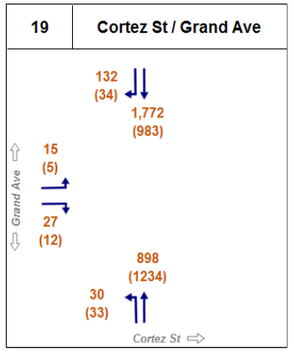


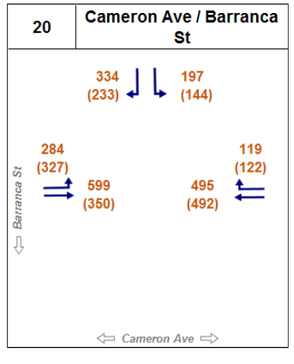


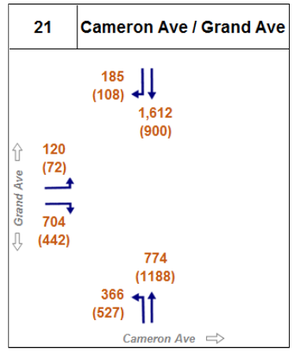


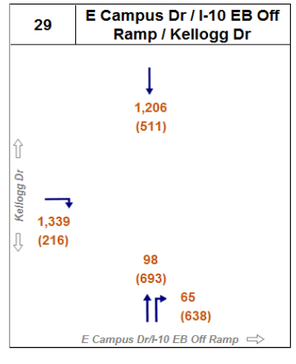


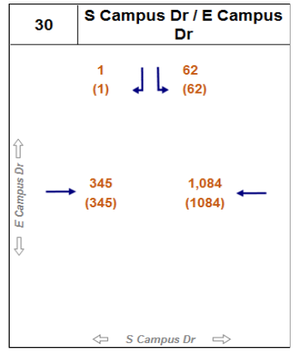












LEGEND

- XX — Intersection Number
- XX — AM Peak Hour Traffic Volume (veh/hr)
- (XX) — PM Peak Hour Traffic Volume (veh/hr)
- XX,XXX — Segment Peak Hour Traffic Volume (pc/hr)
- Mt. SAC Campus
- Project Area (2018 EFMP)

Traffic Impact Analysis
Mt. San Antonio College
2018 EFMP

Figure 17B.
Buildout (2027) Cumulative Plus Project Traffic Volumes (Intersections 9-21, 29-30)

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March 2019

5. OPERATIONAL ANALYSIS – EXISTING YEAR (2018)

5.1. EXISTING CONDITIONS

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. For existing conditions, the ICU spreadsheets and HCM reports are included in Appendix B.

Table 7 in Section 5.3 shows the resulting LOS for each of the study intersections under existing conditions, with any unacceptable LOS highlighted in red.

As seen in the table, nine signalized intersections currently operate at LOS E or worse in one or both peak hours, including the following:

4. Temple Avenue/Grand Avenue (AM peak hour)
10. Temple Avenue/Campus Drive (AM peak hour)
12. Temple Avenue/Valley Boulevard (AM peak hour)
13. Temple Avenue/Pomona Boulevard (AM and PM peak hours)
18. Holt Avenue/Grand Avenue (AM peak hour)
21. Cameron Avenue/Grand Avenue (AM peak hour)
23. San Jose Hills Road/Grand Avenue (AM peak hour)
24. La Puente Road/Grand Avenue (AM peak hour)
25. Valley Boulevard/Grand Avenue (AM peak hour)

In addition, the worst minor-street (stop controlled) movement at the intersection of Cortez Street and Grand Avenue (#19) operates at LOS E or worse in both peak hours as well as at the intersection of Cameron Avenue and Barranca Street (#20) in the AM peak hour. Recall that for two-way stop-controlled intersections (such as Cortez Street/Grand Avenue and Cameron Avenue/Barranca Street), there is no defined intersection LOS.

In addition to the study intersections, the two study Caltrans segments were evaluated for existing conditions, as shown below:

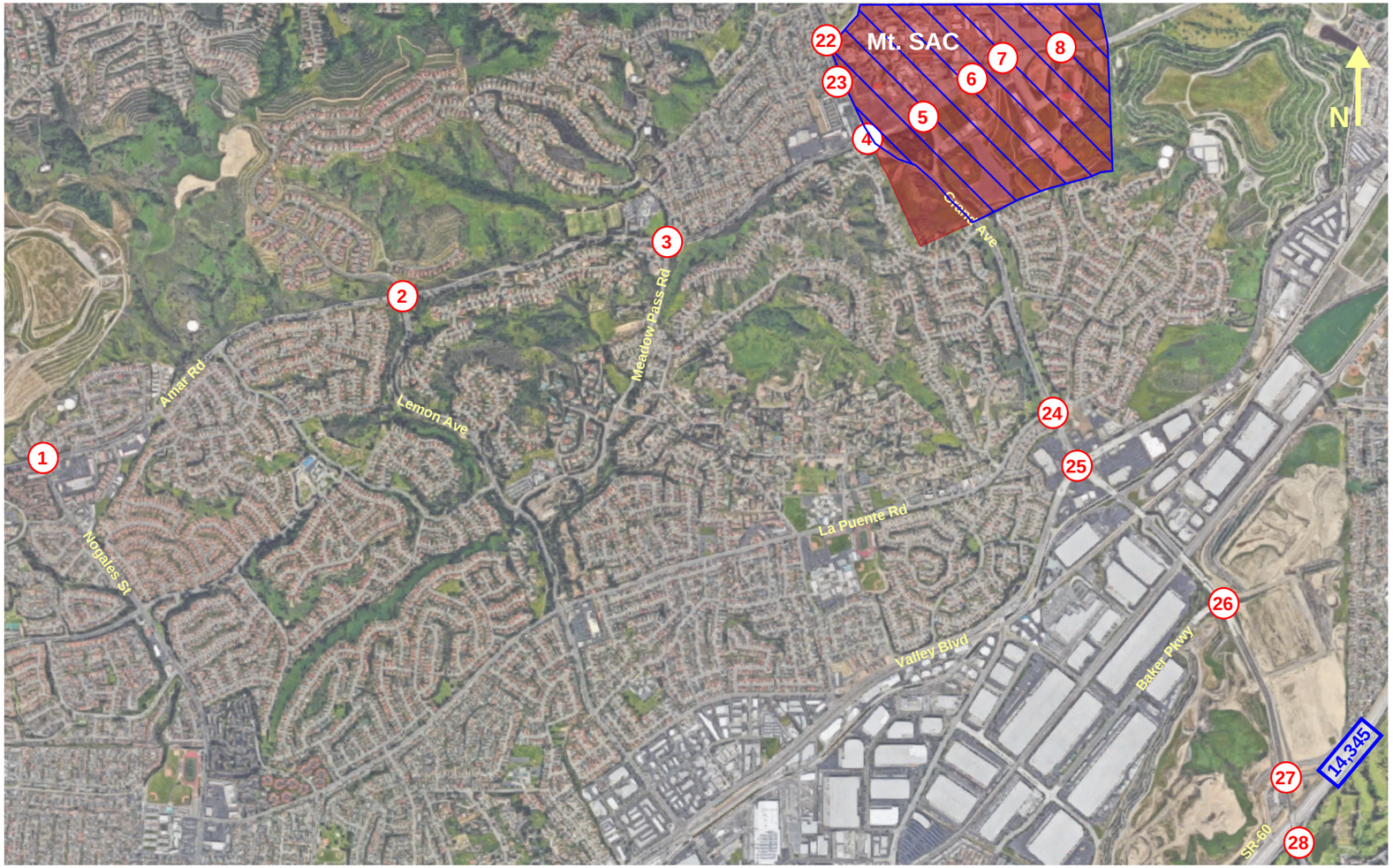
- I-10, Citrus Street to Holt Avenue
    - 1,857 passenger cars per hour per lane (pc/hr/ln), LOS D
- SR-57, Grand Avenue to SR-60
    - 792 pc/hr/ln, LOS B

5.2. EXISTING PLUS PROJECT CONDITIONS

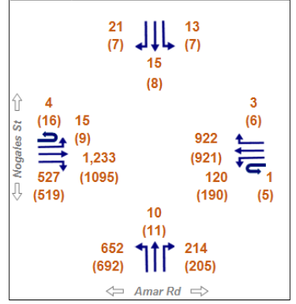
The same approach was used to evaluate existing conditions plus the project; the full buildout (2027) version of the project was assumed in this analysis. The purpose of the Existing Plus Project analysis is to provide the baseline for assessing environmental impacts, which is generally the existing 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 present-day 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, and in this case realization of the full estimated student headcount in the year 2027, as assessed against existing traffic conditions, is an unrealistic, hypothetical scenario for the following reasons:

- Implementation of the proposed project is not an immediate-term construction project (the horizon year is 2027)
- This scenario does not account for future population and development growth in the City and surrounding areas with or without the proposed project
- This scenario does not account for other projected land use projects that should provide for, or contribute to, needed traffic improvements to the circulation system in the study area
- The circulation system is projected to change over time with or without the proposed project

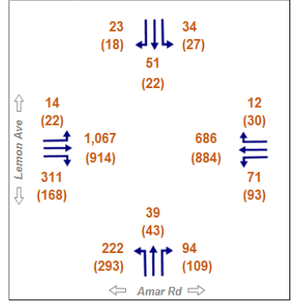
Figures 18A and 18B show the existing plus project traffic volumes. The ICU and HCM reports for existing conditions plus the project are included in Appendix B. The resulting level of service for each of the study intersections for existing plus project conditions is also shown in Table 7 in Section 5.3.



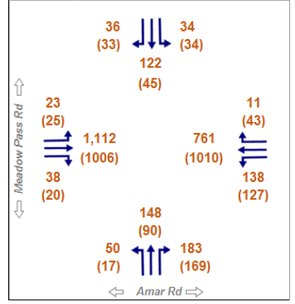
1 Amar Rd / Nogales St



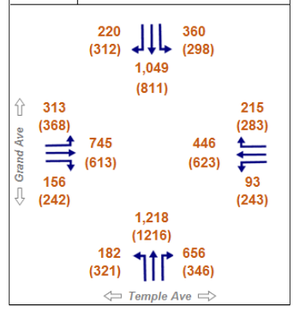
2 Amar Rd / Lemon Ave



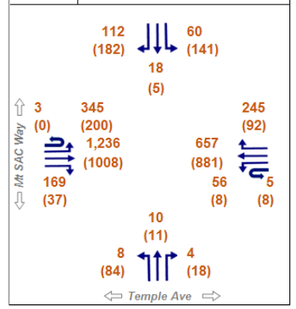
3 Amar Rd / Meadow Pass Rd



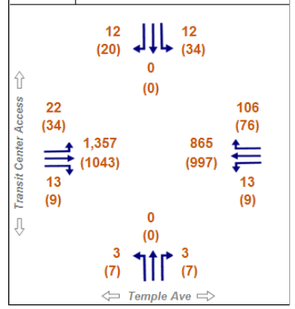
4 Temple Ave / Grand Ave



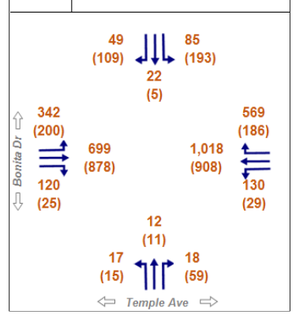
5 Temple Ave / Mt SAC Way



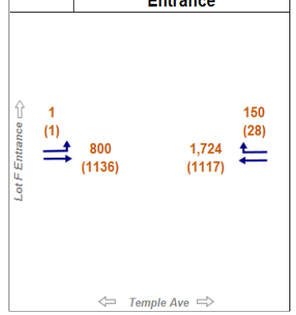
6 Temple Ave / Transit Center Access



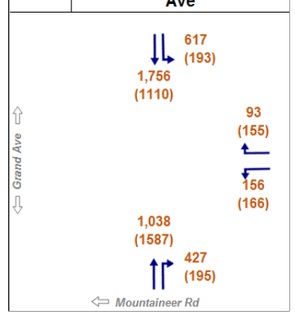
7 Temple Ave / Bonita Dr



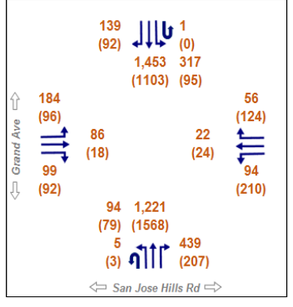
8 Temple Ave / Lot F Entrance



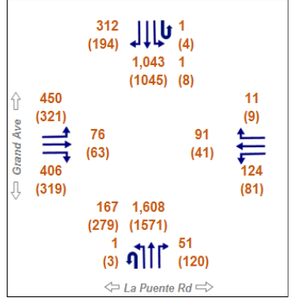
22 Mountaineer Rd / Grand Ave



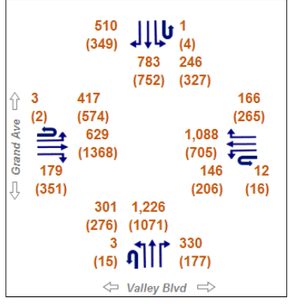
23 San Jose Hills Rd / Grand Ave



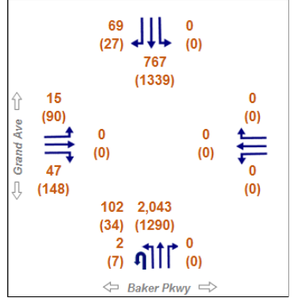
24 La Puente Rd / Grand Ave



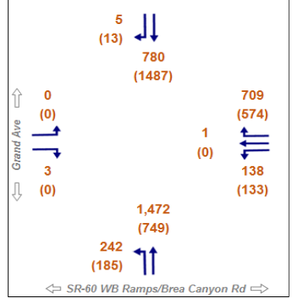
25 Valley Blvd / Grand Ave



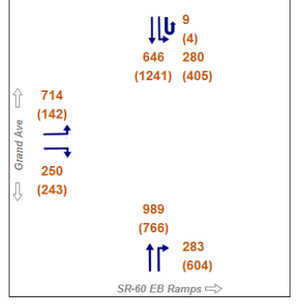
26 Baker Pkwy / Grand Ave



27 SR-60 WB Ramps / Grand Ave



28 SR-60 EB Ramps / Grand Ave



LEGEND

- XX — Intersection Number
- XX — AM Peak Hour Traffic Volume (veh/hr)
- (XX) — PM Peak Hour Traffic Volume (veh/hr)
- XX,XXX — Segment Peak Hour Traffic Volume (pc/hr)
- Mt. SAC Campus
- Project Area (2018 EFMP)

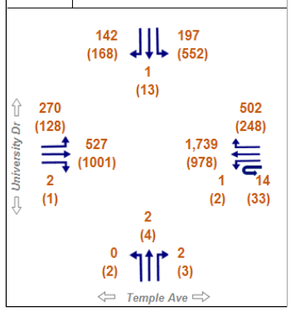
Traffic Impact Analysis
Mt. San Antonio College
2018 EFMP

Figure 18A.
Existing Plus Project Traffic Volumes (Intersections 1-8, 22-28)

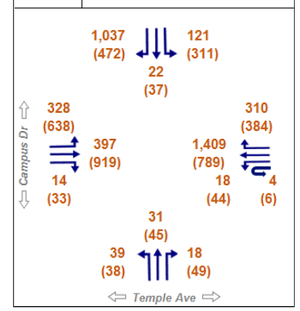
PSOMAS
March 2019



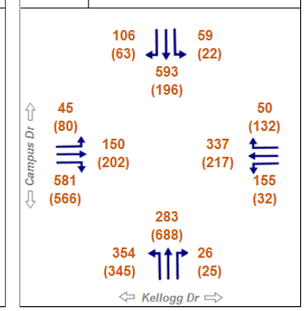
9 Temple Ave / University Dr



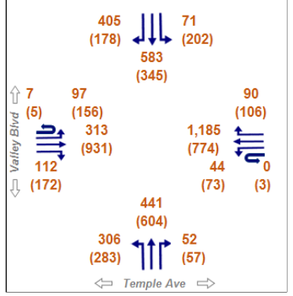
10 Temple Ave / Campus Dr



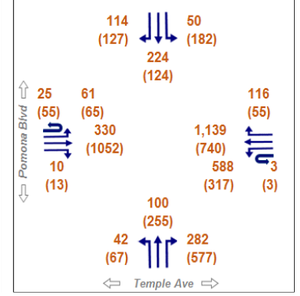
11 Kellogg Dr / Campus Dr



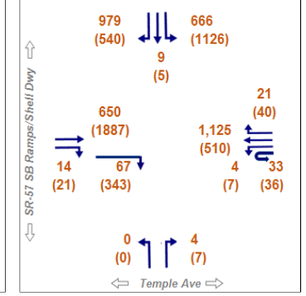
12 Temple Ave / Valley Blvd



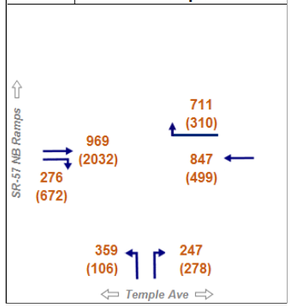
13 Temple Ave / Pomona Blvd



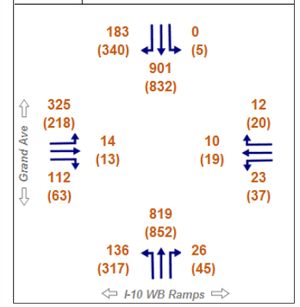
14 Temple Ave / Shell Dwy / SR-57 SB Ramps



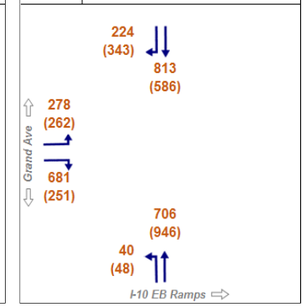
15 Temple Ave / SR-57 NB Ramps



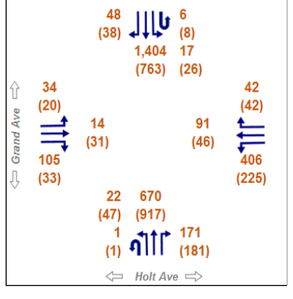
16 I-10 WB Ramps / Grand Ave



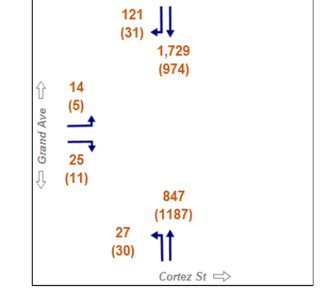
17 I-10 EB Ramps / Grand Ave



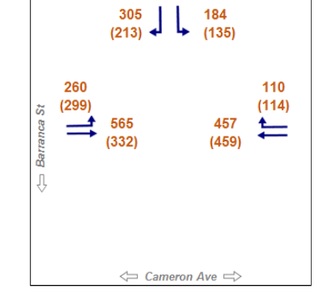
18 Holt Ave / Grand Ave



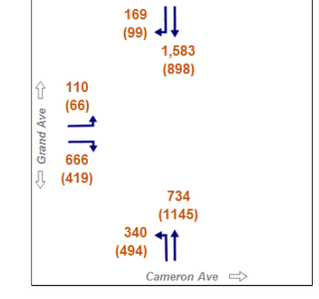
19 Cortez St / Grand Ave



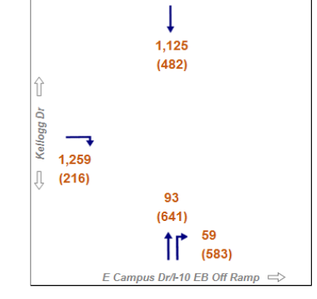
20 Cameron Ave / Barranca St



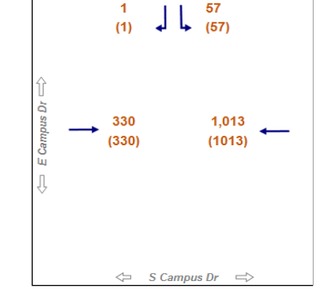
21 Cameron Ave / Grand Ave



29 E Campus Dr / I-10 EB Off Ramp / Kellogg Dr



30 S Campus Dr / E Campus Dr



LEGEND

- XX — Intersection Number
- XX — AM Peak Hour Traffic Volume (veh/hr)
- (XX) — PM Peak Hour Traffic Volume (veh/hr)
- XX,XXX — Segment Peak Hour Traffic Volume (pc/hr)
- Mt. SAC Campus
- Project Area (2018 EFMP)

Traffic Impact Analysis
Mt. San Antonio College
2018 EFMP

Figure 18B.
Existing Plus Project Traffic Volumes (Intersections 9-21, 29-30)

PSOMAS
March 2019

The intersections which would operate at LOS E or worse are the same as those listed in Section 5.1, Existing Conditions; further, the intersection of San Jose Hills Road and Grand Avenue, already operating at LOS E in the AM peak hour, would deteriorate from LOS D to LOS E in the PM peak hour.

For existing conditions plus project, the volumes and LOS on the Caltrans study segments are as listed below:

- I-10, Citrus Street to Holt Avenue
    - 1,869 passenger cars per hour per lane (pc/hr/ln), LOS D
- SR-57, Grand Avenue to SR-60
    - 797 pc/hr/ln, LOS B

5.3. EXISTING PLUS PROJECT SIGNIFICANT IMPACT EVALUATION

Table 7 shows the LOS for existing and existing plus project conditions as well as the increase in ICU for the non-Caltrans intersections with the project. For the Caltrans intersections, a significant impact can only occur if the intersection is operating at LOS E or F. As shown in the table, 12 intersections would have a significant impact for the hypothetical existing plus project condition.

Recall that although operational information is provided for unsignalized intersections, projects are not considered to have a significant impact on any unsignalized intersections. However, as previously discussed, a preliminary peak hour signal warrant evaluation was conducted for unsignalized intersections which are expected to operate at LOS E or F. Two unsignalized intersections are shown to operate at LOS E or F under existing and existing plus project conditions; the preliminary peak hour signal warrant evaluation is included in Section 5.4.

For the Caltrans study segments, both are expected to operate at LOS D or better with the project; therefore, no mitigation is required.

Table 7. Existing Plus Project Impacts Analysis

	Intersection	Intersection Control	Location of Intersection	Existing						Existing Plus Project						Increase in Delay (Caltrans 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	Amar Rd/Nogales St	Signalized	West Covina		0.862	D		0.829	D		0.874	D		0.838	D			0.01	0.01	NO	NO
2	Amar Rd/Lemon Ave	Signalized	Walnut		0.792	C		0.652	B		0.805	D		0.661	B			0.01	0.01	NO	NO
3	Amar Rd/Meadow Pass Rd	Signalized	Walnut		0.773	C		0.699	B		0.791	C		0.713	C			0.02	0.01	NO	NO
4	Temple Ave/Grand Ave	Signalized	Walnut		0.932	E		0.813	D		0.993	E		0.847	D			0.06	0.03	YES	YES
5	Temple Ave/Mt. SAC Way	Signalized	Walnut		0.625	B		0.687	B		0.664	B		0.738	C			0.04	0.05	NO	NO
6	Temple Ave/Transit Center	Signalized	Walnut		0.589	A		0.478	A		0.625	B		0.511	A			0.04	0.03	NO	NO
7	Temple Ave/Bonita Dr	Signalized	Walnut		0.602	B		0.571	A		0.677	B		0.621	B			0.07	0.05	NO	NO
8	Temple Ave/Lot F	Unsignalized	Walnut	27.2		D	18.7		C	32.0		D	20.6		C	N/A	N/A			N/A	N/A
9	Temple Ave/University Dr	Signalized	Pomona		0.839	D		0.688	B		0.885	D		0.722	C			0.05	0.03	YES	NO
10	Temple Ave/Campus Dr	Signalized	Pomona		1.003	F		0.759	C		1.056	F		0.783	C			0.05	0.02	YES	NO
11	Kellogg Dr/Campus Dr	Signalized	Pomona		0.828	D		0.579	A		0.853	D		0.601	B			0.03	0.02	YES	NO
12	Temple Ave/Valley Blvd	Signalized	Pomona		0.919	E		0.763	C		0.936	E		0.776	C			0.02	0.01	YES	NO
13	Temple Ave/Pomona Blvd	Signalized	Pomona		0.971	E		1.071	F		0.974	E		1.077	F			0.00	0.01	NO	YES
14	Temple Ave/SR-57 SB Ramps	Signalized*	Pomona	23.7		C	42.8		D	24.2		C	43.6		D	N/A	N/A			NO	NO
15	Temple Ave/SR-57 NB Ramps	Signalized*	Pomona	9.8		A	8.5		A	10.0		A	8.5		A	N/A	N/A			NO	NO
16	I-10 WB Ramps/Grand Ave	Signalized*	West Covina	21.8		C	20.6		C	23.8		C	22.1		C	N/A	N/A			NO	NO
17	I-10 EB Ramps/Grand Ave	Signalized*	West Covina	23.2		C	13.8		B	27.7		C	13.7		B	N/A	N/A			NO	NO
18	Holt Ave/Grand Ave	Signalized	West Covina		1.019	F		0.617	B		1.057	F		0.638	B			0.04	0.02	YES	NO
19	Cortez St/Grand Ave	Unsignalized**	West Covina	207.5		F	49.7		E	278.2		F	60.7		F	N/A	N/A			N/A	N/A
20	Cameron Ave/Barranca St	Unsignalized	West Covina	48.2		E	29.1		D	51.4		F	30.6		D	N/A	N/A			N/A	N/A
21	Cameron Ave/Grand Ave	Signalized	LA County		1.131	F		0.771	C		1.184	F		0.809	D			0.05	0.04	YES	YES
22	Mountaineer Rd/Grand Ave	Signalized	Walnut		0.719	C		0.753	C		0.748	C		0.790	C			0.03	0.04	NO	YES
23	San Jose Hills Rd/Grand Ave	Signalized	Walnut		0.934	E		0.897	D		0.992	E		0.960	E			0.06	0.06	YES	YES
24	La Puente Rd/Grand Ave	Signalized	Walnut		1.028	F		0.875	D		1.063	F		0.895	D			0.04	0.02	YES	YES
25	Valley Blvd/Grand Ave	Signalized	Walnut		0.907	E		0.824	D		0.933	E		0.841	D			0.03	0.02	YES	YES
26	Baker Pkwy/Grand Ave	Signalized	Industry		0.581	A		0.534	A		0.604	B		0.547	A			0.02	0.01	NO	NO
27	SR-60 WB Ramps/Grand Ave	Signalized*	Industry	24.2		C	15.2		B	26.7		C	15.9		B	N/A	N/A			NO	NO
28	SR-60 EB Ramps/Grand Ave	Signalized*	Diamond Bar	22.7		C	13.9		B	23.7		C	15.0		B	N/A	N/A			NO	NO

*Caltrans Intersection

**TWSC (delay shows highest lane delay)

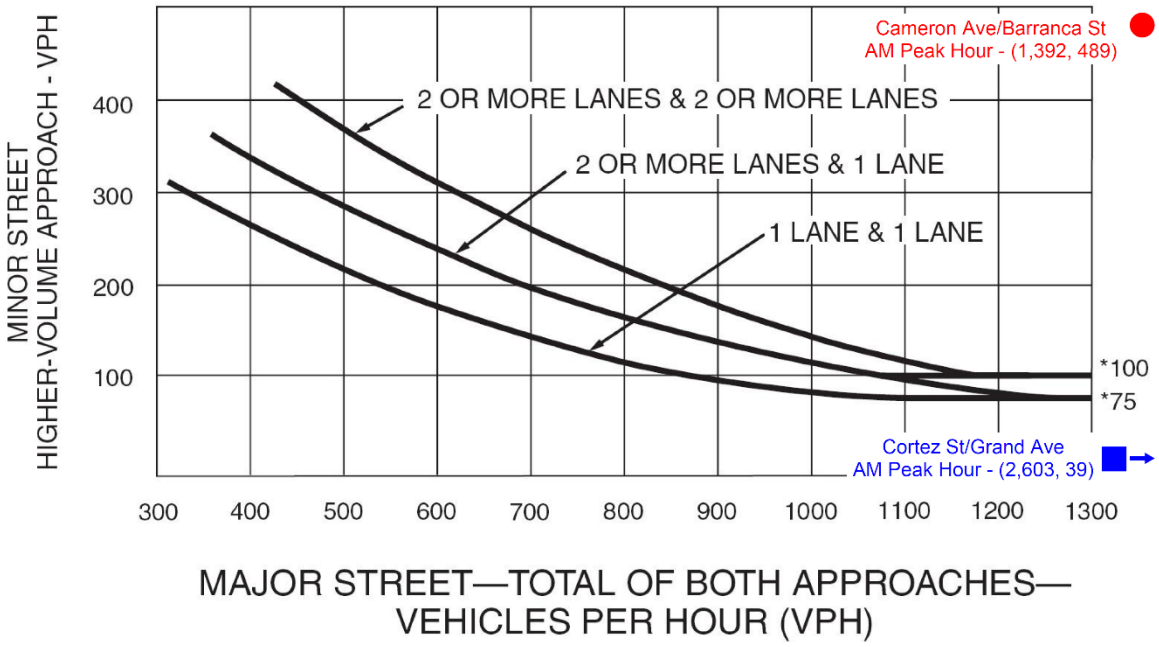
Highlighted cells indicate LOS E or F OR indicate significant impact

5.4. EXISITNG PLUS PROJECT PRELIMINARY SIGNAL WARRANT ANALYSIS

As seen in Table 7, the intersections of Cortez Street/Grand Avenue and Cameron Avenue/Barranca Street are expected to operate at LOS E or F under existing and existing plus project conditions. Therefore, the peak hour signal warrant (warrant 3 of the MUTCD) was evaluated for both intersections for conditions with the project. Because of the existing southbound right turn lane on Grand Avenue at Cortez Street, the right turn volume was not included in the total volume at that intersection.

As shown in Figure 19, the intersection of Cameron Avenue and Barranca Street is expected to meet the peak hour signal warrant, while the intersection of Cortez Street and Grand Avenue is not (due to the low volumes on Cortez Street).

Figure 19. Existing Plus Project Peak Hour Signal Warrant



5.5. MITIGATION MEASURES

The following list includes the recommended improvements for each of the intersections with a significant project impact under the Existing Plus Project scenario. These recommendations are also applicable to future year traffic analysis scenarios as noted:

4. Temple Avenue and Grand Avenue
    - Convert the eastbound right turn lane to a shared thru-right turn lane. This will not require any physical reconstruction but will require additional striping to provide a third eastbound thru lane on the east leg of the intersection.
    - Convert the westbound right turn lane to a shared thru-right turn lane. This will not require any physical reconstruction but will require additional striping to provide a third westbound thru lane on the west leg of the intersection.
    - These mitigation measures will reduce the project impact, but the impact is still considered to be significant. To fully mitigate the impacts, a second northbound right turn lane would need to be added on Grand Avenue, which is not feasible due to right-of-way constraints. Therefore, this impact would be **significant and unavoidable** and a statement of overriding considerations is required.
    - ***The recommendations will fully mitigate the impacts in 2021. The recommendations are also applicable in 2027 but will not fully mitigate the impacts.***

9. Temple Avenue and University Drive
    - Convert the westbound right turn lane to a shared thru-right turn lane. This will not require any physical reconstruction but will require additional striping to provide a third westbound thru lane on the west leg of the intersection.
    - ***These recommendations are also applicable to impacts that occur at this intersection in 2021 and 2027.***

10. Temple Avenue and Campus Drive
    - Convert the westbound right turn lane to a shared thru-right turn lane. This will not require any physical reconstruction but will require additional striping to provide a third westbound thru lane on the west leg of the intersection.
    - ***These recommendations are also applicable to impacts that occur at this intersection in 2021 and 2027.***

11. Kellogg Drive and Campus Drive
    - Convert the shared eastbound thru-right turn lane to an exclusive right turn lane. This will only require restriping on the eastbound approach.
    - ***These recommendations are also applicable to impacts that occur at this intersection in 2027.***
12. Temple Avenue and Valley Boulevard
    - Add a second northbound left turn lane. This will require restriping of both the north and south legs of the intersection (no physical reconstruction) and may result in the loss of some parking spaces along Valley Boulevard, south of Temple Avenue.
    - ***These recommendations are also applicable to impacts that occur at this intersection in 2021 and 2027.***
13. Temple Avenue and Pomona Boulevard
    - Convert the southbound lanes to provide two exclusive left turn lanes and a shared thru-right turn lane. This will require restriping on the southbound approach and the removal of the existing "right lane must turn right" and "right turn only" signs.
    - ***These recommendations are also applicable to impacts that occur at this intersection in 2027.***
18. Holt Avenue and Grand Avenue
    - Convert the southbound right turn lane to a shared thru-right turn lane. This will require additional striping on the south leg to either extend the right turn lane at Virginia Avenue north to Holt Avenue to act as a trap right turn lane (where drivers in that lane will be forced to turn right at Virginia Avenue), or to convert the lane to a shared thru-right turn lane at Virginia Avenue. Some physical improvements, including the removal of the existing raised median island and relocation of the signal pole, will also be needed for the northwest corner of the Holt Avenue/Grand Avenue intersection.
    - ***These recommendations are also applicable to impacts that occur at this intersection in 2021 and 2027.***

21. Cameron Avenue and Grand Avenue
    - Add a second eastbound right turn lane. This will only require restriping and will not require any physical improvements.
    - ***These recommendations are also applicable to impacts that occur at this intersection in 2021 and 2027.***
22. Mountaineer Road and Grand Avenue
    - This intersection already includes dual southbound and westbound left turn lanes, dual westbound right turn lanes, and a northbound (de-facto) right turn lane. To mitigate the impacts, a northbound through lane would need to be added on Grand Avenue, which is not feasible due to right-of-way constraints. This impact would be **significant and unavoidable** and a statement of overriding considerations is required.
23. San Jose Hills Road and Grand Avenue
    - Convert the westbound thru lane to a shared thru-left turn lane. This will only require striping, no physical reconstruction.
    - Convert the northbound right turn lane to a shared thru-right turn lane. This will not require any physical reconstruction but will require additional striping to provide a third northbound thru lane on the north leg of the intersection.
    - ***These recommendations are also applicable to impacts that occur at this intersection in 2021 and 2027.***
24. La Puente Road and Grand Avenue
    - Modify the signal phasing to include an eastbound right turn overlap.
    - ***These recommendations are also applicable to impacts that occur at this intersection in 2021 and 2027.***
25. Valley Boulevard and Grand Avenue
    - Because this intersection includes dual left turn lanes in all directions and free right turn lanes in three directions, the intersection is considered to be built out. To mitigate the impact, a northbound through lane would need to be added on Grand Avenue, which is not feasible due to right-of-way constraints. This impact would be **significant and unavoidable** and a statement of overriding considerations is required.

Table 8 shows the significant impact evaluation with the recommended mitigation measures in place. As shown, the mitigation measures reduce the project impact to a less than significant level for 9 of the 12 intersections. However, the implementation of the identified improvements is subject to the approval of the cities of Walnut, Pomona, and West Covina as well as the County of Los Angeles. While Mt. SAC would work with these jurisdictions to implement the recommended improvements, Mt. SAC does not have the legal ability to compel these agencies to implement the improvements needed to mitigate this impact to a level of insignificance. As such, the impacts would be **significant and unavoidable** and a statement of overriding considerations is needed.

It should be noted that implementation of travel demand management (TDM) strategies included as part of the proposed EFMP may help reduce the project traffic overall and therefore further reduce the project impacts at study area intersections. For example, the construction of the Transit Center on campus, along with complementary programs (i.e. bike storage, bike share, etc.), may help shift student, staff, and faculty trips from personal vehicles to transit, therefore reducing campus vehicular traffic and reducing the severity of project impacts. However, even with implementation of TDM strategies, the project impacts at study area intersections would be **significant and unavoidable.**

Table 8. Existing Plus Mitigated Project Impacts Analysis

Intersection		Intersection Control	Location of Intersection	Existing				Existing + Project w/Mitigation				Increase in ICU		Significant Impact?	
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour					
				V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	AM	PM	AM	PM
4	Temple Ave/ Grand Ave	Signalized	Walnut	0.932	E	0.813	D	0.962	E	0.841	D	0.03	0.03	YES	YES
9	Temple Ave/ University Dr	Signalized	Pomona	0.839	D	0.688	B	0.807	D	0.709	C	-0.03	0.02	NO	NO
10	Temple Ave/ Campus Dr	Signalized	Pomona	1.003	F	0.759	C	0.973	E	0.780	C	-0.03	0.02	NO	NO
11	Kellogg Dr/ Campus Dr	Signalized	Pomona	0.828	D	0.579	A	0.802	D	0.530	A	-0.03	-0.05	NO	NO
12	Temple Ave/ Valley Blvd	Signalized	Pomona	0.919	E	0.763	C	0.832	D	0.776	C	-0.09	0.01	NO	NO
13	Temple Ave/ Pomona Blvd	Signalized	Pomona	0.971	E	1.071	F	0.936	E	1.034	F	-0.03	-0.04	NO	NO
18	Holt Ave/Grand Ave	Signalized	West Covina	1.019	F	0.617	B	0.911	E	0.638	B	-0.11	0.02	NO	NO
21	Cameron Ave/ Grand Ave	Signalized	LA County	1.131	F	0.771	C	0.985	E	0.702	C	-0.15	-0.07	NO	NO
22	Mountaineer Rd/ Grand Ave	Signalized	Walnut	0.719	C	0.753	C	0.748	C	0.790	C	0.03	0.04	NO	YES
23	San Jose Hills Rd/ Grand Ave	Signalized	Walnut	0.934	E	0.897	D	0.920	E	0.749	C	-0.01	-0.15	NO	NO
24	La Puente Rd/ Grand Ave	Signalized	Walnut	1.028	F	0.875	D	1.030	F	0.874	D	0.00	0.00	NO	NO
25	Valley Blvd/ Grand Ave	Signalized	Walnut	0.907	E	0.824	D	0.933	E	0.841	D	0.03	0.02	YES	YES

Highlighted cells indicate LOS E or F OR indicate significant impact

6. OPERATIONAL ANALYSIS – INTERIM YEAR (2021)

6.1. 2021 CUMULATIVE CONDITIONS WITHOUT THE PROJECT

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. Appendix C shows the ICU and HCM reports for 2021 cumulative conditions.

Table 9 in Section 6.3 shows the resulting LOS for each of the study intersections under 2021 cumulative conditions without the project.

As seen in the table, nine intersections would operate at LOS E or worse for 2021 cumulative conditions in one or both peak hours without the proposed project, including the following:

4. Temple Avenue/Grand Avenue (AM peak hour)
10. Temple Avenue/Campus Drive (AM peak hour)
12. Temple Avenue/Valley Boulevard (AM peak hour)
13. Temple Avenue/Pomona Boulevard (AM and PM peak hours)
18. Holt Avenue/Grand Avenue (AM peak hour)
21. Cameron Avenue/Grand Avenue (AM peak hour)
23. San Jose Hills Road/Grand Avenue (AM and PM peak hours)
24. La Puente Road/Grand Avenue (AM and PM peak hours)
25. Valley Boulevard/Grand Avenue (AM peak hour)

In addition, the worst minor-street (stop controlled) movement at the intersection of Cortez Street and Grand Avenue (#19) would operate at LOS E or worse in both peak hours as well as at the intersection of Cameron Avenue and Barranca Street (#20) in the AM peak hour. Recall that for two-way stop-controlled intersections (such as Cortez Street/Grand Avenue and Cameron Avenue/Barranca Street), there is no defined intersection LOS.

In addition to the study intersections, the two study Caltrans segments were evaluated for 2021 cumulative conditions, as shown below:

- I-10, Citrus Street to Holt Avenue
    - 1,868 passenger cars per hour per lane (pc/hr/ln), LOS D
- SR-57, Grand Avenue to SR-60
    - 792 pc/hr/ln, LOS B

6.2. 2021 CUMULATIVE PLUS PROJECT CONDITIONS

The same approach was used to evaluate 2021 cumulative conditions plus the project; the interim year (2021) version of the project was assumed in this analysis. The ICU and HCM reports for 2021 cumulative plus project conditions are included in Appendix C.

Table 9 in Section 6.3 shows the resulting level of service for each of the study intersections for 2021 cumulative plus project conditions. The intersections which would operate at LOS E or worse are the same as those listed in Section 6.1.

The two study Caltrans segments were also evaluated for 2021 cumulative plus project conditions and would operate at the same LOS as without the project, as shown below:

- I-10, Citrus Street to Holt Avenue
    - 1,873 passenger cars per hour per lane (pc/hr/ln), LOS D
- SR-57, Grand Avenue to SR-60
    - 795 pc/hr/ln, LOS B

6.3. 2021 CUMULATIVE PLUS PROJECT SIGNIFICANT IMPACT EVALUATION

The increase in ICU for the non-Caltrans intersections due to the project traffic is shown in Table 9. For the Caltrans intersections, a significant impact can only occur if the intersection operates at LOS E or F prior to adding project traffic. As shown in the table, nine intersections have a significant impact for 2021 cumulative plus project conditions.

For the Caltrans study segments, both are expected to operate at LOS D or better with the project; therefore, no mitigation is required.

Table 9. Interim (2021) Cumulative Plus Project Impacts Analysis

	Intersection	Intersection Control	Location of Intersection	2021 Cumulative						2021 Cumulative Plus Project						Increase in Delay (Caltrans 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	Amar Rd/Nogales St	Signalized	West Covina		0.877	D		0.846	D		0.882	D		0.849	D			0.00	0.00	NO	NO
2	Amar Rd/Lemon Ave	Signalized	Walnut		0.806	D		0.662	B		0.810	D		0.665	B			0.00	0.00	NO	NO
3	Amar Rd/Meadow Pass Rd	Signalized	Walnut		0.803	D		0.730	C		0.810	D		0.736	C			0.01	0.01	NO	NO
4	Temple Ave/Grand Ave	Signalized	Walnut		0.948	E		0.842	D		0.974	E		0.855	D			0.03	0.01	YES	NO
5	Temple Ave/Mt. SAC Way	Signalized	Walnut		0.637	B		0.699	B		0.650	B		0.722	C			0.01	0.02	NO	NO
6	Temple Ave/Transit Center	Signalized	Walnut		0.600	B		0.486	A		0.611	B		0.498	A			0.01	0.01	NO	NO
7	Temple Ave/Bonita Dr	Signalized	Walnut		0.610	B		0.582	A		0.635	B		0.601	B			0.03	0.02	NO	NO
8	Temple Ave/Lot F	Unsignalized	Walnut	28.2		D	19.2		C	29.9		D	20.0		C	N/A	N/A			N/A	N/A
9	Temple Ave/University Dr	Signalized	Pomona		0.851	D		0.700	C		0.868	D		0.713	C			0.02	0.01	YES	NO
10	Temple Ave/Campus Dr	Signalized	Pomona		1.021	F		0.774	C		1.042	F		0.781	C			0.02	0.01	YES	NO
11	Kellogg Dr/Campus Dr	Signalized	Pomona		0.841	D		0.590	A		0.851	D		0.598	A			0.01	0.01	NO	NO
12	Temple Ave/Valley Blvd	Signalized	Pomona		0.934	E		0.773	C		0.941	E		0.778	C			0.01	0.01	YES	NO
13	Temple Ave/Pomona Blvd	Signalized	Pomona		1.030	F		1.158	F		1.031	F		1.160	F			0.00	0.00	NO	NO
14	Temple Ave/SR-57 SB Ramps	Signalized*	Pomona	24.3		C	45.6		D	24.5		C	45.9		D	N/A	N/A			NO	NO
15	Temple Ave/SR-57 NB Ramps	Signalized*	Pomona	10.1		B	8.9		A	10.1		B	8.9		A	N/A	N/A			NO	NO
16	I-10 WB Ramps/Grand Ave	Signalized*	West Covina	24.9		C	22.5		C	25.4		C	23.4		C	N/A	N/A			NO	NO
17	I-10 EB Ramps/Grand Ave	Signalized*	West Covina	24.8		C	13.8		B	26.6		C	13.8		B	N/A	N/A			NO	NO
18	Holt Ave/Grand Ave	Signalized	West Covina		1.045	F		0.648	B		1.060	F		0.656	B			0.02	0.01	YES	NO
19	Cortez St/Grand Ave	Unsignalized**	West Covina	248.6		F	62.5		F	278.2		F	66.4		F	N/A	N/A			N/A	N/A
20	Cameron Ave/Barranca St	Unsignalized	West Covina	51.6		F	31.1		D	53.1		F	31.7		D	N/A	N/A			N/A	N/A
21	Cameron Ave/Grand Ave	Signalized	LA County		1.158	F		0.808	D		1.178	F		0.823	D			0.02	0.01	YES	NO
22	Mountaineer Rd/Grand Ave	Signalized	Walnut		0.750	C		0.786	C		0.763	C		0.802	D			0.01	0.02	NO	NO
23	San Jose Hills Rd/Grand Ave	Signalized	Walnut		0.972	E		0.934	E		0.995	E		0.957	E			0.02	0.02	YES	YES
24	La Puente Rd/Grand Ave	Signalized	Walnut		1.062	F		0.918	E		1.076	F		0.926	E			0.01	0.01	YES	YES
25	Valley Blvd/Grand Ave	Signalized	Walnut		0.931	E		0.888	D		0.941	E		0.894	D			0.01	0.01	YES	NO
26	Baker Pkwy/Grand Ave	Signalized	Industry		0.590	A		0.548	A		0.599	A		0.553	A			0.01	0.01	NO	NO
27	SR-60 WB Ramps/Grand Ave	Signalized*	Industry	24.8		C	15.4		B	25.7		C	15.8		B	N/A	N/A			NO	NO
28	SR-60 EB Ramps/Grand Ave	Signalized*	Diamond Bar	23.8		C	14.7		B	24.2		C	15.1		B	N/A	N/A			NO	NO

*Caltrans Intersection

**TWSC (delay shows highest lane delay)

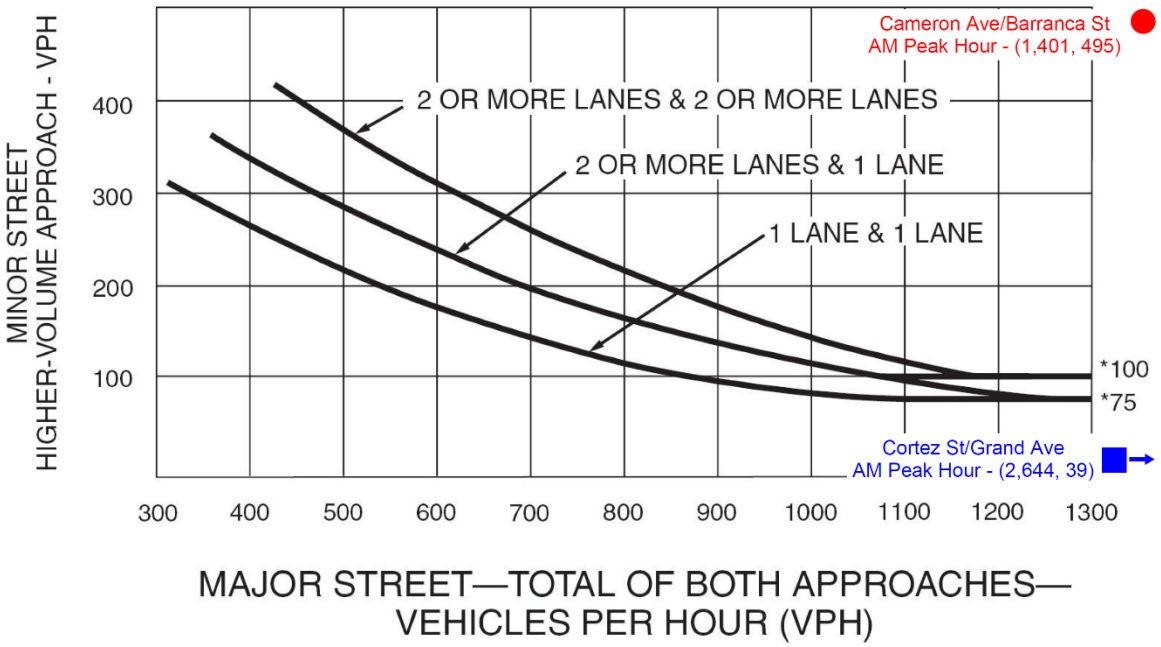
Highlighted cells indicate LOS E or F OR indicate significant impact

6.4. 2021 WITH PROJECT PRELIMINARY SIGNAL WARRANT ANALYSIS

As seen in Table 9, the intersections of Cortez Street/Grand Avenue and Cameron Avenue/Barranca Street are expected to operate at LOS E or F under existing and existing plus project conditions. Therefore, the peak hour signal warrant (warrant 3 of the MUTCD) was evaluated.

As seen in Figure 20, the Cameron Avenue/Barranca Street intersection is expected to meet the signal warrant, while the intersection of Cortez Street and Grand Avenue is still not expected to meet the signal warrant due to the low volumes on Cortez Street.

Figure 20. Interim (2021) Cumulative Plus Project Peak Hour Signal Warrant



6.5. MITIGATION MEASURES

As for existing conditions, mitigations were developed to reduce traffic impacts to a level considered to be less than significant for eight of the nine intersections with significant impacts for the 2021 cumulative plus project conditions. Note that each of the improvements are also included in the improvements listed in Section 5.3 for existing plus project conditions.

For the 2021 cumulative plus project scenario, the following improvements are recommended at each of the intersections with a significant project impact:

4. Temple Avenue and Grand Avenue
    - Convert the eastbound right turn lane to a shared thru-right turn lane. This will not require any physical reconstruction but will require additional striping to provide a third eastbound thru lane on the east leg of the intersection.
    - Convert the westbound right turn lane to a shared thru-right turn lane. This will not require any physical reconstruction but will require additional striping to provide a third westbound thru lane on the west leg of the intersection.
9. Temple Avenue and University Drive
    - Convert the westbound right turn lane to a shared thru-right turn lane. This will not require any physical reconstruction but will require additional striping to provide a third westbound thru lane on the west leg of the intersection.
10. Temple Avenue and Campus Drive
    - Convert the westbound right turn lane to a shared thru-right turn lane. This will not require any physical reconstruction but will require additional striping to provide a third westbound thru lane on the west leg of the intersection.
12. Temple Avenue and Valley Boulevard
    - Add a second northbound left turn lane. This will require restriping of both the north and south legs of the intersection (no physical reconstruction) and may result in the loss of some parking spaces along Valley Boulevard, south of Temple Avenue.
18. Holt Avenue and Grand Avenue
    - Convert the southbound right turn lane to a shared thru-right turn lane. This will require additional striping on the south leg to either extend the right turn lane at Virginia Avenue north to Holt Avenue to act as a trap right turn lane (where drivers in that lane will be forced to turn right at Virginia Avenue), or to convert the lane to a shared thru-right turn lane at Virginia Avenue.

Some physical improvements, including the removal of the existing raised median island and relocation of the signal pole, will also be needed for the northwest corner of the Holt Avenue/Grand Avenue intersection.

21. Cameron Avenue and Grand Avenue
    - Add a second eastbound right turn lane. This will only require restriping and will not require any physical improvements.
23. San Jose Hills Road and Grand Avenue
    - Convert the westbound thru lane to a shared thru-left turn lane. This will only require striping, no physical reconstruction.
    - Convert the northbound right turn lane to a shared thru-right turn lane. This will not require any physical reconstruction but will require additional striping to provide a third northbound thru lane on the north leg of the intersection.
24. La Puente Road and Grand Avenue
    - Modify the signal phasing to include an eastbound right turn overlap.
25. Valley Boulevard and Grand Avenue
    - Because this intersection includes dual left turn lanes in all directions and free right turn lanes in three directions, the intersection is considered to be built out. To mitigate the impact, a northbound through lane would need to be added on Grand Avenue, which is not feasible due to right-of-way constraints. This impact would be **significant and unavoidable** and a statement of overriding considerations is required.

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 eight of the nine intersections. However, the implementation of the identified improvements is subject to the approval of the cities of Walnut, Pomona, and West Covina as well as the County of Los Angeles. While Mt. SAC would work with these jurisdictions to implement the recommended improvements, Mt. SAC does not have the legal ability to compel these agencies to implement the improvements needed to mitigate this impact to a level of insignificance. As such, the impacts would be **significant and unavoidable** and a statement of overriding considerations is needed.

It should be noted that implementation of travel demand management (TDM) strategies included as part of the proposed EFMP may help reduce the project traffic overall and therefore further reduce the project impacts at study area intersections. For example, the construction of the Transit Center on campus, along with complementary programs (i.e. bike storage, bike share, etc.), may help shift student, staff, and faculty trips from personal vehicles to transit, therefore reducing campus vehicular traffic and reducing the severity of project impacts. However, even with implementation of TDM strategies, the project impacts at study area intersections would be **significant and unavoidable.**

Table 10. Interim (2021) Cumulative Plus Mitigated Project Impacts Analysis

Intersection		Intersection Control	Location of Intersection	2021 Cumulative				2021 Cumulative + Project w/Mitigation				Increase in ICU		Significant Impact?	
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour					
				V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	AM	PM	AM	PM
4	Temple Ave/ Grand Ave	Signalized	Walnut	0.948	E	0.842	D	0.946	E	0.845	D	0.00	0.00	NO	NO
9	Temple Ave/ University Dr	Signalized	Pomona	0.851	D	0.700	C	0.800	C	0.702	C	-0.05	0.00	NO	NO
10	Temple Ave/ Campus Dr	Signalized	Pomona	1.021	F	0.774	C	0.962	E	0.779	C	-0.06	0.00	NO	NO
12	Temple Ave/ Valley Blvd	Signalized	Pomona	0.934	E	0.773	C	0.833	D	0.778	C	-0.10	0.01	NO	NO
18	Holt Ave/Grand Ave	Signalized	West Covina	1.045	F	0.648	B	0.916	E	0.656	B	-0.13	0.01	NO	NO
21	Cameron Ave/ Grand Ave	Signalized	LA County	1.158	F	0.808	D	0.980	E	0.715	C	-0.18	-0.09	NO	NO
23	San Jose Hills Rd/ Grand Ave	Signalized	Walnut	0.972	E	0.934	E	0.914	E	0.742	C	-0.06	-0.19	NO	NO
24	La Puente Rd/ Grand Ave	Signalized	Walnut	1.062	F	0.918	E	1.041	F	0.904	E	-0.02	-0.01	NO	NO
25	Valley Blvd/ Grand Ave	Signalized	Walnut	0.931	E	0.888	D	0.941	E	0.894	D	0.01	0.01	YES	NO

Highlighted cells indicate LOS E or F OR indicate significant impact

7. OPERATIONAL ANALYSIS – BUILDOUT YEAR (2027)

7.1. 2027 CUMULATIVE CONDITIONS

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 ICU and HCM reports for 2027 cumulative conditions are included in Appendix D, and the level of service for each of the study intersections for the 2027 cumulative conditions is shown in Table 11 in Section 7.3.

As seen in the table, 10 intersections operate at LOS E or worse for 2027 cumulative conditions without the project in one or both peak hours, including the following:

1. Amar Road/Nogales Street (AM peak hour)
4. Temple Avenue/Grand Avenue (AM peak hour)
10. Temple Avenue/Campus Drive (AM peak hour)
12. Temple Avenue/Valley Boulevard (AM peak hour)
13. Temple Avenue/Pomona Boulevard (AM and PM peak hours)
18. Holt Avenue/Grand Avenue (AM peak hour)
21. Cameron Avenue/Grand Avenue (AM peak hour)
23. San Jose Hills Road/Grand Avenue (AM and PM peak hours)
24. La Puente Road/Grand Avenue (AM and PM peak hours)
25. Valley Boulevard/Grand Avenue (AM peak hour)

In addition, the worst minor-street (stop controlled) movement at the intersection of Cortez Street and Grand Avenue (#19) would operate at LOS F in both peak hours, and the worse minor-street movement at the intersection of Cameron Avenue and Barranca Street (#20) would operate at LOS E or worse in both peak hours. Recall that for two-way stop-controlled intersections (such as Cortez Street/Grand Avenue and Cameron Avenue/Barranca Street), there is no defined intersection LOS.

In addition to the study intersections, the two study Caltrans segments were evaluated for 2027 cumulative conditions:

- I-10, Citrus Street to Holt Avenue
    - 1,695 passenger cars per hour per lane (pc/hr/ln), LOS D
- SR-57, Grand Avenue to SR-60
    - 883 pc/hr/ln, LOS B

7.2. 2027 CUMULATIVE PLUS PROJECT CONDITIONS

For 2027 cumulative plus project conditions, the same approach was used to evaluate the study intersections and segments, assuming full buildout of the project. The ICU and HCM reports for 2027 cumulative plus project conditions are included in Appendix D. Table 11 in Section 7.3 shows the resulting level of service for each of the study intersections for 2027 cumulative plus project conditions.

The intersections which would operate at LOS E or worse listed in Section 7.1 also operate at LOS E or worse for 2027 cumulative plus project conditions. Further, Temple Avenue/Grand Avenue and San Jose Hills/Grand Avenue intersections will deteriorate from LOS E to LOS F in the AM peak hour. In addition to those, the intersection of Temple Avenue and University Drive deteriorates from LOS D to LOS E in the AM peak hour.

The two study Caltrans segments were also evaluated for 2027 cumulative plus project conditions, as shown below:

- I-10, Citrus Street to Holt Avenue
    - 1,705 passenger cars per hour per lane (pc/hr/ln), LOS D
- SR-57, Grand Avenue to SR-60
    - 889 pc/hr/ln, LOS B

7.3. 2027 CUMULATIVE PLUS PROJECT SIGNIFICANT IMPACT EVALUATION

Table 11 shows the increase in ICU for the non-Caltrans intersections with the project. For the Caltrans intersections, a significant impact can only occur if the intersection is operating at LOS E or F without project traffic. As shown in the table, 15 intersections have a significant impact for 2027 cumulative plus project conditions. For the Caltrans study segments, both are expected to operate at LOS D or better with the project; therefore, no mitigation is required.

Table 11. Buildout (2027) Cumulative Plus Project Impacts Analysis

	Intersection	Intersection Control	Location of Intersection	2027 Cumulative						2027 Cumulative Plus Project						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	Amar Rd/Nogales St	Signalized	West Covina		0.922	E		0.890	D		0.933	E		0.899	D			0.01	0.01	YES	NO
2	Amar Rd/Lemon Ave	Signalized	Walnut		0.843	D		0.695	B		0.857	D		0.704	C			0.01	0.01	NO	NO
3	Amar Rd/Meadow Pass Rd	Signalized	Walnut		0.818	D		0.747	C		0.836	D		0.761	C			0.02	0.01	YES	NO
4	Temple Ave/Grand Ave	Signalized	Walnut		0.957	E		0.852	D		1.018	F		0.884	D			0.06	0.03	YES	YES
5	Temple Ave/Mt. SAC Way	Signalized	Walnut		0.639	B		0.703	C		0.676	B		0.754	C			0.04	0.05	NO	YES
6	Temple Ave/Transit Center	Signalized	Walnut		0.611	B		0.492	A		0.647	B		0.525	A			0.04	0.03	NO	NO
7	Temple Ave/Bonita Dr	Signalized	Walnut		0.602	B		0.586	A		0.677	B		0.636	B			0.07	0.05	NO	NO
8	Temple Ave/Lot F	Unsignalized	Walnut	27.8		D	19.200		C	32.9		D	21.200		C	N/A	N/A			N/A	N/A
9	Temple Ave/University Dr	Signalized	Pomona		0.862	D		0.714	C		0.908	E		0.748	C			0.05	0.03	YES	NO
10	Temple Ave/Campus Dr	Signalized	Pomona		1.034	F		0.804	D		1.087	F		0.821	D			0.05	0.02	YES	YES
11	Kellogg Dr/Campus Dr	Signalized	Pomona		0.873	D		0.601	B		0.899	D		0.623	B			0.03	0.02	YES	NO
12	Temple Ave/Valley Blvd	Signalized	Pomona		0.979	E		0.811	D		0.996	E		0.825	D			0.02	0.01	YES	NO
13	Temple Ave/Pomona Blvd	Signalized	Pomona		1.055	F		1.176	F		1.059	F		1.182	F			0.00	0.01	NO	YES
14	Temple Ave/SR-57 SB Ramps	Signalized*	Pomona	25.6		C	53.4		D	26.2		C	54.6		D	N/A	N/A			NO	NO
15	Temple Ave/SR-57 NB Ramps	Signalized*	Pomona	10.9		B	9.5		A	11.0		B	9.5		A	N/A	N/A			NO	NO
16	I-10 WB Ramps/Grand Ave	Signalized*	West Covina	27.4		C	23.1		C	28.9		C	25.2		C	N/A	N/A			NO	NO
17	I-10 EB Ramps/Grand Ave	Signalized*	West Covina	24.8		C	14.6		B	30.1		C	14.7		B	N/A	N/A			NO	NO
18	Holt Ave/Grand Ave	Signalized	West Covina		1.066	F		0.644	B		1.105	F		0.665	B			0.04	0.02	YES	NO
19	Cortez St/Grand Ave	Unsignalized**	West Covina	259.4		F	53.900		F	376.0		F	64.400		F	N/A	N/A			N/A	N/A
20	Cameron Ave/Barranca St	Unsignalized	West Covina	67.9		F	39.800		E	72.4		F	40.900		E	N/A	N/A			N/A	N/A
21	Cameron Ave/Grand Ave	Signalized	LA County		1.174	F		0.796	C		1.227	F		0.834	D			0.05	0.04	YES	YES
22	Mountaineer Rd/Grand Ave	Signalized	Walnut		0.748	C		0.788	C		0.777	C		0.825	D			0.03	0.04	NO	YES
23	San Jose Hills Rd/Grand Ave	Signalized	Walnut		0.967	E		0.935	E		1.024	F		0.998	E			0.06	0.06	YES	YES
24	La Puente Rd/Grand Ave	Signalized	Walnut		1.080	F		0.929	E		1.115	F		0.949	E			0.04	0.02	YES	YES
25	Valley Blvd/Grand Ave	Signalized	Walnut		0.957	E		0.895	D		0.983	E		0.912	E			0.03	0.02	YES	YES
26	Baker Pkwy/Grand Ave	Signalized	Industry		0.602	B		0.561	A		0.625	B		0.574	A			0.02	0.01	NO	NO
27	SR-60 WB Ramps/Grand Ave	Signalized*	Industry	25.8		C	16.1		B	28.9		C	17.3		B	N/A	N/A			NO	NO
28	SR-60 EB Ramps/Grand Ave	Signalized*	Diamond Bar	25.2		C	15.8		B	26.4		C	17.0		B	N/A	N/A			NO	NO

*Caltrans Intersection

**TWSC (delay shows highest lane delay)

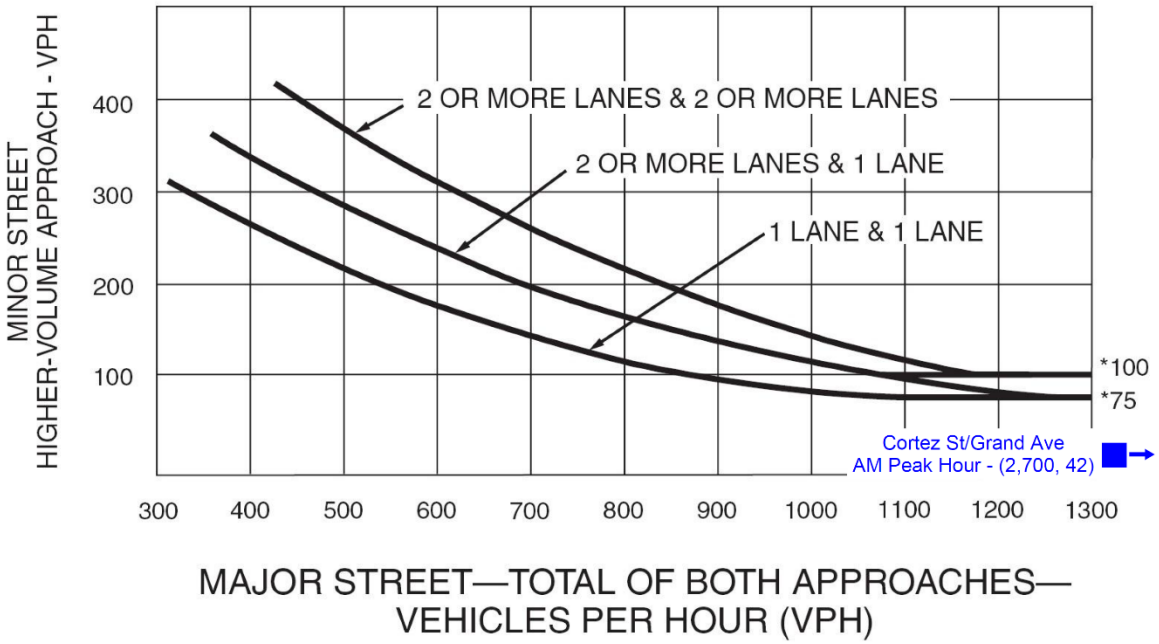
Highlighted cells indicate LOS E or F OR indicate significant impact

7.4. 2027 WITH PROJECT PRELIMINARY SIGNAL WARRANT ANALYSIS

As seen in Table 11, the intersections of Cortez Street/Grand Avenue and Cameron Avenue/Barranca Street are expected to operate at LOS E or F under buildout (2027) cumulative conditions, with and without the project. Therefore, the peak hour signal warrant (warrant 3 of the MUTCD) was evaluated.

Because the Cameron Avenue/Barranca Street intersection met the warrant for existing plus project conditions, it was not reevaluated for this condition. As seen in Figure 21, the intersection of Cortez Street and Grand Avenue is still not expected to meet the signal warrant due to the low volumes on Cortez Street.

Figure 21. Buildout (2027) Cumulative Plus Project Peak Hour Signal Warrant



7.5. MITIGATION MEASURES

To reduce significant traffic impacts to a level considered to be less than significant for the 2027 cumulative plus project conditions, several mitigation measures were recommended. Note that most of the improvements listed below were also included in the existing plus project mitigation.

The following list includes the improvements at each of the intersections with a significant project impact:

1. Amar Road and Nogales Street
    - Convert the eastbound right turn lane to a shared thru-right turn lane. This will not require any physical reconstruction but will require additional striping to provide a third eastbound thru lane on the east leg of the intersection.
3. Amar Road and Meadow Pass Road
    - To mitigate the impacts, the eastbound right turn lane would have to be converted to a shared thru-right turn lane, and there would also be additional striping needs on the east leg to provide a third eastbound through lane. However, this would either require physical reconstruction or removal of the bike lane, neither of which are feasible. This impact would be **significant and unavoidable** and a statement of overriding considerations is required.
4. Temple Avenue and Grand Avenue
    - Convert the eastbound right turn lane to a shared thru-right turn lane. This will not require any physical reconstruction but will require additional striping to provide a third eastbound thru lane on the east leg of the intersection.
    - Convert the westbound right turn lane to a shared thru-right turn lane. This will not require any physical reconstruction but will require additional striping to provide a third westbound thru lane on the west leg of the intersection.
    - These mitigation measures will reduce the project impact, but the impact is still considered to be significant. To fully mitigate the impacts, a second northbound right turn lane would need to be added on Grand Avenue, which is not feasible due to right-of-way constraints. Therefore, this impact would be **significant and unavoidable** and a statement of overriding considerations is required.

5. Temple Avenue and Mt. SAC Way
    - Convert the westbound right turn lane to a shared thru-right turn lane. This will not require any physical reconstruction but will require additional striping to provide a third westbound thru lane on the west leg of the intersection.

9. Temple Avenue and University Drive
    - Convert the westbound right turn lane to a shared thru-right turn lane. This will not require any physical reconstruction but will require additional striping to provide a third westbound thru lane on the west leg of the intersection.

10. Temple Avenue and Campus Drive
    - Convert the westbound right turn lane to a shared thru-right turn lane. This will not require any physical reconstruction but will require additional striping to provide a third westbound thru lane on the west leg of the intersection.

11. Kellogg Drive and Campus Drive
    - Convert the shared eastbound thru-right turn lane to an exclusive right turn lane. This will only require restriping on the eastbound approach.

12. Temple Avenue and Valley Boulevard
    - Add a second northbound left turn lane. This will require restriping of both the north and south legs of the intersection (no physical reconstruction) and may result in the loss of some parking spaces along Valley Boulevard, south of Temple Avenue.

13. Temple Avenue and Pomona Boulevard
    - Convert the southbound lanes to provide two exclusive left turn lanes and a shared thru-right turn lane. This will require restriping on the southbound approach and the removal of the existing “right lane must turn right” and “right turn only” signs.

18. Holt Avenue and Grand Avenue
    - Convert the southbound right turn lane to a shared thru-right turn lane. This will require additional striping on the south leg to either extend the right turn lane at Virginia Avenue north to Holt Avenue to act as a trap right turn lane (where drivers in that lane will be forced to turn right at Virginia Avenue), or

to convert the lane to a shared thru-right turn lane at Virginia Avenue. Some physical improvements, including the removal of the existing raised median island and relocation of the signal pole, will also be needed for the northwest corner of the Holt Avenue/Grand Avenue intersection.

21. Cameron Avenue and Grand Avenue
    - Add a second eastbound right turn lane. This will only require restriping and will not require any physical improvements.
22. Mountaineer Road and Grand Avenue
    - This intersection already includes dual southbound and westbound left turn lanes, dual westbound right turn lanes, and a northbound (de-facto) right turn lane. To mitigate the impacts, a northbound through lane would need to be added on Grand Avenue, which is not feasible due to right-of-way constraints. Therefore, this impact would be **significant and unavoidable** and a statement of overriding considerations is required.
23. San Jose Hills Road and Grand Avenue
    - Convert the westbound thru lane to a shared thru-left turn lane. This will only require striping, no physical reconstruction.
    - Convert the northbound right turn lane to a shared thru-right turn lane. This will not require any physical reconstruction but will require additional striping to provide a third northbound thru lane on the north leg of the intersection.
24. La Puente Road and Grand Avenue
    - Modify the signal phasing to include an eastbound right turn overlap.
25. Valley Boulevard and Grand Avenue
    - Because this intersection includes dual left turn lanes in all directions and free right turn lanes in three directions, the intersection is considered to be built out. To mitigate the impact, a northbound through lane would need to be added on Grand Avenue, which is not feasible due to right-of-way constraints. This impact would be **significant and unavoidable** and a statement of overriding considerations is required.

Table 12 shows the significant impact evaluation with the recommended mitigation measures in place. As shown, the mitigation measures reduce the project impact to a less than significant level for 11 of the 15 intersections.

Table 12. Buildout (2027) Cumulative Plus Mitigated Project Impacts Analysis

	Intersection	Intersection Control	Location of Intersection	2027 Cumulative				2027 Cumulative + Project w/Mitigation				Increase in ICU		Significant Impact?	
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour					
				ICU or V/C	LOS	ICU or V/C	LOS	ICU or V/C	LOS	ICU or V/C	LOS	AM	PM	AM	PM
1	Amar Rd/ Nogales St	Signalized	West Covina	0.922	E	0.890	D	0.914	E	0.894	D	-0.01	0.00	NO	NO
3	Amar Rd/Meadow Pass Rd	Signalized	Walnut	0.818	D	0.747	C	0.836	D	0.761	C	0.02	0.01	YES	NO
4	Temple Ave/ Grand Ave	Signalized	Walnut	0.957	E	0.852	D	0.984	E	0.873	D	0.03	0.02	YES	YES
5	Temple Ave/Mt. SAC Way	Signalized	Walnut	0.639	B	0.703	C	0.675	B	0.689	B	0.04	-0.01	NO	NO
9	Temple Ave/ University Dr	Signalized	Pomona	0.862	D	0.714	C	0.839	D	0.735	C	-0.02	0.02	NO	NO
10	Temple Ave/ Campus Dr	Signalized	Pomona	1.034	F	0.804	D	1.004	F	0.815	D	-0.03	0.01	NO	NO
11	Kellogg Dr/ Campus Dr	Signalized	Pomona	0.873	D	0.601	B	0.843	D	0.549	A	-0.03	-0.05	NO	NO
12	Temple Ave/ Valley Blvd	Signalized	Pomona	0.979	E	0.811	D	0.882	D	0.825	D	-0.10	0.01	NO	NO
13	Temple Ave/ Pomona Blvd	Signalized	Pomona	1.055	F	1.176	F	1.011	F	1.135	F	-0.04	-0.04	NO	NO
18	Holt Ave/Grand Ave	Signalized	West Covina	1.066	F	0.644	B	0.958	E	0.665	B	-0.11	0.02	NO	NO
21	Cameron Ave/ Grand Ave	Signalized	LA County	1.174	F	0.796	C	1.017	F	0.721	C	-0.16	-0.07	NO	NO
22	Mountaineer Rd/ Grand Ave	Signalized	Walnut	0.748	C	0.788	C	0.777	C	0.825	D	0.03	0.04	NO	YES
23	San Jose Hills Rd/ Grand Ave	Signalized	Walnut	0.967	E	0.935	E	0.948	E	0.777	C	-0.02	-0.16	NO	NO
24	La Puente Rd/ Grand Ave	Signalized	Walnut	1.080	F	0.929	E	1.079	F	0.926	E	0.00	0.00	NO	NO
25	Valley Blvd/ Grand Ave	Signalized	Walnut	0.957	E	0.895	D	0.983	E	0.912	E	0.03	0.02	YES	YES

Highlighted cells indicate LOS E or F OR indicate significant impact

However, the implementation of the identified improvements is subject to the approval of the cities of Walnut, Pomona, and West Covina as well as the County of Los Angeles. While Mt. SAC would work with these jurisdictions to implement the recommended improvements, Mt. SAC does not have the legal ability to compel these agencies to implement the improvements needed to mitigate this impact to a level of insignificance. As such, the impacts would be **significant and unavoidable** and a statement of overriding considerations is needed.

Travel demand management (TDM) strategies included as part of the proposed EFMP may help reduce the project traffic overall and therefore further reduce the project impacts at study area intersections. For example, the construction of the Transit Center on campus, along with complementary programs (i.e. bike storage, bike share, etc.), may help shift student, staff, and faculty trips from personal vehicles to transit, therefore reducing campus vehicular traffic and reducing the severity of project impacts. However, even with implementation of TDM strategies, the project impacts at study area intersections would be **significant and unavoidable.**

8. CALIFORNIA STATE POLYTECHNIC UNIVERSITY, POMONA

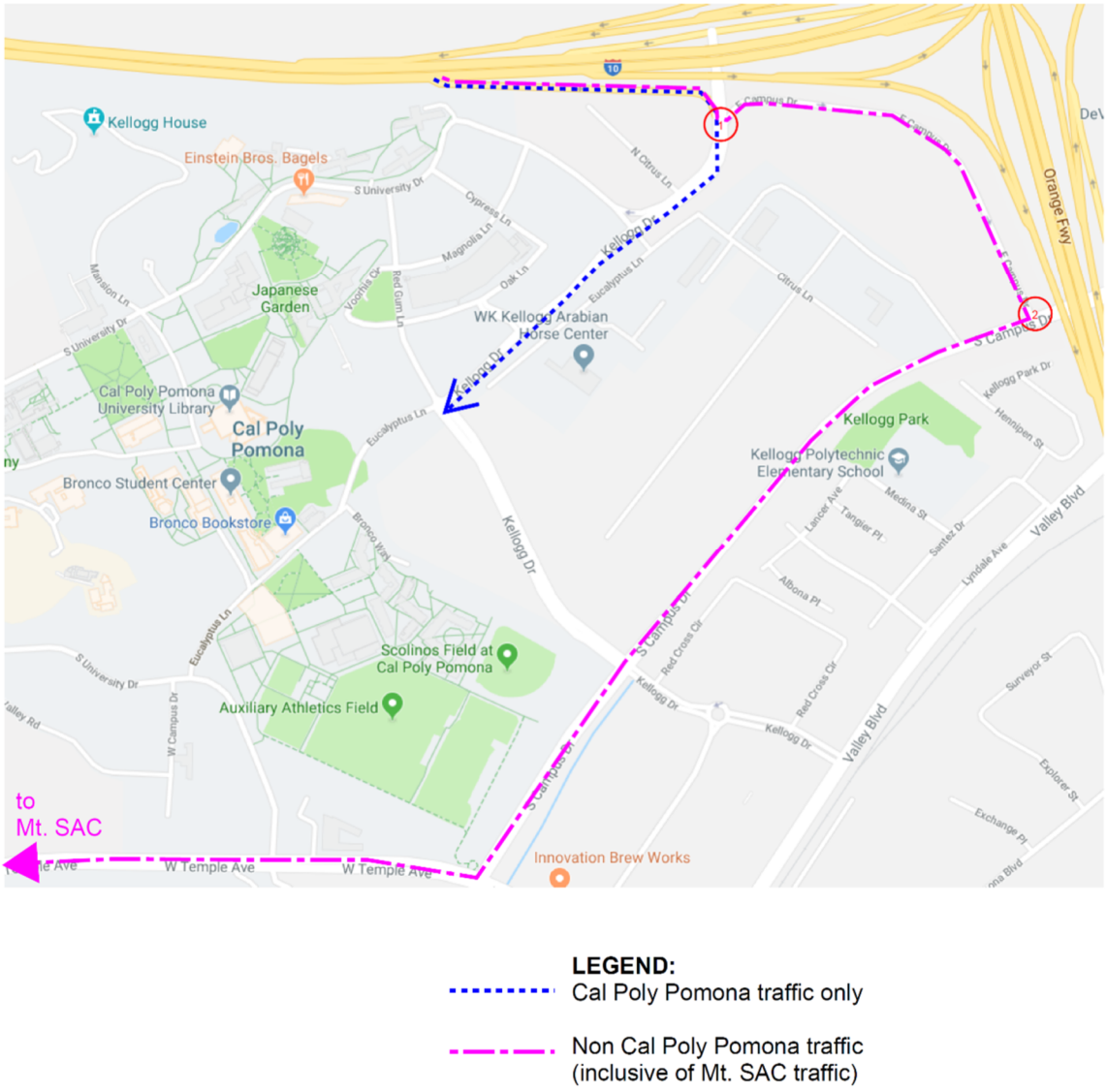
After the initial draft of this document was prepared, Mt. SAC was approached by officials involved in the master planning effort currently underway at California State Polytechnic University, Pomona (Cal Poly Pomona) regarding a traffic concern on the Cal Poly Pomona campus. Given the existing roadway network, drivers traveling eastbound along I-10 wishing to reach Mt. SAC or other areas in the vicinity can exit the freeway at Grand Avenue or at Kellogg Drive. If choosing to use the Kellogg Drive exit, the design of the interchange forces drivers to travel through the Cal Poly Pomona campus to South Campus Drive, and eventually to Temple Avenue or Valley Boulevard. This cut-through traffic is a concern for Cal Poly Pomona, both due to operations and due to the potential additional conflicts with the added non-campus traffic traveling through the area.

Although there is no available data to support the theory, it is likely that a considerable portion of the cut-through traffic which eventually reaches Temple Avenue is traveling to Mt. SAC. When approached by Cal Poly Pomona, Mt. SAC agreed that the presence of cut-through traffic on a campus can create concerns. Further, although the I-10 eastbound off-ramp/Kellogg Drive/East Campus Drive and East Campus Drive/South Campus Drive intersections are outside the study area for this analysis, Mt. SAC also agreed that a qualitative discussion of the issue and potential recommendations could be provided in this document as a precursor to future analyses.

To help reduce and potentially eliminate cut-through traffic, the I-10 eastbound off-ramp/Kellogg Drive/East Campus Drive intersection would need to be reconstructed. If the intersection allowed for a through movement from the off-ramp to East Campus Drive, the East Campus Drive segment between Kellogg Drive and South Campus Drive (see Figure 22) could serve as a bypass of the central portion of the Cal Poly Pomona campus. Drivers would then use South Campus Drive to access Temple Avenue. Cal Poly Pomona traffic would continue to turn right when exiting I-10 at Kellogg Drive, traveling into the center of campus.

This potential realignment and redistribution of traffic will need to be studied in detail to determine what changes and/or improvements would be feasible, and what improvements would be needed (i.e. traffic control).

Figure 22. Cal Poly Pomona Potential Bypass



It is recommended that Cal Poly Pomona conduct the analysis in conjunction with their ongoing master planning process. Further, Caltrans should be included in the discussion and development of recommendations.

9. FAIR SHARE CONTRIBUTION

It is anticipated that the project will contribute its fair share towards the cost of the mitigation measures listed in Sections 6.5 and 7.5. The project fair share (where applicable) was calculated for each of the intersections requiring mitigation based on the Caltrans methodology, which indicates that the fair share percentage is equal to the percentage of the total new trips which are generated by the project.

Table 13 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 13. Project Fair Share Contribution

Intersection		2021 Cumulative Plus Project			2027 Cumulative Plus Project		
		AM Peak Hour	PM Peak Hour	Fair Share	AM Peak Hour	PM Peak Hour	Fair Share
1	Amar Rd/Nogales St	N/A			12%	N/A	**12%**
3	Amar Rd/Meadow Pass Rd	N/A			Impact is significant and unavoidable.		
4	Temple Ave/Grand Ave	Impact is significant and unavoidable.					
5	Temple Ave/Mt. SAC Way	N/A			N/A	72%	**72%**
9	Temple Ave/University Dr	52%	N/A	**52%**	60%	N/A	**60%**
10	Temple Ave/Campus Dr	49%	N/A	**49%**	53%	50%	**51%**
11	Kellogg Dr/Campus Dr	N/A			38%	N/A	**38%**
12	Temple Ave/Valley Blvd	30%	N/A	**30%**	22%	N/A	**22%**
13	Temple Ave/Pomona Blvd	N/A			N/A	18%	**18%**
18	Holt Ave/Grand Ave	28%	N/A	**28%**	49%	N/A	**49%**
21	Cameron Ave/Grand Ave	30%	N/A	**30%**	50%	58%	**54%**
22	Mountaineer Rd/Grand Ave	N/A			Impact is significant and unavoidable.		
23	San Jose Hills Rd/Grand Ave	35%	29%	**32%**	54%	57%	**55%**
24	La Puente Rd/Grand Ave	27%	23%	**25%**	36%	38%	**37%**
25	Valley Blvd/Grand Ave	Impact is significant and unavoidable.					

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

10. CONGESTION MANAGEMENT PROGRAM (CMP) ANALYSIS

The Congestion Management Program (CMP) has been implemented by the Los Angeles County Metropolitan Transportation Authority (Metro). The CMP for Los Angeles County requires that the potential regional traffic impact for development projects be analyzed. According to the CMP traffic impact analysis guidelines, a CMP traffic analysis is required for the following locations:

- CMP arterial monitoring intersections where the proposed project would add 50 or more trips during either the AM or PM weekday peak hours
- CMP freeway monitoring segments where the proposed project would add 150 or more trips in either direction during either the AM or PM weekday peak hours

The project is not expected to add 50 or more peak hour trips to any CMP intersections and is not expected to add 150 or more peak hour trips in either direction to any of the CMP freeway segments. Therefore, no CMP analysis for arterial monitoring intersections or freeway monitoring segments is required.

10.1. TRANSIT IMPACT ANALYSIS

The CMP also includes methodology for estimating the number of transit trips expected to be generated by the proposed project. The methodology assumes a factor of 1.4 person-trips for each trip generated by the project and assigns 3.5% of total person trips to the transit network. Using these guidelines, the project is expected to generate 10 new peak hour trips in the interim year of 2021 and 26 new peak hour trips at buildout (2027).

It is not expected that this increase in peak hour trips would result in a significant impact on transit operations, particularly given that the campus is currently served by five Foothill Transit routes.

11. SUMMARY

This traffic study provided an evaluation of the potential traffic impacts from the anticipated growth at Mt. San Antonio College, which is based on assumptions in the EFMP. The EFMP documents include recommendations for constructing new buildings and new parking structures on campus to serve the anticipated population growth of the College; based on the high growth rate in the EFMP, nearly 4,900 new students are expected by 2027. With input from Mt. SAC and the Cities of Walnut, Pomona, West Covina, Diamond Bar, and Industry, 28 intersections were evaluated in this study along with two segments of Caltrans facilities.

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

4. Temple Avenue/Grand Avenue (AM peak hour)
10. Temple Avenue/Campus Drive (AM peak hour)
12. Temple Avenue/Valley Boulevard (AM peak hour)
13. Temple Avenue/Pomona Boulevard (AM and PM peak hours)
18. Holt Avenue/Grand Avenue (AM peak hour)
21. Cameron Avenue/Grand Avenue (AM peak hour)
23. San Jose Hills Road/Grand Avenue (AM peak hour)
24. La Puente Road/Grand Avenue (AM peak hour)
25. Valley Boulevard/Grand Avenue (AM peak hour)

In addition, the worst minor-street (stop controlled) movement at the intersections of Cortez Street and Grand Avenue (#19, both peak hours) and Cameron Avenue and Barranca Street (#20, AM peak hour) operate at LOS E or worse. Recall that for two-way stop-controlled intersections (such as Cortez Street/Grand Avenue and Cameron Avenue/Barranca Street), there is no defined intersection LOS.

In the interim analysis year of 2021, the project is expected to generate 2,164 new daily trips, including 207 trips in each peak hour. In 2027, the project is expected to generate 5,613 daily trips, including 537 in each peak hour. Based on the anticipated project traffic and other cumulative traffic volume increases, the project is anticipated to have a significant impact at 15 of the study intersections in at least one of the analysis years.

Table 14 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 also be effective in mitigating the impacts to a less-than-significant impact in the interim and buildout study years except for the mitigation measures at Temple Avenue and Grand Avenue. Note that any mitigation listed in the existing plus project condition is the full responsibility of the project.

Many of the mitigation measures consist of relatively simple striping and/or signal phasing changes at the intersection. Mitigation measures at the intersection of Cameron Avenue and Grand Avenue will require some physical reconstruction. At locations where a right turn lane is converted to a shared thru-right turn lane, striping will also be required on the downstream leg of the intersection.

The four intersections of Amar Road/Meadow Pass Road, Temple Avenue/Grand Avenue, Mountaineer Road/Grand Avenue and Valley Boulevard/Grand Avenue will have **significant and unavoidable** impacts. The impacts at the Temple Avenue/Grand Avenue intersection can be partially mitigated with the measures listed above for existing and 2027 conditions and will be fully mitigated in 2021. Therefore, a statement of overriding considerations is required for these four intersections.

In addition, the implementation of the identified improvements is subject to the approval of the cities of Walnut, Pomona, and West Covina as well as the County of Los Angeles. While Mt. SAC would work with these jurisdictions to implement the recommended improvements, Mt. SAC does not have the legal ability to compel these agencies to implement the improvements needed to mitigate this impact to a level of insignificance. Therefore, the impacts would be **significant and unavoidable** and a statement of overriding considerations is needed.

However, travel demand management strategies, such as the addition of a Transit Center on campus or improved bicycle facilities and access, may help reduce overall project traffic and therefore further reduce the project impact on the listed intersections. Additionally, increasing the cost of parking on campus and/or providing incentives for carpooling may further reduce demand. For purposes of this analysis, however, impacts would remain **significant and unavoidable** and would require a statement of overriding considerations.

Table 14. Summary of Mitigation Measures

Intersection			Mitigation Measures		
			Existing + Project	2021 + Project	2027 + Project
1	Amar Rd	Nogales St	N/A	N/A	**Convert EB right turn lane to shared thru-right turn lane (striping only)**
3	Amar Rd	Meadow Pass Rd	N/A	N/A	No improvements are feasible due to ROW constraints
4*	Temple Ave	Grand Ave	**Convert EB right turn lane to shared thru-right turn lane (striping only)**	Same as Existing	Same as Existing
			Convert WB right turn lane to shared thru-right turn lane (striping only)	Same as Existing	Same as Existing
5	Temple Ave	Mt SAC Way	N/A	N/A	**Convert WB right turn lane to shared thru-right turn lane (striping only)**
9	Temple Ave	University Dr	**Convert WB right turn lane to shared thru-right turn lane (striping only)**	Same as Existing	Same as Existing
10	Temple Ave	Campus Dr	**Convert WB right turn lane to shared thru-right turn lane (striping only)**	Same as Existing	Same as Existing
11	Kellogg Dr	Campus Dr	**Convert shared EB thru-right turn lane to exclusive right turn lane (striping only)**	N/A	Same as Existing
12	Temple Ave	Valley Blvd	**Add second NB left turn lane (striping only)**	Same as Existing	Same as Existing
13	Temple Ave	Pomona Blvd	**Convert SB to two left turn lanes and shared thru-right turn lane (striping and sign removal only)**	N/A	Same as Existing
18	Holt Ave	Grand Ave	**Covert SB right turn lane to shared thru-right turn lane**	Same as Existing	Same as Existing
21	Cameron Ave	Grand Ave	**Add second EB right turn lane (striping only)**	Same as Existing	Same as Existing
22	Mountaineer Rd	Grand Ave	No improvements are feasible due to ROW constraints		
23	San Jose Hills Rd	Grand Ave	**Convert WB thru lane to shared thru-left turn lane (striping only)**	Same as Existing	Same as Existing
			Convert NB right turn lane to shared thru-right turn lane (striping only)	Same as Existing	Same as Existing
24	La Puente Rd	Grand Ave	**Modify the signal to include an EB right turn overlap**	Same as Existing	Same as Existing
25	Valley Blvd	Grand Ave	Intersection is built out and no improvements are feasible due to ROW constraints		

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

*Recommendations will fully mitigate project impact for 2021, but not for existing or 2027 conditions.

Indicates intersection where no improvements are feasible

Lastly, because parking needs may change over time due to the construction of the Transit Center and the general shift of trips away from personal vehicles, the structure in Lot F may not be needed when initially indicated, if at all. Although the EFMP and PCMP both include a recommendation to build a parking structure in Lot F, the demand management strategies previously discussed and the general changing nature of how people travel may delay or eliminate the need for a structure in Lot F. Further, the projected traffic volumes in this study are not contingent on the construction of the structure, and it is not expected that there would be any additional impacts to the study intersections if the structure was not constructed by 2027.

Estimates in the PCMP show that the structure in Lot F will eliminate approximately 800 parking spaces during construction, and that construction will take approximately 18 months. It is recommended that parking demand data be collected in the third week (census week) of the fall semester on a regular basis (i.e. every year, every other year). A parking generation rate should be calculated as the total demand divided by the total number of students, and the rate should be compared to previous years to determine how the parking rate per student is changing over time. (Note that traffic volume counts may not be directly related to parking demand; students who are dropped off and/or picked up on campus contribute to the overall trip generation, but not to the parking needs.)

The student growth rate and parking generation rate can then be used to estimate future parking demand for the future school years; if the estimated demand two years in the future from the current year of data collection would result in fewer than 1,000 surplus parking spaces, the College should move forward with the construction of a parking structure in Lot F. Otherwise, it is expected that the campus will continue to have sufficient parking until the next data collection period.

12. REFERENCES

[1] *Mt. San Antonio College Draft 2018 Educational and Facilities Master Plan*. http://www.mtsac.edu/efmp/Draft_EFMP.html, accessed August 2018, dated May 9, 2018.

[2] *Mt. San Antonio College 2017 Parking and Circulation Master Plan*. Psomas, November 2017.

[3] *Mt. SAC 2015 Facilities Master Plan Update & Physical Education Projects, Traffic Impact Study, Final Report*. Iteris, September 2016.

[4] *2010 Congestion Management Program.* Los Angeles County Metropolitan Transportation Authority, 2010.

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

[6] *Highway Capacity Manual, 6th Edition*. Transportation Research Board, October 2016.

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

[8] City of Walnut General Plan, City of Walnut, 2018.

[9] City of Pomona General Plan Update. City of Pomona, 2014.

[10] Foothill Transit, system map. http://foothilltransit.org/wp-content/uploads/2018/06/system-map-20180624-la.pdf, accessed September 2018.

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

[12] *Trip Generation Manual 10th Edition*. Institute of Transportation Engineers, Washington D.C., 2017.

Appendix A – Traffic Volume Data

National Data & Surveying Services

Intersection Turning Movement Count

Location: Nogales St & Amar Rd
City: Walnut
Control: Signalized

Project ID: 18-05295-001
Date: 5/9/2018

Total

NS/EW Streets:	Nogales St				Nogales St				Amar Rd				Amar Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1.5	0.5	1	0	0	1	0	0	1	2	1	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	138	1	24	2	4	3	6	0	1	210	81	3	17	211	2	0	703
7:15 AM	159	2	52	0	2	4	5	0	5	300	120	1	29	255	2	0	936
7:30 AM	167	4	42	0	2	3	5	0	3	337	157	1	29	240	0	1	991
7:45 AM	152	1	65	0	6	3	5	0	3	301	128	2	31	212	1	0	910
8:00 AM	174	3	51	0	3	5	6	0	4	265	122	0	30	208	0	0	871
8:15 AM	170	3	47	0	3	1	6	0	1	182	127	1	28	233	1	0	803
8:30 AM	147	0	42	0	0	5	2	0	2	171	131	1	46	191	1	0	739
8:45 AM	128	1	39	0	1	2	7	0	4	176	112	2	42	147	1	0	662
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1235	15	362	2	21	26	42	0	23	1942	978	11	252	1697	8	1	6615
APPROACH %'s :	76.52%	0.93%	22.43%	0.12%	23.60%	29.21%	47.19%	0.00%	0.78%	65.74%	33.11%	0.37%	12.87%	86.67%	0.41%	0.05%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	652	10	210	0	13	15	21	0	15	1203	527	4	119	915	3	1	3708
PEAK HR FACTOR :	0.937	0.625	0.808	0.000	0.542	0.750	0.875	0.000	0.750	0.892	0.839	0.500	0.960	0.897	0.375	0.250	0.935
	0.956				0.875				0.878				0.907				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1.5	0.5	1	0	0	1	0	0	1	2	1	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	182	5	75	0	1	4	0	0	3	213	116	6	37	189	0	1	832
4:15 PM	187	2	48	0	5	1	1	0	1	219	105	3	45	182	1	0	800
4:30 PM	206	5	47	1	0	1	3	0	1	215	100	2	51	204	1	0	837
4:45 PM	165	4	53	0	4	1	2	0	3	244	123	5	38	185	4	1	832
5:00 PM	173	1	54	0	1	4	1	0	2	253	127	4	50	216	1	2	889
5:15 PM	175	3	52	0	3	0	0	0	0	280	140	3	51	215	0	0	922
5:30 PM	175	3	55	0	1	2	4	0	4	250	135	6	51	255	1	1	943
5:45 PM	169	4	41	0	2	2	2	0	3	291	117	3	36	218	4	2	894
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1432	27	425	1	17	15	13	0	17	1965	963	32	359	1664	12	7	6949
APPROACH %'s :	75.97%	1.43%	22.55%	0.05%	37.78%	33.33%	28.89%	0.00%	0.57%	66.01%	32.35%	1.07%	17.58%	81.49%	0.59%	0.34%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	692	11	202	0	7	8	7	0	9	1074	519	16	188	904	6	5	3648
PEAK HR FACTOR :	0.989	0.688	0.918	0.000	0.583	0.500	0.438	0.000	0.563	0.923	0.927	0.667	0.922	0.886	0.375	0.625	0.967
	0.971				0.786				0.956				0.895				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Lemon Ave & Amar Rd
City: Walnut
Control: Signalized

Project ID: 18-05295-002
Date: 5/9/2018

Total

NS/EW Streets:	Lemon Ave				Lemon Ave				Amar Rd				Amar Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1.5	0.5	1	0	0.5	0.5	1	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	31	6	15	0	1	6	0	0	4	150	53	0	5	203	4	0	478
7:15 AM	51	12	20	2	9	16	3	0	3	230	90	1	15	175	3	0	630
7:30 AM	61	9	28	0	12	18	3	0	7	299	91	0	15	167	3	0	713
7:45 AM	63	12	23	0	5	6	6	0	0	263	72	0	24	168	3	0	645
8:00 AM	47	6	19	0	8	11	11	0	4	240	58	1	16	168	3	0	592
8:15 AM	46	6	39	0	19	12	13	0	6	222	37	0	18	160	3	0	581
8:30 AM	24	4	27	0	6	11	7	0	1	168	34	0	29	208	10	0	529
8:45 AM	38	4	10	2	4	6	6	0	5	167	45	0	29	137	3	0	456
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	361	59	181	4	64	86	49	0	30	1739	480	2	151	1386	32	0	4624
APPROACH %'s :	59.67%	9.75%	29.92%	0.66%	32.16%	43.22%	24.62%	0.00%	1.33%	77.25%	21.32%	0.09%	9.62%	88.34%	2.04%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	222	39	90	2	34	51	23	0	14	1032	311	2	70	678	12	0	2580
PEAK HR FACTOR :	0.881	0.813	0.804	0.250	0.708	0.708	0.523	0.000	0.500	0.863	0.854	0.500	0.729	0.969	1.000	0.000	0.905
		0.901				0.818				0.856				0.974			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1.5	0.5	1	0	0.5	0.5	1	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	51	2	22	1	6	11	6	0	8	201	30	1	11	185	2	0	537
4:15 PM	41	9	25	0	11	9	8	0	8	240	30	0	19	184	6	0	590
4:30 PM	47	8	20	0	4	4	6	0	7	199	31	1	28	213	5	0	573
4:45 PM	42	4	21	1	8	4	2	0	5	239	49	0	12	204	6	0	597
5:00 PM	71	11	22	1	4	4	8	0	5	215	59	0	18	190	10	0	618
5:15 PM	67	12	28	0	7	5	0	0	3	220	38	0	16	238	3	0	637
5:30 PM	75	14	29	1	5	8	6	0	7	219	38	0	28	224	9	0	663
5:45 PM	80	6	27	0	11	5	4	0	7	236	33	0	29	213	8	0	659
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	474	66	194	4	56	50	40	0	50	1769	308	2	161	1651	49	0	4874
APPROACH %'s :	64.23%	8.94%	26.29%	0.54%	38.36%	34.25%	27.40%	0.00%	2.35%	83.09%	14.47%	0.09%	8.65%	88.72%	2.63%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	293	43	106	2	27	22	18	0	22	890	168	0	91	865	30	0	2577
PEAK HR FACTOR :	0.916	0.768	0.914	0.500	0.614	0.688	0.563	0.000	0.786	0.943	0.712	0.000	0.784	0.909	0.750	0.000	0.972
		0.933				0.838				0.968				0.944			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Meadow Pass Rd & Amar Rd
City: Walnut
Control: Signalized

Project ID: 18-05295-003
Date: 5/9/2018

Total

NS/EW Streets:	Meadow Pass Rd				Meadow Pass Rd				Amar Rd				Amar Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	1	0	1	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	7	7	19	0	8	18	7	0	1	164	8	0	19	192	3	0	453
7:15 AM	10	20	28	0	9	50	7	0	0	238	22	0	53	199	0	1	637
7:30 AM	18	59	56	0	9	45	9	0	6	275	11	0	45	150	2	0	685
7:45 AM	13	42	59	0	12	19	12	0	7	318	4	0	18	188	3	0	695
8:00 AM	9	27	36	0	4	8	8	0	10	242	1	0	21	215	6	0	587
8:15 AM	29	34	40	0	31	31	31	0	9	223	6	4	38	222	7	0	705
8:30 AM	24	18	39	0	66	67	39	0	8	174	2	2	31	212	12	0	694
8:45 AM	3	6	32	0	20	19	8	0	5	175	6	0	15	126	4	0	419
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	113	213	309	0	159	257	121	0	46	1809	60	6	240	1504	37	1	4875
APPROACH %'s :	17.80%	33.54%	48.66%	0.00%	29.61%	47.86%	22.53%	0.00%	2.39%	94.17%	3.12%	0.31%	13.47%	84.40%	2.08%	0.06%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	75	121	174	0	113	125	90	0	34	957	13	6	108	837	28	0	2681
PEAK HR FACTOR :	0.647	0.720	0.737	0.000	0.428	0.466	0.577	0.000	0.850	0.752	0.542	0.375	0.711	0.943	0.583	0.000	0.951
			0.811				0.477				0.767				0.911		

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	1	0	1	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	3	14	37	0	8	9	5	0	7	232	2	0	24	210	3	0	554
4:15 PM	3	17	38	0	9	11	5	0	8	236	4	0	21	209	3	1	565
4:30 PM	7	11	25	0	8	15	4	0	5	208	5	0	34	224	6	0	552
4:45 PM	2	15	48	0	4	8	7	0	7	247	4	0	29	218	7	1	597
5:00 PM	3	21	42	0	7	12	12	0	5	217	4	0	31	218	13	1	586
5:15 PM	2	22	36	0	11	14	11	0	8	251	8	0	32	258	7	1	661
5:30 PM	6	27	37	0	7	5	4	0	6	213	2	1	28	252	12	0	600
5:45 PM	6	20	51	1	9	14	6	0	6	298	6	0	34	261	11	0	723
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	32	147	314	1	63	88	54	0	52	1902	35	1	233	1850	62	4	4838
APPROACH %'s :	6.48%	29.76%	63.56%	0.20%	30.73%	42.93%	26.34%	0.00%	2.61%	95.58%	1.76%	0.05%	10.84%	86.09%	2.89%	0.19%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	17	90	166	1	34	45	33	0	25	979	20	1	125	989	43	2	2570
PEAK HR FACTOR :	0.708	0.833	0.814	0.250	0.773	0.804	0.688	0.000	0.781	0.821	0.625	0.250	0.919	0.947	0.827	0.500	0.889
			0.878				0.778				0.827				0.947		

National Data & Surveying Services

Intersection Turning Movement Count

Location: Grand Ave & Temple Ave
City: Walnut
Control: Signalized

Project ID: 18-05295-004
Date: 5/9/2018

Total

NS/EW Streets:	Grand Ave				Grand Ave				Temple Ave				Temple Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	1	0	2	3	0	0	2	2	1	0	2	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	24	184	97	0	51	235	39	1	50	121	22	0	13	174	47	0	1058
7:15 AM	39	281	152	0	87	306	65	0	59	137	35	0	13	107	40	0	1321
7:30 AM	36	279	138	0	73	253	37	0	84	221	42	0	24	119	48	0	1354
7:45 AM	45	347	181	0	73	263	52	1	73	188	50	1	20	101	47	0	1442
8:00 AM	62	241	142	0	80	211	62	0	80	173	29	0	26	113	57	0	1276
8:15 AM	72	236	143	0	82	261	80	1	65	142	48	0	19	71	38	0	1258
8:30 AM	65	198	108	0	52	183	58	0	75	152	55	0	20	80	30	0	1076
8:45 AM	39	164	87	0	69	269	48	0	58	122	37	0	17	66	23	0	999
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	382	1930	1048	0	567	1981	441	3	544	1256	318	1	152	831	330	0	9784
APPROACH %'s :	11.37%	57.44%	31.19%	0.00%	18.95%	66.21%	14.74%	0.10%	25.67%	59.27%	15.01%	0.05%	11.58%	63.29%	25.13%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	182	1148	613	0	313	1033	216	1	296	719	156	1	83	440	192	0	5393
PEAK HR FACTOR :	0.734	0.827	0.847	0.000	0.899	0.844	0.831	0.250	0.881	0.813	0.780	0.250	0.798	0.924	0.842	0.000	0.935
		0.848				0.853				0.844				0.912			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	1	0	2	3	0	0	2	2	1	0	2	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	54	257	52	0	56	152	64	0	72	133	67	1	61	146	63	0	1178
4:15 PM	69	227	63	0	68	189	70	0	86	150	52	1	80	128	63	0	1246
4:30 PM	54	225	68	0	48	194	75	0	80	128	65	0	102	163	84	0	1286
4:45 PM	82	218	77	0	51	201	66	1	79	142	54	1	73	129	53	0	1227
5:00 PM	76	247	61	0	57	190	61	0	90	143	69	1	73	155	64	0	1287
5:15 PM	83	351	79	0	64	189	84	1	81	142	56	0	46	149	50	0	1375
5:30 PM	78	264	86	0	71	175	88	0	101	163	56	0	45	164	65	0	1356
5:45 PM	84	306	90	0	69	219	70	0	84	147	61	0	55	141	71	0	1397
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	580	2095	576	0	484	1509	578	2	673	1148	480	4	535	1175	513	0	10352
APPROACH %'s :	17.84%	64.44%	17.72%	0.00%	18.81%	58.65%	22.46%	0.08%	29.20%	49.80%	20.82%	0.17%	24.07%	52.86%	23.08%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	321	1168	316	0	261	773	303	1	356	595	242	1	219	609	250	0	5415
PEAK HR FACTOR :	0.955	0.832	0.878	0.000	0.919	0.882	0.861	0.250	0.881	0.913	0.877	0.250	0.750	0.928	0.880	0.000	0.969
		0.880				0.934				0.933				0.923			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Mt. SAC Way & Temple Ave
City: Walnut
Control: Signalized

Project ID: 18-05295-005
Date: 5/9/2018

Total

NS/EW Streets:	Mt. SAC Way				Mt. SAC Way				Temple Ave				Temple Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0.5	0.5	1	0	0.5	0.5	1	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	2	2	2	0	9	3	11	1	79	174	7	0	5	195	58	1	549
7:15 AM	2	4	1	0	11	1	17	0	81	252	24	0	7	174	68	1	643
7:30 AM	0	3	0	0	7	7	25	0	89	310	39	1	11	150	64	1	707
7:45 AM	2	1	2	0	24	3	25	0	79	294	59	0	16	141	56	3	705
8:00 AM	3	2	0	0	12	7	36	0	57	307	43	2	18	163	31	0	681
8:15 AM	2	3	1	0	16	10	13	0	39	286	38	0	7	114	17	1	547
8:30 AM	3	3	2	0	8	10	18	0	24	294	39	0	4	108	19	2	534
8:45 AM	4	5	0	0	21	15	13	0	20	223	30	0	6	95	18	1	451
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	18	23	8	0	108	56	158	1	468	2140	279	3	74	1140	331	10	4817
APPROACH %'s :	36.73%	46.94%	16.33%	0.00%	33.44%	17.34%	48.92%	0.31%	16.19%	74.05%	9.65%	0.10%	4.76%	73.31%	21.29%	0.64%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	7	10	3	0	54	18	103	0	306	1163	165	3	52	628	219	5	2736
PEAK HR FACTOR :	0.583	0.625	0.375	0.000	0.563	0.643	0.715	0.000	0.860	0.938	0.699	0.375	0.722	0.902	0.805	0.417	0.967
	0.714				0.795				0.932				0.904				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0.5	0.5	1	0	0.5	0.5	1	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	22	3	4	0	21	6	32	0	45	178	17	0	2	204	12	1	547
4:15 PM	47	4	6	0	41	5	72	0	45	222	10	1	2	175	21	1	652
4:30 PM	44	3	7	0	60	2	86	0	50	205	11	0	5	224	14	3	714
4:45 PM	28	0	7	0	26	4	37	0	64	207	9	0	2	188	23	2	597
5:00 PM	30	3	5	0	36	0	49	0	40	191	6	0	3	203	19	2	587
5:15 PM	15	3	2	0	29	2	36	0	46	242	7	0	1	206	17	0	606
5:30 PM	14	4	7	0	26	1	28	0	41	268	8	0	0	212	17	3	629
5:45 PM	23	1	2	0	36	2	48	0	46	252	13	0	1	213	21	3	661
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	223	21	40	0	275	22	388	0	377	1765	81	1	16	1625	144	15	4993
APPROACH %'s :	78.52%	7.39%	14.08%	0.00%	40.15%	3.21%	56.64%	0.00%	16.95%	79.36%	3.64%	0.04%	0.89%	90.28%	8.00%	0.83%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	149	10	25	0	163	11	244	0	199	825	36	1	12	790	77	8	2550
PEAK HR FACTOR :	0.793	0.625	0.893	0.000	0.679	0.550	0.709	0.000	0.777	0.929	0.818	0.250	0.600	0.882	0.837	0.667	0.893
	0.807				0.706				0.947				0.901				

Prepared by NDS/ATD

VOLUME

W Temple Ave & Transit Center

Day: Tuesday
Date: 3/27/2018

City: Walnut
Project #: CA18_5194_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	13,436	13,967	27,403

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			15		30		45		12:00			188		257		445	
00:15			6		29		35		12:15			187		178		365	
00:30			13		6		19		12:30			169		202		371	
00:45			6	40	9	74	15	114	12:45			187	731	186	823	373	1554
01:00			4		8		12		13:00			243		288		531	
01:15			4		11		15		13:15			162		257		419	
01:30			5		10		15		13:30			168		171		339	
01:45			4	17	8	37	12	54	13:45			180	753	183	899	363	1652
02:00			13		9		22		14:00			190		210		400	
02:15			3		8		11		14:15			206		179		385	
02:30			9		4		13		14:30			198		241		439	
02:45			4	29	6	27	10	56	14:45			268	862	252	882	520	1744
03:00			4		6		10		15:00			228		295		523	
03:15			6		4		10		15:15			200		261		461	
03:30			9		6		15		15:30			182		201		383	
03:45			9	28	6	22	15	50	15:45			213	823	196	953	409	1776
04:00			14		8		22		16:00			232		221		453	
04:15			16		17		33		16:15			281		194		475	
04:30			14		15		29		16:30			246		307		553	
04:45			26	70	38	78	64	148	16:45			259	1018	245	967	504	1985
05:00			22		42		64		17:00			246		268		514	
05:15			16		68		84		17:15			278		244		522	
05:30			44		92		136		17:30			263		237		500	
05:45			61	143	111	313	172	456	17:45			227	1014	263	1012	490	2026
06:00			44		128		172		18:00			215		254		469	
06:15			62		190		252		18:15			299		201		500	
06:30			101		211		312		18:30			336		230		566	
06:45			119	326	218	747	337	1073	18:45			304	1154	222	907	526	2061
07:00			195		234		429		19:00			188		162		350	
07:15			317		268		585		19:15			162		131		293	
07:30			321		221		542		19:30			121		124		245	
07:45			382	1215	215	938	597	2153	19:45			120	591	133	550	253	1141
08:00			292		210		502		20:00			120		144		264	
08:15			288		165		453		20:15			130		122		252	
08:30			235		144		379		20:30			174		112		286	
08:45			226	1041	166	685	392	1726	20:45			105	529	154	532	259	1061
09:00			206		169		375		21:00			115		135		250	
09:15			257		190		447		21:15			106		107		213	
09:30			312		231		543		21:30			97		125		222	
09:45			197	972	169	759	366	1731	21:45			98	416	133	500	231	916
10:00			143		183		326		22:00			125		242		367	
10:15			113		136		249		22:15			88		111		199	
10:30			131		147		278		22:30			44		61		105	
10:45			145	532	192	658	337	1190	22:45			29	286	42	456	71	742
11:00			143		244		387		23:00			25		34		59	
11:15			216		253		469		23:15			20		31		51	
11:30			198		290		488		23:30			25		26		51	
11:45			202	759	247	1034	449	1793	23:45			17	87	23	114	40	201
TOTALS				5172		5372		10544	TOTALS				8264		8595		16859
SPLIT %				49.1%		50.9%		38.5%	SPLIT %				49.0%		51.0%		61.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	13,436	13,967	27,403

AM Peak Hour			07:15	11:15	07:15	PM Peak Hour			18:00	16:30	16:30
AM Pk Volume			1312	1047	2226	PM Pk Volume			1154	1064	2093
Pk Hr Factor			0.859	0.903	0.932	Pk Hr Factor			0.859	0.866	0.946
7 - 9 Volume	0	0	2256	1623	3879	4 - 6 Volume	0	0	2032	1979	4011
7 - 9 Peak Hour			07:15	07:00	07:15	4 - 6 Peak Hour			16:45	16:30	16:30
7 - 9 Pk Volume	0	0	1312	938	2226	4 - 6 Pk Volume	0	0	1046	1064	2093
Pk Hr Factor	0.000	0.000	0.859	0.875	0.932	Pk Hr Factor	0.000	0.000	0.941	0.866	0.946

National Data & Surveying Services

Intersection Turning Movement Count

Location: Transit Center & Temple Ave
City: Walnut
Control: 1-Way Stop (SB)

Project ID: 18-5195-001
Date: 3/27/2018

Total

NS/EW Streets:	Transit Center Dwy				Transit Center Dwy				Temple Ave				Temple Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	2
1:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	2
3:00 AM	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	3
3:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
4:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	2
4:45 AM	0	0	0	0	0	0	1	0	9	0	0	0	0	0	8	0	18
5:00 AM	0	0	0	0	3	0	0	0	2	0	0	0	0	0	4	0	9
5:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 AM	0	0	0	0	1	0	0	0	3	0	0	0	0	0	1	0	5
5:45 AM	0	0	0	0	6	0	2	0	1	0	0	0	0	0	4	0	13
6:00 AM	0	0	0	0	6	0	3	0	1	0	0	0	0	0	7	0	17
6:15 AM	0	0	0	0	5	0	1	0	0	0	0	0	0	0	14	0	20
6:30 AM	0	0	0	0	4	0	1	0	2	0	0	0	0	0	21	0	28
6:45 AM	0	0	0	0	5	0	3	0	3	0	0	0	0	0	25	0	36
7:00 AM	0	0	0	0	0	0	1	0	4	0	0	0	0	0	25	0	30
7:15 AM	0	0	0	0	1	0	4	0	6	0	0	0	0	0	35	0	46
7:30 AM	0	0	0	0	3	0	2	0	5	0	0	0	0	0	26	0	36
7:45 AM	0	0	0	0	4	0	2	0	5	0	0	0	0	0	21	0	32
8:00 AM	0	0	0	0	4	0	4	0	6	0	0	0	0	0	24	0	38
8:15 AM	0	0	0	0	6	0	2	0	8	0	0	0	0	0	16	0	32
8:30 AM	0	0	0	0	2	0	5	0	6	0	0	0	0	0	15	0	28
8:45 AM	0	0	0	0	6	0	3	0	7	0	0	0	0	0	20	0	36
9:00 AM	0	0	0	0	2	0	4	0	5	0	0	0	0	0	20	0	31
9:15 AM	0	0	0	0	0	0	4	0	7	0	0	0	0	0	26	0	37
9:30 AM	0	0	0	0	11	0	9	0	9	0	0	0	0	0	39	0	68
9:45 AM	0	0	0	0	7	0	7	0	3	0	0	0	0	0	23	0	40
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	84	0	58	0	92	0	0	0	0	0	380	0	614
APPROACH %'s :					59.15%	0.00%	40.85%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR :	09:00 AM - 10:00 AM																TOTAL
PEAK HR VOL :	0	0	0	0	20	0	24	0	24	0	0	0	0	0	108	0	176
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.455	0.000	0.667	0.000	0.667	0.000	0.000	0.000	0.000	0.000	0.692	0.000	0.647
						0.550				0.667					0.692		

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
2:00 PM	0	0	0	0	11	0	11	0	1	0	0	0	0	0	14	0	37
2:15 PM	0	0	0	0	8	0	4	0	1	0	0	0	0	0	8	0	21
2:30 PM	0	0	0	0	13	0	8	0	4	0	0	0	0	0	22	0	47
2:45 PM	0	0	0	0	18	0	7	0	2	0	0	0	0	0	22	0	49
3:00 PM	0	0	0	0	13	0	6	0	2	0	0	0	0	0	18	0	39
3:15 PM	0	0	0	0	7	0	10	0	2	0	0	0	0	0	10	0	29
3:30 PM	0	0	0	0	12	0	7	0	4	0	0	0	0	0	8	0	31
3:45 PM	0	0	0	0	12	0	5	0	9	0	0	0	0	0	23	0	49
4:00 PM	0	0	0	0	8	0	9	0	11	0	0	0	0	0	7	0	35
4:15 PM	0	0	0	0	8	0	10	0	18	0	0	0	0	0	10	0	46
4:30 PM	0	0	0	0	14	0	10	0	10	0	0	0	0	0	25	0	59
4:45 PM	0	0	0	0	9	0	5	0	6	0	0	0	0	0	22	0	42
5:00 PM	0	0	0	0	12	0	0	0	12	0	0	0	0	0	25	0	49
5:15 PM	0	0	0	0	11	0	3	0	10	0	0	0	0	0	22	0	46
5:30 PM	0	0	0	0	2	0	9	0	5	0	0	0	0	0	14	0	30
5:45 PM	0	0	0	0	9	0	8	0	7	0	0	0	0	0	15	0	39
6:00 PM	0	0	0	0	6	0	7	0	8	0	0	0	0	0	20	0	41
6:15 PM	0	0	0	0	8	0	14	0	36	0	0	0	0	0	28	0	86
6:30 PM	0	0	0	0	13	0	31	0	36	0	0	0	0	0	21	0	101
6:45 PM	0	0	0	0	17	0	24	0	14	0	0	0	0	0	26	0	81
7:00 PM	0	0	0	0	6	0	8	0	10	0	0	0	0	0	5	0	29
7:15 PM	0	0	0	0	3	0	8	0	5	0	0	0	0	0	2	0	18
7:30 PM	0	0	0	0	4	0	17	0	4	0	0	0	0	0	3	0	28
7:45 PM	0	0	0	0	8	0	9	0	3	0	0	0	0	0	3	0	23
8:00 PM	0	0	0	0	9	0	3	0	3	0	0	0	0	0	2	0	17
8:15 PM	0	0	0	0	7	0	5	0	15	0	0	0	0	0	6	0	33
8:30 PM	0	0	0	0	18	0	23	0	7	0	0	0	0	0	5	0	53
8:45 PM	0	0	0	0	16	0	12	0	0	0	0	0	0	0	2	0	30
9:00 PM	0	0	0	0	24	0	6	0	1	0	0	0	0	0	4	0	35
9:15 PM	0	0	0	0	7	0	0	0	2	0	0	0	0	0	1	0	10
9:30 PM	0	0	0	0	7	0	8	0	0	0	0	0	0	0	2	0	17
9:45 PM	0	0	0	0	8	0	12	0	2	0	0	0	0	0	2	0	24
10:00 PM	0	0	0	0	22	0	8	0	1	0	0	0	0	0	2	0	33
10:15 PM	0	0	0	0	3	0	5	0	0	0	0	0	0	0	1	0	9
10:30 PM	0	0	0	0	3	0	5	0	0	0	0	0	0	0	0	0	8
10:45 PM	0	0	0	0	5	0	1	0	0	0	0	0	0	0	0	0	6
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
11:45 PM	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	364	0	318	0	251	0	0	0	0	0	400	0	1333
APPROACH %'s :					53.37%	0.00%	46.63%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR :	06:00 PM - 07:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	44	0	76	0	94	0	0	0	0	0	95	0	309
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.647	0.000	0.613	0.000	0.653	0.000	0.000	0.000	0.000	0.000	0.848	0.000	0.765
						0.682				0.653					0.848		

National Data & Surveying Services

Intersection Turning Movement Count

Location: Bonita Ave & Temple Ave
City: Walnut
Control: Signalized

Project ID: 18-05295-006
Date: 5/9/2018

Total

NS/EW Streets:	Bonita Ave				Bonita Ave				Temple Ave				Temple Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	1	0	2	1	1	0	2	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	5	0	2	0	7	0	4	0	26	120	7	0	20	304	87	0	582
7:15 AM	6	2	3	0	15	6	6	0	31	155	27	0	24	261	121	0	657
7:30 AM	3	3	4	0	16	3	8	0	76	207	20	0	30	267	130	0	767
7:45 AM	1	1	2	0	15	6	8	0	62	174	31	0	29	236	137	0	702
8:00 AM	6	6	7	0	21	7	15	0	121	150	38	0	38	197	116	0	722
8:15 AM	5	2	4	0	22	4	16	0	103	146	37	0	22	129	71	0	561
8:30 AM	7	2	4	0	20	9	14	0	84	176	29	0	20	122	40	0	527
8:45 AM	2	4	7	0	14	2	14	0	45	177	13	0	26	124	52	0	480
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	35	20	33	0	130	37	85	0	548	1305	202	0	209	1640	754	0	4998
APPROACH %'s :	39.77%	22.73%	37.50%	0.00%	51.59%	14.68%	33.73%	0.00%	26.67%	63.50%	9.83%	0.00%	8.03%	63.00%	28.97%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	16	12	16	0	67	22	37	0	290	686	116	0	121	961	504	0	2848
PEAK HR FACTOR :	0.667	0.500	0.571	0.000	0.798	0.786	0.617	0.000	0.599	0.829	0.763	0.000	0.796	0.900	0.920	0.000	0.928
			0.579				0.733				0.883				0.929		

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	1	0	2	1	1	0	2	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	12	2	10	0	48	0	37	0	33	153	5	0	4	202	38	0	544
4:15 PM	4	2	22	0	68	2	30	0	41	200	5	0	6	168	56	0	604
4:30 PM	12	4	25	0	83	1	42	0	33	218	8	0	4	157	26	0	613
4:45 PM	9	1	23	0	40	4	29	0	50	185	6	0	5	179	33	0	564
5:00 PM	3	3	13	0	34	1	23	0	41	189	2	0	10	189	35	0	543
5:15 PM	3	5	14	0	48	2	25	0	37	222	2	0	2	220	36	0	616
5:30 PM	3	0	15	0	31	1	12	0	44	241	10	0	3	241	43	0	644
5:45 PM	4	3	12	0	37	1	21	0	42	195	8	0	8	219	27	0	577
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	50	20	134	0	389	12	219	0	321	1603	46	0	42	1575	294	0	4705
APPROACH %'s :	24.51%	9.80%	65.69%	0.00%	62.74%	1.94%	35.32%	0.00%	16.29%	81.37%	2.34%	0.00%	2.20%	82.42%	15.38%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	13	11	54	0	150	5	81	0	164	847	22	0	23	869	141	0	2380
PEAK HR FACTOR :	0.813	0.550	0.900	0.000	0.781	0.625	0.810	0.000	0.932	0.879	0.550	0.000	0.575	0.901	0.820	0.000	0.924
			0.886				0.787				0.875				0.900		

National Data & Surveying Services

Intersection Turning Movement Count

Location: Lot F Entrance & Temple Ave
City: Walnut
Control: 1-Way Stop (NB)

Project ID: 18-05295-007
Date: 5/9/2018

Total

NS/EW Streets:	Lot F Entrance				Lot F Entrance				Temple Ave				Temple Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	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	0	0	0	0	0	116	0	0	0	405	12	0	533
7:15 AM	0	0	0	0	0	0	0	0	0	164	0	0	0	416	16	0	596
7:30 AM	0	0	0	0	0	0	0	0	0	231	0	0	0	406	25	0	662
7:45 AM	0	0	0	0	0	0	0	0	0	205	0	1	0	432	51	0	689
8:00 AM	0	0	0	0	0	0	0	0	1	166	0	0	0	340	45	0	552
8:15 AM	0	0	0	0	0	0	0	0	0	180	0	0	0	223	48	0	451
8:30 AM	0	0	0	0	0	0	0	0	1	195	0	1	0	167	31	0	395
8:45 AM	0	0	0	0	0	0	0	0	0	201	0	1	0	199	31	1	433
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	2	1458	0	3	0	2588	259	1	4311
APPROACH %'s :									0.14%	99.66%	0.00%	0.21%	0.00%	90.87%	9.09%	0.04%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	1	766	0	1	0	1594	137	0	2499
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.829	0.000	0.250	0.000	0.922	0.672	0.000	0.907
										0.831				0.896			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	0	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	0	0	0	0	0	209	0	0	0	236	3	0	448
4:15 PM	0	0	0	0	0	0	0	0	0	266	0	1	0	229	2	0	498
4:30 PM	0	0	0	0	0	0	0	0	0	351	0	0	0	183	3	1	538
4:45 PM	0	0	0	0	0	0	0	0	0	249	0	0	0	219	2	0	470
5:00 PM	0	0	0	0	0	0	0	0	0	224	0	0	0	229	4	2	459
5:15 PM	0	0	0	0	0	0	0	0	0	276	0	1	0	264	8	1	550
5:30 PM	0	0	0	0	0	0	0	0	0	304	0	0	0	266	4	0	574
5:45 PM	0	0	0	0	0	0	0	0	1	254	0	0	0	268	3	0	526
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	1	2133	0	2	0	1894	29	4	4063
APPROACH %'s :									0.05%	99.86%	0.00%	0.09%	0.00%	98.29%	1.50%	0.21%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	1	1058	0	1	0	1027	19	3	2109
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.870	0.000	0.250	0.000	0.958	0.594	0.375	0.919
										0.872				0.961			

National Data & Surveying Services

Intersection Turning Movement Count

Location: University Dr & Temple Ave
City: Walnut
Control: Signalized

Project ID: 18-05295-008
Date: 5/9/2018

Total

NS/EW Streets:	University Dr				University Dr				Temple Ave				Temple Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0.5	0.5	0	1.5	0.5	1	0	2	2	1	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	1	0	11	0	13	0	22	99	1	0	0	398	64	0	609
7:15 AM	0	0	1	0	37	0	29	0	55	108	0	0	0	429	103	2	764
7:30 AM	0	1	0	0	55	0	35	0	96	137	2	0	1	401	121	3	852
7:45 AM	0	1	1	0	57	1	54	0	87	111	0	0	0	389	144	4	849
8:00 AM	0	0	0	0	48	0	24	0	32	137	0	0	0	376	134	5	756
8:15 AM	0	1	0	0	13	1	9	0	41	140	1	0	1	253	109	0	569
8:30 AM	0	0	0	0	16	2	8	0	44	124	1	0	0	185	124	0	504
8:45 AM	0	2	0	0	36	4	17	0	64	145	0	0	1	225	158	1	653
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	5	3	0	273	8	189	0	441	1001	5	0	3	2656	957	15	5556
APPROACH %'s :	0.00%	62.50%	37.50%	0.00%	58.09%	1.70%	40.21%	0.00%	30.48%	69.18%	0.35%	0.00%	0.08%	73.15%	26.36%	0.41%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	2	2	0	197	1	142	0	270	493	2	0	1	1595	502	14	3221
PEAK HR FACTOR :	0.000	0.500	0.500	0.000	0.864	0.250	0.657	0.000	0.703	0.900	0.250	0.000	0.250	0.929	0.872	0.700	0.945
		0.500				0.759				0.814				0.983			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0.5	0.5	0	1.5	0.5	1	0	2	2	1	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	1	0	0	0	207	1	54	0	18	204	0	0	1	182	37	17	722
4:15 PM	1	1	0	0	99	3	19	0	9	259	1	0	0	211	35	9	647
4:30 PM	0	0	0	0	113	4	40	0	16	321	0	0	0	161	46	12	713
4:45 PM	1	0	0	0	84	2	21	0	16	250	0	0	0	194	34	2	604
5:00 PM	1	2	0	0	139	5	50	0	21	207	1	0	0	194	38	7	665
5:15 PM	1	0	0	0	133	3	42	0	29	242	0	0	1	231	43	2	727
5:30 PM	0	1	3	0	97	4	28	0	39	258	0	0	1	237	73	11	752
5:45 PM	0	1	0	0	183	1	48	0	39	216	0	0	0	217	94	13	812
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	5	5	3	0	1055	23	302	0	187	1957	2	0	3	1627	400	73	5642
APPROACH %'s :	38.46%	38.46%	23.08%	0.00%	76.45%	1.67%	21.88%	0.00%	8.71%	91.19%	0.09%	0.00%	0.14%	77.37%	19.02%	3.47%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	2	4	3	0	552	13	168	0	128	923	1	0	2	879	248	33	2956
PEAK HR FACTOR :	0.500	0.500	0.250	0.000	0.754	0.650	0.840	0.000	0.821	0.894	0.250	0.000	0.500	0.927	0.660	0.635	0.910
		0.563				0.790				0.886				0.897			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Campus Dr & Temple Ave
City: Walnut
Control: Signalized

Project ID: 18-05295-009
Date: 5/9/2018

Total

NS/EW Streets:	Campus Dr				Campus Dr				Temple Ave				Temple Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1.5	0.5	0	1.5	0.5	2	0	2	3	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	8	0	9	0	31	7	188	0	50	76	1	0	1	341	43	0	755
7:15 AM	3	3	4	0	37	1	215	0	51	85	2	0	2	361	54	0	818
7:30 AM	13	7	3	0	44	8	277	0	108	86	2	0	1	336	81	0	966
7:45 AM	14	13	5	0	20	6	279	0	74	94	4	0	8	325	83	3	928
8:00 AM	9	8	6	0	20	7	188	0	77	117	6	0	7	322	92	1	860
8:15 AM	7	4	3	0	25	5	158	0	78	75	3	0	1	220	55	1	635
8:30 AM	8	4	5	0	19	3	129	0	60	89	1	0	4	237	76	0	635
8:45 AM	7	5	5	0	22	4	146	0	80	91	3	0	4	283	95	1	746
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	69	44	40	0	218	41	1580	0	578	713	22	0	28	2425	579	6	6343
APPROACH %'s :	45.10%	28.76%	26.14%	0.00%	11.85%	2.23%	85.92%	0.00%	44.02%	54.30%	1.68%	0.00%	0.92%	79.82%	19.06%	0.20%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	39	31	18	0	121	22	959	0	310	382	14	0	18	1344	310	4	3572
PEAK HR FACTOR :	0.696	0.596	0.750	0.000	0.688	0.688	0.859	0.000	0.718	0.816	0.583	0.000	0.563	0.931	0.842	0.333	0.924
	0.688				0.837				0.883				0.993				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1.5	0.5	0	1.5	0.5	2	0	2	3	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	13	13	11	0	124	9	95	0	145	257	6	0	10	121	75	0	879
4:15 PM	7	3	14	0	74	6	80	0	161	219	11	0	9	175	58	2	819
4:30 PM	4	6	8	0	84	7	76	0	192	255	5	0	4	147	58	5	851
4:45 PM	0	3	13	0	69	2	91	0	133	198	6	0	9	148	70	1	743
5:00 PM	7	10	11	0	73	10	81	0	147	192	5	0	7	159	78	0	780
5:15 PM	5	8	16	0	60	7	114	0	151	219	10	0	11	175	98	4	878
5:30 PM	10	15	10	0	89	10	123	0	160	200	10	0	10	201	103	2	943
5:45 PM	16	12	12	0	89	10	100	0	137	273	8	0	16	209	105	0	987
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	62	70	95	0	662	61	760	0	1226	1813	61	0	76	1335	645	14	6880
APPROACH %'s :	27.31%	30.84%	41.85%	0.00%	44.64%	4.11%	51.25%	0.00%	39.55%	58.48%	1.97%	0.00%	3.67%	64.49%	31.16%	0.68%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	38	45	49	0	311	37	418	0	595	884	33	0	44	744	384	6	3588
PEAK HR FACTOR :	0.594	0.750	0.766	0.000	0.874	0.925	0.850	0.000	0.930	0.810	0.825	0.000	0.688	0.890	0.914	0.375	0.909
	0.825				0.863				0.904				0.892				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Campus Dr & Kellogg Dr
City: Walnut
Control: Signalized

Project ID: 18-05295-010
Date: 5/9/2018

Total

NS/EW Streets:	Campus Dr				Campus Dr				Kellogg Dr				Kellogg Dr				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	2	0	0	1	2	0	0	1	1.5	1.5	0	1	1.5	0.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	40	49	3	0	23	97	18	0	4	38	138	0	12	25	4	0	451
7:15 AM	57	46	8	0	11	122	26	0	0	37	141	0	25	54	7	0	534
7:30 AM	102	76	6	0	15	175	36	0	13	35	148	0	41	87	14	0	748
7:45 AM	103	71	9	0	16	161	23	0	19	41	136	0	54	125	10	0	768
8:00 AM	89	75	3	0	17	113	21	0	13	37	99	0	35	71	19	0	592
8:15 AM	54	88	3	0	16	84	25	0	2	39	69	0	18	44	12	0	454
8:30 AM	72	67	3	0	13	72	29	0	10	26	69	0	16	63	10	0	450
8:45 AM	94	67	5	0	12	75	32	0	3	31	93	0	29	86	11	0	538
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	611	539	40	0	123	899	210	0	64	284	893	0	230	555	87	0	4535
APPROACH %'s :	51.34%	45.29%	3.36%	0.00%	9.98%	72.97%	17.05%	0.00%	5.16%	22.88%	71.96%	0.00%	26.38%	63.65%	9.98%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	351	268	26	0	59	571	106	0	45	150	524	0	155	337	50	0	2642
PEAK HR FACTOR :	0.852	0.882	0.722	0.000	0.868	0.816	0.736	0.000	0.592	0.915	0.885	0.000	0.718	0.674	0.658	0.000	0.860
	0.876				0.814				0.917				0.717				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	2	0	0	1	2	0	0	1	1.5	1.5	0	1	1.5	0.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	64	162	6	0	5	41	8	0	21	58	147	0	11	39	46	0	608
4:15 PM	50	180	4	0	2	35	6	0	19	52	108	0	7	46	41	0	550
4:30 PM	34	190	5	0	7	47	10	0	18	40	95	0	9	51	38	0	544
4:45 PM	49	155	2	0	3	47	8	0	23	27	111	0	4	39	35	0	503
5:00 PM	60	169	7	0	10	50	11	0	16	46	96	0	7	39	47	0	558
5:15 PM	81	155	9	0	4	46	7	0	30	59	138	0	11	54	38	0	632
5:30 PM	92	181	5	0	6	45	24	0	20	42	143	0	8	55	23	0	644
5:45 PM	105	148	4	0	2	40	21	0	14	55	150	0	6	69	24	0	638
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	535	1340	42	0	39	351	95	0	161	379	988	0	63	392	292	0	4677
APPROACH %'s :	27.91%	69.90%	2.19%	0.00%	8.04%	72.37%	19.59%	0.00%	10.54%	24.80%	64.66%	0.00%	8.43%	52.48%	39.09%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	338	653	25	0	22	181	63	0	80	202	527	0	32	217	132	0	2472
PEAK HR FACTOR :	0.805	0.902	0.694	0.000	0.550	0.905	0.656	0.000	0.667	0.856	0.878	0.000	0.727	0.786	0.702	0.000	0.960
	0.914				0.887				0.891				0.925				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Valley Blvd & Temple Ave
City: Walnut
Control: Signalized

Project ID: 18-05295-011
Date: 5/9/2018

Total

NS/EW Streets:	Valley Blvd				Valley Blvd				Temple Ave				Temple Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	1.5	1.5	0	1	3	0	0	1	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	39	46	9	0	11	123	96	0	36	56	28	0	14	261	17	0	736
7:15 AM	55	76	11	0	17	158	108	0	15	70	39	0	19	335	13	0	916
7:30 AM	92	105	13	0	10	145	97	0	22	72	32	2	10	251	23	0	874
7:45 AM	87	142	17	0	9	159	95	0	30	70	20	3	10	290	26	0	958
8:00 AM	72	118	11	0	35	121	92	0	27	89	21	2	5	257	28	0	878
8:15 AM	57	77	8	0	19	134	48	1	35	55	14	0	16	218	24	0	706
8:30 AM	56	86	7	0	15	94	49	0	30	72	16	0	16	265	19	0	725
8:45 AM	62	89	12	0	27	92	73	0	22	92	12	3	24	297	24	0	829
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	520	739	88	0	143	1026	658	1	217	576	182	10	114	2174	174	0	6622
APPROACH %'s :	38.60%	54.86%	6.53%	0.00%	7.82%	56.13%	36.00%	0.05%	22.03%	58.48%	18.48%	1.02%	4.63%	88.30%	7.07%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	306	441	52	0	71	583	392	0	94	301	112	7	44	1133	90	0	3626
PEAK HR FACTOR :	0.832	0.776	0.765	0.000	0.507	0.917	0.907	0.000	0.783	0.846	0.718	0.583	0.579	0.846	0.804	0.000	0.946
	0.812				0.924				0.924				0.863				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	1.5	1.5	0	1	3	0	0	1	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	48	136	9	0	62	80	34	0	47	287	55	1	28	141	22	1	951
4:15 PM	47	144	17	0	60	105	48	0	36	218	50	2	17	131	29	1	905
4:30 PM	47	131	17	0	53	86	27	0	45	262	48	2	19	148	26	0	911
4:45 PM	46	160	14	0	53	100	38	0	46	191	35	1	20	127	28	0	859
5:00 PM	66	159	11	0	54	90	32	0	30	240	37	3	21	179	24	1	947
5:15 PM	67	141	15	0	56	97	41	0	33	188	39	0	21	147	27	0	872
5:30 PM	82	173	15	0	48	68	51	0	31	250	37	1	17	214	34	1	1022
5:45 PM	68	131	16	0	44	90	45	0	55	225	59	1	14	198	21	1	968
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	471	1175	114	0	430	716	316	0	323	1861	360	11	157	1285	211	5	7435
APPROACH %'s :	26.76%	66.76%	6.48%	0.00%	29.41%	48.97%	21.61%	0.00%	12.64%	72.84%	14.09%	0.43%	9.47%	77.50%	12.73%	0.30%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	283	604	57	0	202	345	169	0	149	903	172	5	73	738	106	3	3809
PEAK HR FACTOR :	0.863	0.873	0.891	0.000	0.902	0.889	0.828	0.000	0.677	0.903	0.729	0.417	0.869	0.862	0.779	0.750	0.932
	0.874				0.923				0.904				0.865				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Pomona Blvd & Temple Ave
City: Walnut
Control: Signalized

Project ID: 18-05295-012
Date: 5/9/2018

Total

NS/EW Streets:	Pomona Blvd				Pomona Blvd				Temple Ave				Temple Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	1	0	1.5	0.5	1	0	1	3	0	0	1	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	13	10	48	0	8	45	23	0	5	56	2	6	209	239	42	0	706
7:15 AM	10	9	59	0	10	64	27	0	12	85	2	5	167	342	27	0	819
7:30 AM	11	16	72	0	14	67	43	0	15	65	3	5	163	224	27	2	727
7:45 AM	13	43	84	0	3	49	24	0	8	77	1	4	121	283	19	0	729
8:00 AM	8	32	67	0	23	44	20	0	26	91	4	11	137	238	43	1	745
8:15 AM	9	27	49	0	16	31	15	0	8	70	1	8	159	239	54	0	686
8:30 AM	18	21	53	0	16	31	16	0	11	67	1	10	126	251	50	0	671
8:45 AM	16	17	60	0	17	14	15	0	12	98	2	9	148	330	54	1	793
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	98	175	492	0	107	345	183	0	97	609	16	58	1230	2146	316	4	5876
APPROACH %'s :	12.81%	22.88%	64.31%	0.00%	16.85%	54.33%	28.82%	0.00%	12.44%	78.08%	2.05%	7.44%	33.28%	58.06%	8.55%	0.11%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	42	100	282	0	50	224	114	0	61	318	10	25	588	1087	116	3	3020
PEAK HR FACTOR :	0.808	0.581	0.839	0.000	0.543	0.836	0.663	0.000	0.587	0.874	0.625	0.568	0.880	0.795	0.674	0.375	0.922
	0.757				0.782				0.784				0.837				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	1	0	1.5	0.5	1	0	1	3	0	0	1	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	12	66	147	0	43	24	19	0	13	285	2	14	71	124	15	1	836
4:15 PM	15	57	123	0	40	17	18	0	17	300	2	14	94	165	24	0	886
4:30 PM	25	63	115	0	71	26	29	0	22	267	2	18	70	121	15	0	844
4:45 PM	24	66	143	0	47	21	19	0	13	219	6	16	65	126	7	1	773
5:00 PM	23	62	143	0	67	30	46	0	18	252	0	14	71	136	10	0	872
5:15 PM	12	86	131	0	44	38	28	0	24	236	6	16	92	187	17	0	917
5:30 PM	13	59	136	0	41	37	28	0	12	239	4	10	77	176	7	2	841
5:45 PM	19	48	167	0	30	19	25	0	11	297	3	15	77	205	21	1	938
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	143	507	1105	0	383	212	212	0	130	2095	25	117	617	1240	116	5	6907
APPROACH %'s :	8.15%	28.89%	62.96%	0.00%	47.46%	26.27%	26.27%	0.00%	5.49%	88.51%	1.06%	4.94%	31.19%	62.69%	5.86%	0.25%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	67	255	577	0	182	124	127	0	65	1024	13	55	317	704	55	3	3568
PEAK HR FACTOR :	0.728	0.741	0.864	0.000	0.679	0.816	0.690	0.000	0.677	0.862	0.542	0.859	0.861	0.859	0.655	0.375	0.951
	0.960				0.757				0.887				0.887				

National Data & Surveying Services Intersection Turning Movement Count

Location: SR-57 SB Ramps & Temple Ave
City: Walnut
Control: Signalized

Project ID: 18-05295-013
Date: 5/9/2018

Total

NS/EW Streets:	SR-57 SB Ramps				SR-57 SB Ramps				Temple Ave					Temple Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND					WESTBOUND				
	0	1	0	0	1.3	0.3	1.3	0	0	3	0	0	0	1	3	2	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	ET2	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	1	0	236	2	272	0	0	100	2	0	17	3	280	5	2	920
7:15 AM	0	0	1	0	203	0	274	0	0	131	3	0	19	1	343	5	4	984
7:30 AM	0	0	0	0	179	3	284	0	0	149	4	0	14	0	259	4	5	901
7:45 AM	0	0	3	0	156	3	175	0	0	161	6	0	16	3	261	8	14	806
8:00 AM	0	0	0	0	128	3	207	0	0	199	1	0	16	0	249	4	10	817
8:15 AM	0	0	0	0	128	4	232	0	0	135	1	0	27	3	250	7	4	791
8:30 AM	0	0	0	0	105	2	210	0	0	137	2	0	20	3	284	7	7	777
8:45 AM	0	0	0	0	90	1	220	0	0	168	3	0	27	1	336	6	7	859
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	ET2	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	5	0	1225	18	1874	0	0	1180	22	0	156	14	2262	46	53	6855
APPROACH %'s :	0.00%	0.00%	100.00%	0.00%	39.30%	0.58%	60.12%	0.00%	0.00%	86.89%	1.62%	0.00%	11.49%	0.59%	95.24%	1.94%	2.23%	
PEAK HR :	07:00 AM - 08:00 AM																	TOTAL
PEAK HR VOL :	0	0	5	0	774	8	1005	0	0	541	15	0	66	7	1143	22	25	3611
PEAK HR FACTOR :	0.000	0.000	0.417	0.000	0.820	0.667	0.885	0.000	0.000	0.840	0.625	0.000	0.868	0.583	0.833	0.688	0.446	0.917
	0.417				0.876						0.850			0.848				

NS/EW Streets:	SR-57 SB Ramps				SR-57 SB Ramps				Temple Ave					Temple Ave				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND					WESTBOUND				
	0	1	0	0	1.3	0.3	1.3	0	0	3	0	0	0	1	3	2	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	ET2	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	190	2	103	0	0	458	12	0	70	3	117	11	18	984
4:15 PM	1	0	4	0	227	0	120	0	0	526	9	0	69	2	131	6	11	1106
4:30 PM	0	0	0	0	225	3	112	0	0	474	8	0	83	1	101	15	7	1029
4:45 PM	0	0	3	0	222	3	114	0	0	491	10	0	86	0	108	14	5	1056
5:00 PM	0	0	2	0	293	2	117	0	0	452	2	0	95	0	90	15	10	1078
5:15 PM	0	0	1	0	284	0	156	0	0	499	3	0	100	5	117	13	9	1187
5:30 PM	0	0	2	0	268	0	124	0	0	441	8	0	78	1	153	7	11	1093
5:45 PM	0	0	2	0	281	3	116	0	0	471	8	0	65	1	141	5	6	1099
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	ET2	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	0	14	0	1990	13	962	0	0	3812	60	0	646	13	958	86	77	8632
APPROACH %'s :	6.67%	0.00%	93.33%	0.00%	67.12%	0.44%	32.45%	0.00%	0.00%	84.37%	1.33%	0.00%	14.30%	1.15%	84.48%	7.58%	6.79%	
PEAK HR :	05:00 PM - 06:00 PM																	TOTAL
PEAK HR VOL :	0	0	7	0	1126	5	513	0	0	1863	21	0	338	7	501	40	36	4457
PEAK HR FACTOR :	0.000	0.000	0.875	0.000	0.961	0.417	0.822	0.000	0.000	0.933	0.656	0.000	0.845	0.350	0.819	0.667	0.818	0.939
	0.875				0.934						0.923			0.849				

National Data & Surveying Services Intersection Turning Movement Count

Location: SR-57 NB Ramps & Temple Ave
City: Walnut
Control: Signalized

Project ID: 18-05295-014
Date: 5/9/2018

Total

NS/EW Streets:	SR-57 NB Ramps				SR-57 NB Ramps				Temple Ave				Temple Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1.5	0	1.5	0	0	0	0	0	1	3	2	0	0	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	64	0	46	0	0	0	0	0	0	296	45	0	0	231	157	0	839
7:15 AM	110	0	53	0	0	0	0	0	0	272	38	0	0	250	155	1	879
7:30 AM	69	0	59	0	0	0	0	0	0	254	55	0	0	189	222	0	848
7:45 AM	80	0	77	0	0	0	0	0	0	233	80	0	0	219	178	0	867
8:00 AM	91	0	58	0	0	0	0	0	0	209	94	0	0	185	156	0	793
8:15 AM	90	0	64	0	0	0	0	0	0	192	67	0	0	182	173	0	768
8:30 AM	99	0	50	0	0	0	0	0	0	162	72	0	0	196	176	1	756
8:45 AM	124	0	59	0	0	0	0	0	0	167	66	0	0	218	136	0	770
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	727	0	466	0	0	0	0	0	0	1785	517	0	0	1670	1353	2	6520
APPROACH %'s :	60.94%	0.00%	39.06%	0.00%					0.00%	77.54%	22.46%	0.00%	0.00%	55.21%	44.73%	0.07%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	323	0	235	0	0	0	0	0	0	1055	218	0	0	889	712	1	3433
PEAK HR FACTOR :	0.734	0.000	0.763	0.000	0.000	0.000	0.000	0.000	0.000	0.891	0.681	0.000	0.000	0.889	0.802	0.250	0.976
	0.856								0.933				0.974				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1.5	0	1.5	0	0	0	0	0	1	3	2	0	0	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	33	0	57	0	0	0	0	0	0	391	213	1	0	109	73	0	877
4:15 PM	21	0	72	0	0	0	0	0	0	422	245	0	0	125	61	0	946
4:30 PM	21	0	64	0	0	0	0	0	0	486	171	0	0	110	69	0	921
4:45 PM	26	0	72	0	0	0	0	0	0	460	157	0	0	110	66	0	891
5:00 PM	22	0	75	0	0	0	0	0	0	474	167	0	0	100	73	0	911
5:15 PM	26	0	58	0	0	0	0	0	0	528	183	0	0	126	82	0	1003
5:30 PM	23	0	85	0	0	0	0	0	0	509	154	0	0	135	80	0	986
5:45 PM	29	0	60	0	0	0	0	0	0	519	147	0	0	135	75	1	966
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	201	0	543	0	0	0	0	0	0	3789	1437	1	0	950	579	1	7501
APPROACH %'s :	27.02%	0.00%	72.98%	0.00%					0.00%	72.49%	27.49%	0.02%	0.00%	62.09%	37.84%	0.07%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	100	0	278	0	0	0	0	0	0	2030	651	0	0	496	310	1	3866
PEAK HR FACTOR :	0.862	0.000	0.818	0.000	0.000	0.000	0.000	0.000	0.000	0.961	0.889	0.000	0.000	0.919	0.945	0.250	0.964
	0.875								0.943				0.938				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Grand Ave & I-10 WB Ramp
City: Walnut
Control: Signalized

Project ID: 18-05295-015
Date: 5/9/2018

Total

NS/EW Streets:	Grand Ave				Grand Ave				I-10 WB Ramp				I-10 WB Ramp				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	1	0	0.5	0.5	1	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	26	174	7	0	0	204	48	0	77	0	36	0	2	2	2	0	578
7:15 AM	10	161	5	0	0	212	43	0	95	7	26	0	3	2	2	0	566
7:30 AM	34	226	13	0	0	227	32	0	80	1	35	0	8	2	1	0	659
7:45 AM	32	214	3	0	0	219	46	0	98	4	31	0	8	4	6	0	665
8:00 AM	40	214	5	0	0	226	62	0	52	2	20	0	4	2	3	0	630
8:15 AM	59	209	7	0	1	165	71	0	74	2	16	0	5	2	2	0	613
8:30 AM	58	201	6	0	0	164	66	0	53	3	10	1	1	0	1	0	564
8:45 AM	59	214	4	0	0	162	83	0	55	2	9	0	1	2	2	0	593
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	318	1613	50	0	1	1579	451	0	584	21	183	1	32	16	19	0	4868
APPROACH %'s :	16.05%	81.42%	2.52%	0.00%	0.05%	77.74%	22.21%	0.00%	74.02%	2.66%	23.19%	0.13%	47.76%	23.88%	28.36%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	165	863	28	0	1	837	211	0	304	9	102	0	25	10	12	0	2567
PEAK HR FACTOR :	0.699	0.955	0.538	0.000	0.250	0.922	0.743	0.000	0.776	0.563	0.729	0.000	0.781	0.625	0.500	0.000	0.965
	0.960				0.911				0.780				0.653				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	1	0	0.5	0.5	1	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	62	209	6	0	2	200	89	0	48	3	7	0	4	3	2	0	635
4:15 PM	76	196	8	0	1	174	90	0	55	3	14	0	8	3	5	0	633
4:30 PM	73	226	9	0	0	184	79	0	50	4	15	0	3	3	3	0	649
4:45 PM	65	202	8	0	3	180	83	0	67	3	22	0	6	3	3	0	645
5:00 PM	62	241	10	0	1	209	78	0	47	6	17	1	13	2	8	0	695
5:15 PM	75	202	14	0	2	203	83	0	67	3	14	0	7	2	3	0	675
5:30 PM	63	208	10	0	1	212	101	0	51	1	11	0	10	7	6	0	681
5:45 PM	70	192	11	0	1	196	78	0	53	3	21	0	7	8	3	0	643
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	546	1676	76	0	11	1558	681	0	438	26	121	1	58	31	33	0	5256
APPROACH %'s :	23.76%	72.93%	3.31%	0.00%	0.49%	69.24%	30.27%	0.00%	74.74%	4.44%	20.65%	0.17%	47.54%	25.41%	27.05%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	265	853	42	0	7	804	345	0	232	13	64	1	36	14	20	0	2696
PEAK HR FACTOR :	0.883	0.885	0.750	0.000	0.583	0.948	0.854	0.000	0.866	0.542	0.727	0.250	0.692	0.500	0.625	0.000	0.970
	0.927				0.920				0.842				0.761				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Grand Ave & I-10 EB Ramp
City: Walnut
Control: Signalized

Project ID: 18-05295-016
Date: 5/9/2018

Total

NS/EW Streets:	Grand Ave				Grand Ave				I-10 EB Ramp				I-10 EB Ramp				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	0	2	0	0	1.5	0	0.5	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	6	150	0	0	0	184	57	0	62	0	113	0	0	0	0	0	572
7:15 AM	8	121	0	0	0	205	42	2	64	0	162	0	0	0	0	0	604
7:30 AM	11	189	0	0	0	199	60	0	76	0	148	0	0	0	0	0	683
7:45 AM	12	184	0	0	0	205	62	0	70	0	161	0	0	0	0	0	694
8:00 AM	9	188	0	0	0	187	60	0	68	0	123	0	0	0	0	0	635
8:15 AM	6	206	0	0	0	124	48	0	69	0	108	0	0	0	0	0	561
8:30 AM	4	212	0	0	0	124	63	0	58	0	96	0	0	0	0	0	557
8:45 AM	7	182	0	0	0	130	52	0	87	0	132	0	0	0	0	0	590
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	63	1432	0	0	0	1358	444	2	554	0	1043	0	0	0	0	0	4896
APPROACH %'s :	4.21%	95.79%	0.00%	0.00%	0.00%	75.28%	24.61%	0.11%	34.69%	0.00%	65.31%	0.00%					
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	40	682	0	0	0	796	224	2	278	0	594	0	0	0	0	0	2616
PEAK HR FACTOR :	0.833	0.902	0.000	0.000	0.000	0.971	0.903	0.250	0.914	0.000	0.917	0.000	0.000	0.000	0.000	0.000	0.942
	0.903				0.957				0.944								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	0	2	0	0	1.5	0	0.5	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	10	208	0	0	0	112	85	0	70	0	44	0	0	0	0	0	529
4:15 PM	9	236	0	0	0	140	65	0	49	0	39	0	0	0	0	0	538
4:30 PM	12	227	0	0	0	118	62	0	68	0	50	0	0	0	0	0	537
4:45 PM	8	214	0	0	0	141	89	0	75	0	56	0	0	0	0	0	583
5:00 PM	13	230	0	0	0	140	90	0	65	0	49	0	0	0	0	0	587
5:15 PM	19	233	0	0	0	144	89	0	55	0	40	0	0	0	0	0	580
5:30 PM	6	224	0	0	0	139	93	0	76	0	47	0	0	0	0	0	585
5:45 PM	10	202	0	0	0	151	71	0	66	0	55	0	0	0	0	0	555
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	87	1774	0	0	0	1085	644	0	524	0	380	0	0	0	0	0	4494
APPROACH %'s :	4.67%	95.33%	0.00%	0.00%	0.00%	62.75%	37.25%	0.00%	57.96%	0.00%	42.04%	0.00%					
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	46	901	0	0	0	564	361	0	271	0	192	0	0	0	0	0	2335
PEAK HR FACTOR :	0.605	0.967	0.000	0.000	0.000	0.979	0.970	0.000	0.891	0.000	0.857	0.000	0.000	0.000	0.000	0.000	0.994
	0.939				0.992				0.884								

National Data & Surveying Services

Intersection Turning Movement Count

Location: Grand Ave & Holt Ave
City: Walnut
Control: Signalized

Project ID: 18-05295-017
Date: 5/9/2018

Total

NS/EW Streets:	Grand Ave				Grand Ave				Holt Ave				Holt Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1.5	0.5	0	1	2	1	0	0	1	0	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	1	128	22	0	3	283	15	1	12	2	12	0	96	13	12	0	600
7:15 AM	1	104	24	1	4	343	9	0	11	2	40	0	118	36	12	0	705
7:30 AM	7	181	46	0	6	316	17	3	13	1	26	0	137	25	16	0	794
7:45 AM	7	184	52	0	5	351	8	3	8	6	20	0	83	20	9	0	756
8:00 AM	7	177	48	0	2	290	14	0	2	5	19	0	64	10	5	0	643
8:15 AM	5	198	35	0	9	215	7	3	4	5	5	0	44	12	16	0	558
8:30 AM	6	195	36	0	3	203	10	3	1	12	12	0	37	13	12	0	543
8:45 AM	7	176	35	0	10	240	11	2	6	12	9	0	27	20	10	0	565
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	41	1343	298	1	42	2241	91	15	57	45	143	0	606	149	92	0	5164
APPROACH %'s :	2.44%	79.80%	17.71%	0.06%	1.76%	93.80%	3.81%	0.63%	23.27%	18.37%	58.37%	0.00%	71.55%	17.59%	10.86%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	22	646	170	1	17	1300	48	6	34	14	105	0	402	91	42	0	2898
PEAK HR FACTOR :	0.786	0.878	0.817	0.250	0.708	0.926	0.706	0.500	0.654	0.583	0.656	0.000	0.734	0.632	0.656	0.000	0.912
		0.863				0.934				0.722				0.751			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1.5	0.5	0	1	2	1	0	0	1	0	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	11	214	31	1	5	142	5	3	6	11	9	0	30	5	4	0	477
4:15 PM	9	229	47	0	8	165	4	2	5	4	5	0	40	4	6	0	528
4:30 PM	16	252	63	0	8	150	6	3	5	5	7	0	42	9	11	0	577
4:45 PM	19	202	50	1	8	172	12	4	7	2	15	0	32	12	4	0	540
5:00 PM	11	210	40	0	5	178	10	2	7	8	8	0	54	15	13	0	561
5:15 PM	15	232	46	0	8	166	7	0	5	5	8	0	61	6	14	0	573
5:30 PM	8	201	51	1	7	163	11	3	4	11	8	0	48	14	8	0	538
5:45 PM	13	217	42	0	6	184	10	3	4	7	9	0	59	11	7	0	572
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	102	1757	370	3	55	1320	65	20	43	53	69	0	366	76	67	0	4366
APPROACH %'s :	4.57%	78.72%	16.58%	0.13%	3.77%	90.41%	4.45%	1.37%	26.06%	32.12%	41.82%	0.00%	71.91%	14.93%	13.16%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	61	896	199	1	29	666	35	9	24	20	38	0	189	42	42	0	2251
PEAK HR FACTOR :	0.803	0.889	0.790	0.250	0.906	0.935	0.729	0.563	0.857	0.625	0.633	0.000	0.775	0.700	0.750	0.000	0.975
		0.874				0.943				0.854				0.832			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Grand Ave & Cortez St
City: Walnut
Control: 1-Way Stop (EB)

Project ID: 18-05295-018
Date: 5/9/2018

Total

NS/EW Streets:	Grand Ave				Grand Ave				Cortez St				Cortez St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	0	2	1	0	0	0.5	0.5	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	2	146	0	0	0	343	21	0	1	0	6	0	0	0	0	0	519
7:15 AM	4	137	0	0	0	448	31	0	2	0	3	0	0	0	0	0	625
7:30 AM	9	231	0	0	0	399	60	0	3	0	10	0	0	0	0	0	712
7:45 AM	7	235	0	0	0	420	18	0	5	0	6	0	0	0	0	0	691
8:00 AM	7	218	0	0	0	353	12	0	4	0	6	0	0	0	0	0	600
8:15 AM	3	237	0	0	0	271	7	0	0	0	5	0	0	0	0	0	523
8:30 AM	5	228	0	0	0	236	7	0	2	0	1	0	0	0	0	0	479
8:45 AM	7	225	0	0	0	279	4	0	0	0	3	0	0	0	0	0	518
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	44	1657	0	0	0	2749	160	0	17	0	40	0	0	0	0	0	4667
APPROACH %'s :	2.59%	97.41%	0.00%	0.00%	0.00%	94.50%	5.50%	0.00%	29.82%	0.00%	70.18%	0.00%					
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	27	821	0	0	0	1620	121	0	14	0	25	0	0	0	0	0	2628
PEAK HR FACTOR :	0.750	0.873	0.000	0.000	0.000	0.904	0.504	0.000	0.700	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.923
		0.876				0.909				0.750							

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	0	2	1	0	0	0.5	0.5	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	5	266	0	0	0	171	5	0	0	0	1	0	0	0	0	0	448
4:15 PM	6	299	0	0	0	204	4	0	3	0	1	0	0	0	0	0	517
4:30 PM	10	346	0	0	0	190	2	0	1	0	1	0	0	0	0	0	550
4:45 PM	7	284	0	0	0	194	5	0	2	0	4	0	0	0	0	0	496
5:00 PM	10	254	0	0	0	231	7	0	2	0	1	0	0	0	0	0	505
5:15 PM	6	302	0	0	0	221	9	0	1	0	5	0	0	0	0	0	544
5:30 PM	7	263	0	0	0	209	9	0	1	0	3	0	0	0	0	0	492
5:45 PM	7	309	0	0	0	238	6	0	1	0	2	0	0	0	0	0	563
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	58	2323	0	0	0	1658	47	0	11	0	18	0	0	0	0	0	4115
APPROACH %'s :	2.44%	97.56%	0.00%	0.00%	0.00%	97.24%	2.76%	0.00%	37.93%	0.00%	62.07%	0.00%					
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	30	1128	0	0	0	899	31	0	5	0	11	0	0	0	0	0	2104
PEAK HR FACTOR :	0.750	0.913	0.000	0.000	0.000	0.944	0.861	0.000	0.625	0.000	0.550	0.000	0.000	0.000	0.000	0.000	0.934
		0.916				0.953				0.667							

National Data & Surveying Services

Intersection Turning Movement Count

Location: Barranca St & Cameron Ave
City: Walnut
Control: 3-Way Stop (SB/EB/WB)

Project ID: 18-05295-019
Date: 5/9/2018

Total

NS/EW Streets:	Barranca St				Barranca St				Cameron Ave				Cameron Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	2	0	1	0	0	2	0	0	0	2	0	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	38	0	72	0	30	100	0	0	0	137	14	0	391
7:15 AM	0	0	0	0	43	0	76	0	40	137	0	0	0	150	24	0	470
7:30 AM	0	0	0	0	44	0	106	0	90	145	0	0	0	140	37	0	562
7:45 AM	0	0	0	0	47	0	86	0	70	153	0	0	0	89	23	0	468
8:00 AM	0	0	0	0	46	0	37	0	60	113	0	0	0	74	25	0	355
8:15 AM	0	0	0	0	46	0	50	0	40	108	0	0	0	80	19	0	343
8:30 AM	0	0	0	0	29	0	53	0	45	69	0	0	0	81	17	0	294
8:45 AM	0	0	0	0	25	0	45	0	42	63	0	0	0	77	19	0	271
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	318	0	525	0	417	888	0	0	0	828	178	0	3154
APPROACH %'s :					37.72%	0.00%	62.28%	0.00%	31.95%	68.05%	0.00%	0.00%	0.00%	82.31%	17.69%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	0	0	0	0	172	0	340	0	230	535	0	0	0	516	98	0	1891
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.915	0.000	0.802	0.000	0.639	0.874	0.000	0.000	0.000	0.860	0.662	0.000	0.841
					0.853				0.814				0.867				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	2	0	1	0	0	2	0	0	0	2	0	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	0	49	0	65	93	0	0	0	93	26	0	345
4:15 PM	0	0	0	0	47	0	46	0	78	91	0	0	0	93	19	0	374
4:30 PM	0	0	0	0	21	0	44	0	72	77	0	0	0	106	25	0	345
4:45 PM	0	0	0	0	25	0	42	0	68	82	0	0	0	73	29	0	319
5:00 PM	0	0	0	0	38	0	60	0	85	88	0	0	0	101	30	0	402
5:15 PM	0	0	0	0	24	0	50	0	71	88	0	0	0	120	39	0	392
5:30 PM	0	0	0	0	42	0	53	0	81	89	0	0	0	124	24	0	413
5:45 PM	0	0	0	0	28	0	50	0	62	55	0	0	0	105	19	0	319
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	244	0	394	0	582	663	0	0	0	815	211	0	2909
APPROACH %'s :					38.24%	0.00%	61.76%	0.00%	46.75%	53.25%	0.00%	0.00%	0.00%	79.43%	20.57%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	0	0	0	0	129	0	205	0	305	347	0	0	0	418	122	0	1526
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.768	0.000	0.854	0.000	0.897	0.975	0.000	0.000	0.000	0.843	0.782	0.000	0.924
					0.852				0.942				0.849				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Grand Ave & Cameron Ave
City: Walnut
Control: Signalized

Project ID: 18-05295-020
Date: 5/9/2018

Total

NS/EW Streets:	Grand Ave				Grand Ave				Cameron Ave				Cameron Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	2	0	0	0	2	0	0	1	0	1	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	79	142	0	0	0	285	65	0	8	0	131	0	0	0	0	0	710
7:15 AM	97	117	0	0	0	397	63	0	13	0	165	0	0	0	0	0	852
7:30 AM	91	201	0	0	0	339	61	0	38	0	174	0	0	0	0	0	904
7:45 AM	69	206	0	0	0	401	26	0	34	0	171	0	0	0	0	0	907
8:00 AM	78	184	0	0	0	337	19	0	25	0	134	0	0	0	0	0	777
8:15 AM	74	226	0	0	0	250	12	0	21	0	138	0	0	0	0	0	721
8:30 AM	61	216	0	0	0	221	16	0	17	0	86	0	0	0	0	0	617
8:45 AM	73	205	0	0	0	274	16	0	10	0	86	0	0	0	0	0	664
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	622	1497	0	0	0	2504	278	0	166	0	1085	0	0	0	0	0	6152
APPROACH %'s :	29.35%	70.65%	0.00%	0.00%	0.00%	90.01%	9.99%	0.00%	13.27%	0.00%	86.73%	0.00%					
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	335	708	0	0	0	1474	169	0	110	0	644	0	0	0	0	0	3440
PEAK HR FACTOR :	0.863	0.859	0.000	0.000	0.000	0.919	0.671	0.000	0.724	0.000	0.925	0.000	0.000	0.000	0.000	0.000	0.948
	0.893				0.893				0.889								

	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
PM	2	2	0	0	0	2	0	0	1	0	1	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	107	252	0	0	0	170	13	0	21	0	88	0	0	0	0	0	651
4:15 PM	101	284	0	0	0	183	14	0	11	0	116	0	0	0	0	0	709
4:30 PM	102	335	0	0	0	167	18	0	26	0	76	0	0	0	0	0	724
4:45 PM	92	265	0	0	0	173	19	0	18	0	88	0	0	0	0	0	655
5:00 PM	105	251	0	0	0	224	29	0	13	0	99	0	0	0	0	0	721
5:15 PM	135	293	0	0	0	195	21	0	19	0	109	0	0	0	0	0	772
5:30 PM	119	251	0	0	0	197	17	0	19	0	104	0	0	0	0	0	707
5:45 PM	123	291	0	0	0	207	32	0	15	0	92	0	0	0	0	0	760
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	884	2222	0	0	0	1516	163	0	142	0	772	0	0	0	0	0	5699
APPROACH %'s :	28.46%	71.54%	0.00%	0.00%	0.00%	90.29%	9.71%	0.00%	15.54%	0.00%	84.46%	0.00%					
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	482	1086	0	0	0	823	99	0	66	0	404	0	0	0	0	0	2960
PEAK HR FACTOR :	0.893	0.927	0.000	0.000	0.000	0.919	0.773	0.000	0.868	0.000	0.927	0.000	0.000	0.000	0.000	0.000	0.959
	0.916				0.911				0.918								

National Data & Surveying Services

Intersection Turning Movement Count

Location: Grand Ave & Mountaineer Rd
City: Walnut
Control: Signalized

Project ID: 18-05295-021
Date: 5/9/2018

Total

NS/EW Streets:	Grand Ave				Grand Ave				Mountaineer Rd				Mountaineer Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	2	2	0	0	0	0	0	0	2	0	2	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	205	41	0	73	392	0	0	0	0	0	0	19	0	7	0	737
7:15 AM	0	232	85	0	126	470	0	0	0	0	0	0	34	0	12	0	959
7:30 AM	0	265	81	0	153	404	0	0	0	0	0	0	30	0	31	1	965
7:45 AM	0	264	126	0	171	409	0	0	0	0	0	0	36	0	21	0	1027
8:00 AM	0	259	96	0	115	395	0	0	0	0	0	0	47	0	17	0	929
8:15 AM	0	271	90	0	57	366	0	0	0	0	0	0	42	0	11	1	838
8:30 AM	0	302	51	0	57	291	0	0	0	0	0	0	24	0	15	1	741
8:45 AM	0	201	47	0	46	344	0	0	0	0	0	0	32	0	17	0	687
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1999	617	0	798	3071	0	0	0	0	0	0	264	0	131	3	6883
APPROACH %'s :	0.00%	76.41%	23.59%	0.00%	20.63%	79.37%	0.00%	0.00%					66.33%	0.00%	32.91%	0.75%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	1020	388	0	565	1678	0	0	0	0	0	0	147	0	81	1	3880
PEAK HR FACTOR :	0.000	0.962	0.770	0.000	0.826	0.893	0.000	0.000	0.000	0.000	0.000	0.000	0.782	0.000	0.653	0.250	0.944
		0.903				0.941								0.895			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	2	2	0	0	0	0	0	0	2	0	2	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	324	46	0	53	221	0	0	0	0	0	0	51	0	54	0	749
4:15 PM	0	332	42	0	55	246	0	0	0	0	0	0	60	0	51	0	786
4:30 PM	0	404	34	0	32	226	0	0	0	0	0	0	60	0	70	0	826
4:45 PM	0	331	37	0	31	223	0	0	0	0	0	0	41	0	25	0	688
5:00 PM	0	366	41	0	38	282	0	0	0	0	0	0	44	0	44	0	815
5:15 PM	0	374	48	0	43	254	0	0	0	0	0	0	35	0	35	0	789
5:30 PM	0	377	36	0	38	259	0	0	0	0	0	0	31	0	24	0	765
5:45 PM	0	427	43	0	38	261	0	0	0	0	0	0	35	0	24	0	828
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	2935	327	0	328	1972	0	0	0	0	0	0	357	0	327	0	6246
APPROACH %'s :	0.00%	89.98%	10.02%	0.00%	14.26%	85.74%	0.00%	0.00%					52.19%	0.00%	47.81%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	1544	168	0	157	1056	0	0	0	0	0	0	145	0	127	0	3197
PEAK HR FACTOR :	0.000	0.904	0.875	0.000	0.913	0.936	0.000	0.000	0.000	0.000	0.000	0.000	0.824	0.000	0.722	0.000	0.965
		0.911				0.948								0.773			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Grand Ave & San Jose Hills Rd
City: Walnut
Control: Signalized

Project ID: 18-05295-022
Date: 5/9/2018

Total

NS/EW Streets:	Grand Ave				Grand Ave				San Jose Hills Rd				San Jose Hills Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	1	0	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	15	222	46	1	46	311	11	1	16	4	25	0	9	2	9	0	718
7:15 AM	17	285	85	1	63	425	21	0	21	15	16	0	16	3	11	0	979
7:30 AM	25	283	95	2	82	320	20	1	51	25	24	0	21	3	6	0	958
7:45 AM	23	322	133	0	85	334	30	0	67	23	27	0	25	9	16	0	1094
8:00 AM	29	282	65	2	52	321	68	0	45	19	32	0	18	6	15	0	954
8:15 AM	31	274	49	1	32	355	92	0	80	10	61	0	7	24	10	0	1026
8:30 AM	11	250	25	2	17	239	18	0	84	9	51	0	9	1	11	0	727
8:45 AM	11	210	31	2	30	351	12	2	32	3	29	0	11	0	15	0	739
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	162	2128	529	11	407	2656	272	4	396	108	265	0	116	48	93	0	7195
APPROACH %'s :	5.72%	75.19%	18.69%	0.39%	12.19%	79.54%	8.15%	0.12%	51.50%	14.04%	34.46%	0.00%	45.14%	18.68%	36.19%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	108	1161	342	5	251	1330	210	1	243	77	144	0	71	42	47	0	4032
PEAK HR FACTOR :	0.871	0.901	0.643	0.625	0.738	0.937	0.571	0.250	0.759	0.770	0.590	0.000	0.710	0.438	0.734	0.000	0.921
		0.845				0.935				0.768				0.800			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	1	0	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	23	321	34	3	22	221	17	0	17	1	20	0	36	2	24	0	741
4:15 PM	17	328	34	0	18	267	19	0	38	8	21	0	41	12	31	0	834
4:30 PM	16	331	35	0	27	236	25	0	29	0	26	0	68	9	51	0	853
4:45 PM	16	319	25	2	27	247	18	0	23	2	23	0	29	2	29	0	762
5:00 PM	18	335	26	2	26	248	17	0	23	8	24	0	42	7	27	0	803
5:15 PM	20	410	62	0	13	275	25	0	20	2	20	0	37	6	24	0	914
5:30 PM	21	341	52	0	19	243	26	0	25	2	22	0	68	5	27	0	851
5:45 PM	20	431	25	1	13	286	24	0	28	3	26	0	30	4	27	0	918
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	151	2816	293	8	165	2023	171	0	203	26	182	0	351	47	240	0	6676
APPROACH %'s :	4.62%	86.17%	8.97%	0.24%	6.99%	85.76%	7.25%	0.00%	49.39%	6.33%	44.28%	0.00%	55.02%	7.37%	37.62%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	79	1517	165	3	71	1052	92	0	96	15	92	0	177	22	105	0	3486
PEAK HR FACTOR :	0.940	0.880	0.665	0.375	0.683	0.920	0.885	0.000	0.857	0.469	0.885	0.000	0.651	0.786	0.972	0.000	0.949
		0.896				0.940				0.890				0.760			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Grand Ave & La Puente Rd
City: Walnut
Control: Signalized

Project ID: 18-05295-023
Date: 5/9/2018

Total

NS/EW Streets:	Grand Ave				Grand Ave				La Puente Rd				La Puente Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	2	1	0	1.5	0.5	1	0	1.5	1	0.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	52	261	9	1	0	197	78	0	62	2	41	0	17	17	0	0	737
7:15 AM	76	358	8	0	0	211	138	0	114	19	86	0	27	40	2	0	1079
7:30 AM	43	370	16	1	1	262	82	1	140	30	139	0	47	40	3	0	1175
7:45 AM	25	393	6	0	0	300	41	0	120	24	113	0	29	6	2	0	1059
8:00 AM	23	378	21	0	0	244	50	0	72	3	68	0	21	5	4	0	889
8:15 AM	23	300	8	0	1	259	42	0	68	4	52	0	20	8	1	0	786
8:30 AM	33	286	14	0	0	270	25	0	63	4	64	0	27	11	2	0	799
8:45 AM	34	214	14	0	2	235	48	0	54	4	66	0	31	12	3	0	717
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	309	2560	96	2	4	1978	504	1	693	90	629	0	219	139	17	0	7241
APPROACH %'s :	10.41%	86.28%	3.24%	0.07%	0.16%	79.53%	20.27%	0.04%	49.08%	6.37%	44.55%	0.00%	58.40%	37.07%	4.53%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	167	1499	51	1	1	1017	311	1	446	76	406	0	124	91	11	0	4202
PEAK HR FACTOR :	0.549	0.954	0.607	0.250	0.250	0.848	0.563	0.250	0.796	0.633	0.730	0.000	0.660	0.569	0.688	0.000	0.894
	0.972				0.953				0.751				0.628				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	2	1	0	1.5	0.5	1	0	1.5	1	0.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	62	339	17	1	1	233	37	0	40	3	70	0	14	10	1	0	828
4:15 PM	53	274	24	0	0	255	47	0	60	14	75	0	15	6	4	0	827
4:30 PM	51	330	19	0	1	336	47	0	62	9	70	0	19	6	1	0	951
4:45 PM	59	299	20	0	1	274	53	0	51	15	95	0	20	5	1	0	893
5:00 PM	69	353	22	0	2	243	46	0	77	12	82	0	18	9	2	0	935
5:15 PM	65	381	34	1	1	273	50	0	85	21	74	0	17	12	5	0	1019
5:30 PM	84	377	33	0	1	234	40	2	80	10	74	0	27	11	1	0	974
5:45 PM	61	385	31	2	4	236	56	2	76	20	89	0	19	9	1	0	991
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	504	2738	200	4	11	2084	376	4	531	104	629	0	149	68	16	0	7418
APPROACH %'s :	14.63%	79.45%	5.80%	0.12%	0.44%	84.20%	15.19%	0.16%	42.01%	8.23%	49.76%	0.00%	63.95%	29.18%	6.87%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	279	1496	120	3	8	986	192	4	318	63	319	0	81	41	9	0	3919
PEAK HR FACTOR :	0.830	0.971	0.882	0.375	0.500	0.903	0.857	0.500	0.935	0.750	0.896	0.000	0.750	0.854	0.450	0.000	0.961
	0.961				0.918				0.946				0.840				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Grand Ave & Valley Blvd
City: Walnut
Control: Signalized

Project ID: 18-05295-024
Date: 5/9/2018

Total

NS/EW Streets:	Grand Ave				Grand Ave				Valley Blvd				Valley Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	1	0	2	3	1	0	2	3	1	0	2	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	69	228	42	0	30	96	105	0	67	77	16	2	26	274	48	0	1080
7:15 AM	81	269	69	1	42	150	111	0	105	129	32	1	33	343	56	2	1424
7:30 AM	97	300	93	0	74	211	157	1	100	157	52	1	31	279	40	5	1598
7:45 AM	56	273	108	0	77	206	145	0	98	198	58	0	48	290	35	3	1595
8:00 AM	67	280	60	2	53	192	96	0	110	145	37	1	34	176	35	2	1290
8:15 AM	49	212	63	0	46	162	114	2	99	140	36	0	39	228	22	1	1213
8:30 AM	58	208	57	0	54	188	123	0	77	138	34	2	33	206	31	2	1211
8:45 AM	64	172	72	0	55	155	107	0	58	122	37	2	25	194	30	2	1095
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	541	1942	564	3	431	1360	958	3	714	1106	302	9	269	1990	297	17	10506
APPROACH %'s :	17.74%	63.67%	18.49%	0.10%	15.66%	49.42%	34.81%	0.11%	33.51%	51.90%	14.17%	0.42%	10.45%	77.34%	11.54%	0.66%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	301	1122	330	3	246	759	509	1	413	629	179	3	146	1088	166	12	5907
PEAK HR FACTOR :	0.776	0.935	0.764	0.375	0.799	0.899	0.811	0.250	0.939	0.794	0.772	0.750	0.760	0.793	0.741	0.600	0.924
	0.896				0.855				0.864				0.813				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	3	1	0	2	3	1	0	2	3	1	0	2	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	57	197	34	8	79	158	84	4	150	288	68	0	49	155	59	7	1397
4:15 PM	55	145	22	10	73	164	112	1	140	283	70	4	54	187	51	6	1377
4:30 PM	55	201	25	2	79	201	121	4	120	275	67	1	37	146	53	4	1391
4:45 PM	60	182	33	8	72	198	98	3	135	319	94	1	65	183	46	2	1499
5:00 PM	72	261	39	3	74	187	90	2	121	339	85	1	46	181	64	1	1566
5:15 PM	67	251	58	4	86	173	104	1	152	338	88	0	60	195	64	7	1648
5:30 PM	71	246	36	6	72	179	79	1	150	342	99	1	51	166	70	5	1574
5:45 PM	66	241	44	2	95	156	74	0	148	349	79	0	49	163	67	3	1536
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	503	1724	291	43	630	1416	762	16	1116	2533	650	8	411	1376	474	35	11988
APPROACH %'s :	19.64%	67.32%	11.36%	1.68%	22.31%	50.14%	26.98%	0.57%	25.91%	58.81%	15.09%	0.19%	17.90%	59.93%	20.64%	1.52%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	276	999	177	15	327	695	347	4	571	1368	351	2	206	705	265	16	6324
PEAK HR FACTOR :	0.958	0.957	0.763	0.625	0.861	0.929	0.834	0.500	0.939	0.980	0.886	0.500	0.858	0.904	0.946	0.571	0.959
	0.965				0.943				0.968				0.914				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Grand Ave & Baker Pkwy
City: Walnut
Control: Signalized

Project ID: 18-05295-025
Date: 5/9/2018

Total

NS/EW Streets:	Grand Ave				Grand Ave				Baker Pkwy				Baker Pkwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	2	0	0	0	3	1	0	2	0	1	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	27	375	0	1	0	124	15	0	3	1	6	0	0	0	0	0	552
7:15 AM	30	501	0	0	0	164	20	0	2	0	9	0	0	0	1	0	727
7:30 AM	15	499	0	1	0	187	13	0	3	0	13	0	0	0	0	0	731
7:45 AM	30	529	1	0	0	207	12	0	5	0	15	0	0	0	0	0	799
8:00 AM	27	410	0	1	0	185	24	0	5	0	10	0	0	0	0	0	662
8:15 AM	43	382	1	3	0	181	24	0	8	0	5	0	1	0	0	0	648
8:30 AM	29	333	0	2	0	182	11	0	12	0	5	0	0	0	1	0	575
8:45 AM	26	370	0	2	0	156	12	0	7	0	11	0	0	0	0	0	584
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	227	3399	2	10	0	1386	131	0	45	1	74	0	1	0	2	0	5278
APPROACH %'s :	6.24%	93.43%	0.05%	0.27%	0.00%	91.36%	8.64%	0.00%	37.50%	0.83%	61.67%	0.00%	33.33%	0.00%	66.67%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	102	1939	1	2	0	743	69	0	15	0	47	0	0	0	1	0	2919
PEAK HR FACTOR :	0.850	0.916	0.250	0.500	0.000	0.897	0.719	0.000	0.750	0.000	0.783	0.000	0.000	0.000	0.250	0.000	0.913
		0.913				0.927				0.775				0.250			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	2	0	0	0	3	1	0	2	0	1	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	10	234	0	2	0	277	6	0	29	0	30	0	0	0	0	0	588
4:15 PM	6	235	1	2	0	274	7	0	15	0	15	0	0	0	0	0	555
4:30 PM	13	232	0	8	0	286	4	0	25	0	29	0	0	0	0	0	597
4:45 PM	15	251	0	8	0	333	6	0	12	0	47	0	0	0	0	0	672
5:00 PM	4	261	0	4	0	363	4	0	24	0	31	0	0	0	0	0	691
5:15 PM	7	282	0	1	0	318	8	0	25	0	33	0	0	0	0	0	674
5:30 PM	13	332	0	1	0	306	6	0	23	0	53	0	0	0	0	0	734
5:45 PM	10	343	0	1	0	295	9	0	18	0	31	0	0	0	0	0	707
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	78	2170	1	27	0	2452	50	0	171	0	269	0	0	0	0	0	5218
APPROACH %'s :	3.43%	95.34%	0.04%	1.19%	0.00%	98.00%	2.00%	0.00%	38.86%	0.00%	61.14%	0.00%					
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	34	1218	0	7	0	1282	27	0	90	0	148	0	0	0	0	0	2806
PEAK HR FACTOR :	0.654	0.888	0.000	0.438	0.000	0.883	0.750	0.000	0.900	0.000	0.698	0.000	0.000	0.000	0.000	0.000	0.956
		0.889				0.892				0.783							

National Data & Surveying Services

Intersection Turning Movement Count

Location: Grand Ave & SR-60 WB Ramps
City: Walnut
Control: Signalized

Project ID: 18-05295-026
Date: 5/9/2018

Total

NS/EW Streets:	Grand Ave				Grand Ave				SR-60 WB Ramps				SR-60 WB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1.5	0.5	0	1.5	2.5	0	0	1	0.5	0.5	0	1.3	0.3	1.3	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	270	61	0	0	119	2	0	0	1	4	0	18	1	86	0	562
7:15 AM	0	360	51	0	0	144	0	0	0	0	0	0	12	0	140	0	707
7:30 AM	0	361	64	0	0	206	1	0	0	0	1	0	37	0	154	0	824
7:45 AM	0	414	61	0	0	219	0	0	0	0	2	0	35	0	170	0	901
8:00 AM	0	311	66	0	0	190	1	0	0	0	0	0	54	1	167	0	790
8:15 AM	0	301	55	0	1	185	1	0	0	0	1	0	34	4	147	0	729
8:30 AM	0	284	49	0	1	202	0	0	0	0	4	0	32	1	129	0	702
8:45 AM	0	299	78	0	0	174	0	0	0	0	0	0	28	0	92	0	671
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	2600	485	0	2	1439	5	0	0	1	12	0	250	7	1085	0	5886
APPROACH %'s :	0.00%	84.28%	15.72%	0.00%	0.14%	99.52%	0.35%	0.00%	0.00%	7.69%	92.31%	0.00%	18.63%	0.52%	80.85%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	1387	246	0	1	800	3	0	0	0	4	0	160	5	638	0	3244
PEAK HR FACTOR :	0.000	0.838	0.932	0.000	0.250	0.913	0.750	0.000	0.000	0.000	0.500	0.000	0.741	0.313	0.938	0.000	0.900
		0.859				0.918				0.500				0.904			

NS/EW Streets:	Grand Ave				Grand Ave				SR-60 WB Ramps				SR-60 WB Ramps				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1.5	0.5	0	1.5	2.5	0	0	1	0.5	0.5	0	1.3	0.3	1.3	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	147	33	0	2	290	0	0	0	0	0	0	40	0	80	0	592
4:15 PM	0	155	48	0	2	309	0	0	0	0	0	0	31	0	82	0	627
4:30 PM	0	146	43	0	1	307	1	0	0	0	2	0	36	0	92	0	628
4:45 PM	0	175	41	0	2	322	0	0	0	0	0	0	78	0	127	0	745
5:00 PM	0	169	49	0	1	385	0	0	0	0	0	0	47	0	97	0	748
5:15 PM	0	189	43	0	1	337	0	0	0	0	0	0	27	0	119	0	716
5:30 PM	0	181	44	0	2	345	0	0	0	0	0	0	24	0	140	0	736
5:45 PM	0	192	49	0	2	370	0	0	0	0	0	0	35	0	164	0	812
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1354	350	0	13	2665	1	0	0	0	2	0	318	0	901	0	5604
APPROACH %'s :	0.00%	79.46%	20.54%	0.00%	0.49%	99.48%	0.04%	0.00%	0.00%	0.00%	100.00%	0.00%	26.09%	0.00%	73.91%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	731	185	0	6	1437	0	0	0	0	0	0	133	0	520	0	3012
PEAK HR FACTOR :	0.000	0.952	0.944	0.000	0.750	0.933	0.000	0.000	0.000	0.000	0.000	0.000	0.707	0.000	0.793	0.000	0.927
		0.950				0.935								0.820			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Grand Ave & SR-60 EB Ramps
City: Walnut
Control: Signalized

Project ID: 18-05295-027
Date: 5/9/2018

Total

NS/EW Streets:	Grand Ave				Grand Ave				SR-60 EB Ramps				SR-60 EB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	1	0	1	3	0	0	2	0	1	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	184	61	0	40	92	0	2	150	0	74	0	0	0	0	0	603
7:15 AM	0	246	60	0	57	102	0	3	180	0	60	0	0	0	0	0	708
7:30 AM	0	273	62	0	65	172	0	2	171	0	57	0	0	0	0	0	802
7:45 AM	0	243	79	0	65	186	0	2	204	0	61	0	0	0	0	0	840
8:00 AM	0	214	82	0	75	183	0	2	146	1	72	0	0	0	0	0	775
8:15 AM	0	212	102	0	62	151	0	3	158	0	75	0	0	0	0	0	763
8:30 AM	0	209	62	0	63	164	0	1	132	0	62	0	0	0	0	0	693
8:45 AM	0	244	67	0	66	165	0	1	137	0	74	0	0	0	0	0	754
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1825	575	0	493	1215	0	16	1278	1	535	0	0	0	0	0	5938
APPROACH %'s :	0.00%	76.04%	23.96%	0.00%	28.60%	70.48%	0.00%	0.93%	70.45%	0.06%	29.49%	0.00%					
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	942	325	0	267	692	0	9	679	1	265	0	0	0	0	0	3180
PEAK HR FACTOR :	0.000	0.863	0.797	0.000	0.890	0.930	0.000	0.750	0.832	0.250	0.883	0.000	0.000	0.000	0.000	0.000	0.946
		0.946				0.931				0.892							

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	1	0	1	3	0	0	2	0	1	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	163	156	0	69	272	0	0	34	1	50	0	0	0	0	0	745
4:15 PM	0	178	144	0	69	277	0	0	30	0	40	0	0	0	0	0	738
4:30 PM	0	183	157	0	79	263	0	0	26	1	50	0	0	0	0	0	759
4:45 PM	0	182	168	0	87	305	0	0	33	1	68	0	0	0	0	0	844
5:00 PM	0	176	143	0	102	340	0	1	27	0	46	0	0	0	0	0	835
5:15 PM	0	194	153	0	85	270	0	0	33	0	70	0	0	0	0	0	805
5:30 PM	0	169	148	0	87	299	0	1	42	0	73	0	0	0	0	0	819
5:45 PM	0	218	160	0	88	325	0	2	31	1	54	0	0	0	0	0	879
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1463	1229	0	666	2351	0	4	256	4	451	0	0	0	0	0	6424
APPROACH %'s :	0.00%	54.35%	45.65%	0.00%	22.05%	77.82%	0.00%	0.13%	36.01%	0.56%	63.43%	0.00%					
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	757	604	0	362	1234	0	4	133	1	243	0	0	0	0	0	3338
PEAK HR FACTOR :	0.000	0.868	0.944	0.000	0.887	0.907	0.000	0.500	0.792	0.250	0.832	0.000	0.000	0.000	0.000	0.000	0.949
		0.900				0.903				0.820							

National Data & Surveying Services

Intersection Turning Movement Count

Location: Kellogg Dr & E Campus Dr/I-10 EB Off Ramp
City: Pomona
Control: No Control

Project ID: 18-05693-001
Date: 10/16/2018

Total

NS/EW Streets:	Kellogg Dr				Kellogg Dr				E Campus Dr/I-10 EB Off Ramp				E Campus Dr/I-10 EB Off Ramp				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	1	0	0	2	0	0	0	0	1	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	9	11	0	0	236	0	0	0	0	127	0	0	0	0	0	383
7:15 AM	0	12	9	0	0	258	0	0	0	0	191	0	0	0	0	0	470
7:30 AM	0	23	15	0	0	283	0	0	0	0	317	0	0	0	0	0	638
7:45 AM	0	27	14	0	0	274	0	0	0	0	347	0	0	0	0	0	662
8:00 AM	0	28	21	0	0	288	0	0	0	0	369	0	0	0	0	0	706
8:15 AM	0	34	24	0	0	296	0	0	0	0	312	0	0	0	0	0	666
8:30 AM	0	25	35	0	0	222	0	0	0	0	204	0	0	0	0	0	486
8:45 AM	0	13	17	0	0	207	0	0	0	0	142	0	0	0	0	0	379
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	171	146	0	0	2064	0	0	0	0	2009	0	0	0	0	0	4390
APPROACH %'s :	0.00%	53.94%	46.06%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%					
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	112	74	0	0	1141	0	0	0	0	1345	0	0	0	0	0	2672
PEAK HR FACTOR :	0.000	0.824	0.771	0.000	0.000	0.964	0.000	0.000	0.000	0.000	0.911	0.000	0.000	0.000	0.000	0.000	0.946
		0.802				0.964				0.911							

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	1	0	0	2	0	0	0	0	1	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	226	208	0	0	59	0	0	0	0	39	0	0	0	0	0	532
4:15 PM	0	113	98	0	0	95	0	0	0	0	32	0	0	0	0	0	338
4:30 PM	0	104	74	0	0	93	0	0	0	0	48	0	0	0	0	0	319
4:45 PM	0	105	86	0	0	98	0	0	0	0	41	0	0	0	0	0	330
5:00 PM	0	142	138	0	0	121	0	0	0	0	71	0	0	0	0	0	472
5:15 PM	0	170	162	0	0	130	0	0	0	0	57	0	0	0	0	0	519
5:30 PM	0	154	141	0	0	121	0	0	0	0	35	0	0	0	0	0	451
5:45 PM	0	168	142	0	0	95	0	0	0	0	29	0	0	0	0	0	434
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1182	1049	0	0	812	0	0	0	0	352	0	0	0	0	0	3395
APPROACH %'s :	0.00%	52.98%	47.02%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%					
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	634	583	0	0	467	0	0	0	0	192	0	0	0	0	0	1876
PEAK HR FACTOR :	0.000	0.932	0.900	0.000	0.000	0.898	0.000	0.000	0.000	0.000	0.676	0.000	0.000	0.000	0.000	0.000	0.904
		0.916				0.898				0.676							

National Data & Surveying Services

Intersection Turning Movement Count

Location: E Campus Dr & S Campus Dr
City: Pomona
Control: Signalized

Project ID: 18-05693-002
Date: 10/16/2018

Total

NS/EW Streets:	E Campus Dr				E Campus Dr				S Campus Dr				S Campus Dr				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0.5	0	0.5	0	0	2	0	0	0	2	0	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	11	0	0	0	0	64	0	0	0	151	0	0	226
7:15 AM	0	0	0	0	7	0	0	0	0	67	0	0	0	204	0	0	278
7:30 AM	0	0	0	0	17	0	1	0	0	80	0	0	0	287	0	0	385
7:45 AM	0	0	0	0	14	0	0	0	0	92	0	0	0	265	0	0	371
8:00 AM	0	0	0	0	19	0	0	0	0	76	0	0	0	235	0	0	330
8:15 AM	0	0	0	0	25	0	1	0	0	82	0	0	0	198	0	0	306
8:30 AM	0	0	0	0	36	0	0	0	0	78	0	0	0	156	0	0	270
8:45 AM	0	0	0	0	16	0	1	0	0	95	0	0	0	127	0	0	239
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	145	0	3	0	0	634	0	0	0	1623	0	0	2405
APPROACH %'s :					97.97%	0.00%	2.03%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	0	0	0	75	0	2	0	0	330	0	0	0	985	0	0	1392
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.750	0.000	0.500	0.000	0.000	0.897	0.000	0.000	0.000	0.858	0.000	0.000	0.904
					0.740				0.897				0.858				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0.5	0	0.5	0	0	2	0	0	0	2	0	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	196	0	1	0	0	228	0	0	0	35	0	0	460
4:15 PM	0	0	0	0	112	0	0	0	0	256	0	0	0	46	0	0	414
4:30 PM	0	0	0	0	71	0	0	0	0	255	0	0	0	52	0	0	378
4:45 PM	0	0	0	0	84	0	2	0	0	246	0	0	0	46	0	0	378
5:00 PM	0	0	0	0	125	0	1	0	0	265	0	0	0	63	0	0	454
5:15 PM	0	0	0	0	171	0	2	0	0	260	0	0	0	44	0	0	477
5:30 PM	0	0	0	0	129	0	10	0	0	275	0	0	0	46	0	0	460
5:45 PM	0	0	0	0	141	0	1	0	0	274	0	0	0	42	0	0	458
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	1029	0	17	0	0	2059	0	0	0	374	0	0	3479
APPROACH %'s :					98.37%	0.00%	1.63%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	566	0	14	0	0	1074	0	0	0	195	0	0	1849
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.827	0.000	0.350	0.000	0.000	0.976	0.000	0.000	0.000	0.774	0.000	0.000	0.969
					0.838				0.976				0.774				

Appendix B – ICU Spreadsheets and HCM Reports – Existing Conditions

E-W Street: Amar Rd
N-S Street: Nogales St
Scenario: AM Peak
Overlap Reduce 35%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM Existing				AM Existing + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	22	1	1.00	0.01	22	1	1.00	0.01	0.878
Comb. L-T						0			
EB Thru	1370	2	2.00	0.43	1404	2	2.00	0.44	
Comb. T-R						0			
EB Right	390	1	1.00	0.24	390	1	1.00	0.24	
Comb. L-T-R						0			
WB Left	132	1	1.00	0.08	133	1	1.00	0.08	0.907
Comb. L-T						0			
WB Thru	1008	2	2.00	0.32	1016	2	2.00	0.32	
Comb. T-R						0			
WB Right	3	1	1.00	0.00	3	1	1.00	0.00	
Comb. L-T-R						0			
NB Left	682	1	1.97	0.22	682	1	1.97	0.22	0.956
Comb. L-T		1				1			
NB Thru	10		0.03	0.22	10	0	0.03	0.22	
Comb. T-R						0			
NB Right	220	1	1.00	0.14	224	1	1.00	0.14	
Comb. L-T-R						0			
SB Left	15		0.27	0.04	15	0	0.27	0.04	0.875
Comb. L-T						0			
SB Thru	17		0.31	0.04	17	0	0.31	0.04	
Comb. T-R						0			
SB Right	24		0.43	0.04	24	0	0.43	0.04	
Comb. L-T-R		1				1			

Critical Volumes	E-W:	0.51	E-W:	0.52
	N-S:	0.25	N-S:	0.25
	Total:	0.76	Total:	0.77
Lost Time		0.10		0.10
V/C		0.862		0.874
Level of Service		D		D

E-W Street: Amar Rd
N-S Street: Nogales St
Scenario: PM Peak
Overlap Reduce 40%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM Existing				PM Existing + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	26	1	1.00	0.02	26	1	1.00	0.02	0.956
Comb. L-T		0				0			
EB Thru	1123	2	2.00	0.35	1145	2	2.00	0.36	
Comb. T-R		0				0			
EB Right	326	1	1.00	0.20	326	1	1.00	0.20	
Comb. L-T-R		0				0			
WB Left	216	1	1.00	0.13	218	1	1.00	0.14	0.895
Comb. L-T		0				0			
WB Thru	1010	2	2.00	0.32	1029	2	2.00	0.32	
Comb. T-R		0				0			
WB Right	7	1	1.00	0.00	7	1	1.00	0.00	
Comb. L-T-R		0				0			
NB Left	713	1	1.97	0.23	713	1	1.97	0.23	0.971
Comb. L-T		1				1			
NB Thru	11	0	0.03	0.23	11	0	0.03	0.23	
Comb. T-R		0				0			
NB Right	208	1	1.00	0.13	211	1	1.00	0.13	
Comb. L-T-R		0				0			
SB Left	9	0	0.32	0.02	9	0	0.32	0.02	0.786
Comb. L-T		0				0			
SB Thru	10	0	0.36	0.02	10	0	0.36	0.02	
Comb. T-R		0				0			
SB Right	9	0	0.32	0.02	9	0	0.32	0.02	
Comb. L-T-R		1				1			

Critical Volumes	E-W:	0.49	E-W:	0.49
	N-S:	0.24	N-S:	0.24
	Total:	0.73	Total:	0.74
Lost Time		0.10		0.10
V/C		0.829		0.838
Level of Service		D		D

E-W Street: Amar Rd
N-S Street: Lemon Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM Existing				AM Existing + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	19	1	1.00	0.01	19	1	1.00	0.01	0.856
Comb. L-T						0			
EB Thru	1206	1	1.54	0.49	1247	1	1.55	0.50	
Comb. T-R		1				1			
EB Right	363		0.46	0.49	363	0	0.45	0.50	
Comb. L-T-R						0			
WB Left	72	1	1.00	0.04	73	1	1.00	0.05	0.974
Comb. L-T						0			
WB Thru	696	2	2.00	0.22	704	2	2.00	0.22	
Comb. T-R						0			
WB Right	12	1	1.00	0.01	12	1	1.00	0.01	
Comb. L-T-R						0			
NB Left	249	1	1.70	0.09	249	1	1.70	0.09	0.901
Comb. L-T		1				1			
NB Thru	43		0.30	0.09	43	0	0.30	0.09	
Comb. T-R						0			
NB Right	100	1	1.00	0.06	104	1	1.00	0.07	
Comb. L-T-R						0			
SB Left	42		0.40	0.06	42	0	0.40	0.06	0.818
Comb. L-T		1				1			
SB Thru	62		0.60	0.06	62	0	0.60	0.06	
Comb. T-R						0			
SB Right	28	1	1.00	0.02	28	1	1.00	0.02	
Comb. L-T-R						0			

Critical Volumes	E-W:	0.54	E-W:	0.55
	N-S:	0.16	N-S:	0.16
	Total:	0.69	Total:	0.70

Lost Time	0.10	0.10

V/C	0.792	0.805
Level of Service	C	D

E-W Street: Amar Rd
N-S Street: Lemon Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM Existing				PM Existing + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	23	1	1.00	0.01	23	1	1.00	0.01	0.968
Comb. L-T		0				0			
EB Thru	920	1	1.68	0.34	944	1	1.69	0.35	
Comb. T-R		1				1			
EB Right	174	0	0.32	0.34	174	0	0.31	0.35	
Comb. L-T-R		0				0			
WB Left	96	1	1.00	0.06	98	1	1.00	0.06	0.944
Comb. L-T		0				0			
WB Thru	916	2	2.00	0.29	936	2	2.00	0.29	
Comb. T-R		0				0			
WB Right	32	1	1.00	0.02	32	1	1.00	0.02	
Comb. L-T-R		0				0			
NB Left	316	1	1.75	0.11	316	1	1.75	0.11	0.933
Comb. L-T		1				1			
NB Thru	46	0	0.25	0.11	46	0	0.25	0.11	
Comb. T-R		0				0			
NB Right	114	1	1.00	0.07	117	1	1.00	0.07	
Comb. L-T-R		0				0			
SB Left	32	0	0.55	0.04	32	0	0.55	0.04	0.838
Comb. L-T		1				1			
SB Thru	26	0	0.45	0.04	26	0	0.45	0.04	
Comb. T-R		0				0			
SB Right	21	1	1.00	0.01	21	1	1.00	0.01	
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.40	E-W:	0.41
	N-S:	0.15	N-S:	0.15
	Total:	0.55	Total:	0.56
Lost Time		0.10		0.10
V/C		0.652		0.661
Level of Service		B		B

E-W Street: Amar Rd
N-S Street: Meadow Pass Rd
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM Existing				AM Existing + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	27	1	1.00	0.02	27	1	1.00	0.02	0.862
Comb. L-T						0			
EB Thru	1245	2	2.00	0.39	1290	2	2.00	0.40	
Comb. T-R						0			
EB Right	44	1	1.00	0.03	44	1	1.00	0.03	
Comb. L-T-R						0			
WB Left	155	1	1.00	0.10	156	1	1.00	0.10	0.890
Comb. L-T						0			
WB Thru	845	2	2.00	0.26	855	2	2.00	0.27	
Comb. T-R						0			
WB Right	12	1	1.00	0.01	12	1	1.00	0.01	
Comb. L-T-R						0			
NB Left	71	1	1.00	0.04	71	1	1.00	0.04	0.709
Comb. L-T						0			
NB Thru	209	1	1.00	0.13	209	1	1.00	0.13	
Comb. T-R						0			
NB Right	253	1	1.00	0.16	258	1	1.00	0.16	
Comb. L-T-R						0			
SB Left	47	1	1.00	0.03	47	1	1.00	0.03	0.727
Comb. L-T						0			
SB Thru	168		0.77	0.14	168	0	0.77	0.14	
Comb. T-R		1				1			
SB Right	50		0.23	0.14	50	0	0.23	0.14	
Comb. L-T-R						0			

Critical Volumes	E-W:	0.49	E-W:	0.50
	N-S:	0.19	N-S:	0.19
	Total:	0.67	Total:	0.69

Lost Time	0.10	0.10

V/C	0.773	0.791
Level of Service	C	C

E-W Street: Amar Rd
N-S Street: Meadow Pass Rd
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM Existing				PM Existing + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	31	1	1.00	0.02	31	1	1.00	0.02	0.827
Comb. L-T		0				0			
EB Thru	1184	2	2.00	0.37	1217	2	2.00	0.38	
Comb. T-R		0				0			
EB Right	24	1	1.00	0.02	24	1	1.00	0.02	
Comb. L-T-R		0				0			
WB Left	134	1	1.00	0.08	136	1	1.00	0.09	0.947
Comb. L-T		0				0			
WB Thru	1044	2	2.00	0.33	1067	2	2.00	0.33	
Comb. T-R		0				0			
WB Right	45	1	1.00	0.03	45	1	1.00	0.03	
Comb. L-T-R		0				0			
NB Left	20	1	1.00	0.01	20	1	1.00	0.01	0.878
Comb. L-T		0				0			
NB Thru	102	1	1.00	0.06	102	1	1.00	0.06	
Comb. T-R		0				0			
NB Right	189	1	1.00	0.12	192	1	1.00	0.12	
Comb. L-T-R		0				0			
SB Left	44	1	1.00	0.03	44	1	1.00	0.03	0.778
Comb. L-T		0				0			
SB Thru	58	0	0.58	0.06	58	0	0.58	0.06	
Comb. T-R		1				1			
SB Right	42	0	0.42	0.06	42	0	0.42	0.06	
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.45	E-W:	0.47
	N-S:	0.15	N-S:	0.15
	Total:	0.60	Total:	0.61
Lost Time		0.10		0.10
V/C		0.699		0.713
Level of Service		B		C

E-W Street: Temple Ave
N-S Street: Grand Ave
Scenario: AM Peak
Overlap Reduce 10%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM Existing				AM Existing + Project				Existing + Project with Mitigation				PHF
	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	
EB Left	352	2	2.00	0.12	372	2	2.00	0.13	372	2	2.00	0.13	
Comb. L-T						0				0			
EB Thru	852	2	2.00	0.27	882	2	2.00	0.28	882	2	2.48	0.22	0.844
Comb. T-R						0				1			
EB Right	166	1	1.00	0.10	166	1	1.00	0.10	185	0	0.52	0.22	
Comb. L-T-R						0				0			
WB Left	91	2	2.00	0.03	102	2	2.00	0.04	102	2	2.00	0.04	
Comb. L-T						0				0			
WB Thru	482	2	2.00	0.15	489	2	2.00	0.15	489	2	2.02	0.15	0.912
Comb. T-R						0				1			
WB Right	189	1	1.00	0.12	212	1	1.00	0.13	236	0	0.98	0.15	
Comb. L-T-R						0				0			
NB Left	215	2	2.00	0.07	215	2	2.00	0.07	215	2	2.00	0.07	
Comb. L-T						0				0			
NB Thru	1354	3	3.00	0.28	1437	3	3.00	0.30	1437	3	3.00	0.30	0.848
Comb. T-R						0				0			
NB Right	651	1	1.00	0.41	696	1	1.00	0.44	696	1	1.00	0.44	
Comb. L-T-R						0				0			
SB Left	368	2	2.00	0.13	423	2	2.00	0.15	423	2	2.00	0.15	
Comb. L-T						0				0			
SB Thru	1211	2	2.48	0.30	1230	2	2.48	0.31	1230	2	2.48	0.31	0.853
Comb. T-R		1				1				1			
SB Right	253		0.52	0.30	258	0	0.52	0.31	258	0	0.52	0.31	
Comb. L-T-R						0				0			

Critical Volumes	E-W:	0.30	E-W:	0.31	E-W:	0.28
	N-S:	0.53	N-S:	0.58	N-S:	0.58
	Total:	0.83	Total:	0.89	Total:	0.86
Lost Time		0.10		0.10		0.10
V/C		0.932		0.993		0.962
Level of Service		E		E		E

E-W Street: Temple Ave
N-S Street: Grand Ave
Scenario: PM Peak
Overlap Reduce 15%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM Existing				PM Existing + Project				Existing + Project with Mitigation				PHF
	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	
EB Left	383	2	2.00	0.13	396	2	2.00	0.14	396	2	2.00	0.14	
Comb. L-T		0				0				0			
EB Thru	638	2	2.00	0.20	657	2	2.00	0.21	657	2	2.15	0.19	0.933
Comb. T-R		0				0				1			
EB Right	221	1	1.00	0.14	221	1	1.00	0.14	259	0	0.85	0.19	
Comb. L-T-R		0				0				0			
WB Left	237	2	2.00	0.08	263	2	2.00	0.09	263	2	2.00	0.09	
Comb. L-T		0				0				0			
WB Thru	660	2	2.00	0.21	675	2	2.00	0.21	675	2	2.06	0.20	0.923
Comb. T-R		0				0				1			
WB Right	230	1	1.00	0.14	261	1	1.00	0.16	307	0	0.94	0.20	
Comb. L-T-R		0				0				0			
NB Left	365	2	2.00	0.13	365	2	2.00	0.13	365	2	2.00	0.13	
Comb. L-T		0				0				0			
NB Thru	1328	3	3.00	0.28	1382	3	3.00	0.29	1382	3	3.00	0.29	0.880
Comb. T-R		0				0				0			
NB Right	305	1	1.00	0.19	334	1	1.00	0.21	334	1	1.00	0.21	
Comb. L-T-R		0				0				0			
SB Left	280	2	2.00	0.10	320	2	2.00	0.11	320	2	2.00	0.11	
Comb. L-T		0				0				0			
SB Thru	827	2	2.16	0.24	868	2	2.17	0.25	868	2	2.17	0.25	0.934
Comb. T-R		1				1				1			
SB Right	324	0	0.84	0.24	334	0	0.83	0.25	334	0	0.83	0.25	
Comb. L-T-R		0				0				0			

Critical Volumes		E-W:	0.34		E-W:	0.35		E-W:	0.34
		N-S:	0.37		N-S:	0.40		N-S:	0.40
		Total:	0.71		Total:	0.75		Total:	0.74
Lost Time			0.10			0.10			0.10
V/C			0.813			0.847			0.841
Level of Service			D			D			D

E-W Street: Temple Ave
N-S Street: Mt SAC Way
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM Existing				AM Existing + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	331	1	1.00	0.21	373	1	1.00	0.23	0.932
Comb. L-T						0			
EB Thru	1248	2	2.00	0.39	1326	2	2.00	0.41	
Comb. T-R						0			
EB Right	177	1	1.00	0.11	181	1	1.00	0.11	
Comb. L-T-R						0			
WB Left	63	1	1.00	0.04	67	1	1.00	0.04	0.904
Comb. L-T						0			
WB Thru	695	2	2.00	0.22	727	2	2.00	0.23	
Comb. T-R						0			
WB Right	242	1	1.00	0.15	271	1	1.00	0.17	
Comb. L-T-R						0			
NB Left	10		0.41	0.01	11	0	0.44	0.02	0.714
Comb. L-T		1				1			
NB Thru	14		0.59	0.01	14	0	0.56	0.02	
Comb. T-R						0			
NB Right	4	1	1.00	0.00	6	1	1.00	0.00	
Comb. L-T-R						0			
SB Left	68		0.75	0.06	75	0	0.77	0.06	0.795
Comb. L-T		1				1			
SB Thru	23		0.25	0.06	23	0	0.23	0.06	
Comb. T-R						0			
SB Right	129	1	1.00	0.08	141	1	1.00	0.09	
Comb. L-T-R						0			

Critical Volumes	E-W:	0.43	E-W:	0.46
	N-S:	0.10	N-S:	0.10
	Total:	0.53	Total:	0.56

Lost Time	0.10	0.10

V/C	0.625	0.664
Level of Service	B	B

E-W Street: Temple Ave
N-S Street: Mt SAC Way
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM Existing				PM Existing + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	189	1	1.00	0.12	219	1	1.00	0.14	0.915
Comb. L-T		0				0			
EB Thru	1042	2	2.00	0.33	1102	2	2.00	0.34	
Comb. T-R		0				0			
EB Right	37	1	1.00	0.02	40	1	1.00	0.03	
Comb. L-T-R		0				0			
WB Left	13	1	1.00	0.01	17	1	1.00	0.01	0.967
Comb. L-T		0				0			
WB Thru	862	2	2.00	0.27	911	2	2.00	0.28	
Comb. T-R		0				0			
WB Right	76	1	1.00	0.05	95	1	1.00	0.06	
Comb. L-T-R		0				0			
NB Left	114	0	0.88	0.08	117	0	0.88	0.08	0.717
Comb. L-T		1				1			
NB Thru	15	0	0.12	0.08	15	0	0.12	0.08	
Comb. T-R		0				0			
NB Right	22	1	1.00	0.01	25	1	1.00	0.02	
Comb. L-T-R		0				0			
SB Left	149	0	0.96	0.10	166	0	0.97	0.11	0.852
Comb. L-T		1				1			
SB Thru	6	0	0.04	0.10	6	0	0.03	0.11	
Comb. T-R		0				0			
SB Right	189	1	1.00	0.12	214	1	1.00	0.13	
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.39	E-W:	0.42
	N-S:	0.20	N-S:	0.22
	Total:	0.59	Total:	0.64

Lost Time	0.10	0.10

V/C	0.687	0.738
Level of Service	B	C

E-W Street: Temple Ave
N-S Street: Transit Center Access
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM Existing				AM Existing + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	26	1	1.00	0.02	26	1	1.00	0.02	
Comb. L-T						0			
EB Thru	1502	2	2.00	0.47	1580	2	2.00	0.49	0.859
Comb. T-R						0			
EB Right			0.00		15	1	1.00	0.01	
Comb. L-T-R						0			
WB Left (U)	0	1	1.00	0.00	15	1	1.00	0.01	
Comb. L-T						0			
WB Thru	948	2	2.00	0.30	1015	2	2.00	0.32	0.853
Comb. T-R						0			
WB Right	124	1	1.00	0.08	124	1	1.00	0.08	
Comb. L-T-R						0			
NB Left	0		0.00		3	1	1.00	0.00	
Comb. L-T						0			
NB Thru	0		0.00		0	0	0.00		0.920
Comb. T-R						0			
NB Right	0		0.00		3	1	1.00	0.00	
Comb. L-T-R						0			
SB Left	16		0.50	0.02	16	0	0.50	0.02	
Comb. L-T						0			
SB Thru			0.00		0	0	0.00		0.750
Comb. T-R						0			
SB Right	16		0.50	0.02	16	0	0.50	0.02	
Comb. L-T-R		1				1			

Critical Volumes	E-W:	0.47	E-W:	0.50
	N-S:	0.02	N-S:	0.02
	Total:	0.49	Total:	0.53

Lost Time	0.10	0.10

V/C	0.589	0.625
Level of Service	A	B

E-W Street: Temple Ave
N-S Street: Transit Center Access
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM Existing				PM Existing + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	37	1	1.00	0.02	37	1	1.00	0.02	0.912
Comb. L-T		0				0			
EB Thru	1075	2	2.00	0.34	1144	2	2.00	0.36	
Comb. T-R		0				0			
EB Right		0	0.00		10	1	1.00	0.01	
Comb. L-T-R		0				0			
WB Left (U)	0	1	1.00	0.00	10	1	1.00	0.01	0.944
Comb. L-T		0				0			
WB Thru	991	2	2.00	0.31	1056	2	2.00	0.33	
Comb. T-R		0				0			
WB Right	81	1	1.00	0.05	81	1	1.00	0.05	
Comb. L-T-R		0				0			
NB Left	0	0	0.00		8	1	1.00	0.00	0.920
Comb. L-T		0				0			
NB Thru	0	0	0.00		0	0	0.00		
Comb. T-R		0				0			
NB Right	0	0	0.00		8	1	1.00	0.00	
Comb. L-T-R		0				0			
SB Left	43	0	0.63	0.04	43	0	0.63	0.04	0.794
Comb. L-T		0				0			
SB Thru		0	0.00		0	0	0.00		
Comb. T-R		0				0			
SB Right	25	0	0.37	0.04	25	0	0.37	0.04	
Comb. L-T-R		1				1			

Critical Volumes	E-W:	0.34	E-W:	0.36
	N-S:	0.04	N-S:	0.05
	Total:	0.38	Total:	0.41

Lost Time	0.10	0.10

V/C	0.478	0.511
Level of Service	A	A

E-W Street: Temple Ave
N-S Street: Bonita Dr
Scenario: AM Peak
Overlap Reduce 10%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM Existing				AM Existing + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	328	2	2.00	0.11	387	2	2.00	0.13	0.883
Comb. L-T						0			
EB Thru	776	1	1.71	0.28	791	2	2.00	0.25	
Comb. T-R		1				0			
EB Right	131		0.29	0.28	136	1	1.00	0.08	
Comb. L-T-R						0			
WB Left	130	1	1.00	0.08	140	1	1.00	0.09	0.929
Comb. L-T						0			
WB Thru	1035	2	2.00	0.32	1096	2	2.00	0.34	
Comb. T-R						0			
WB Right	543	1	1.00	0.34	613	1	1.00	0.38	
Comb. L-T-R						0			
NB Left	28	1	1.00	0.02	29	1	1.00	0.02	0.579
Comb. L-T						0			
NB Thru	21	1	1.00	0.01	21	1	1.00	0.01	
Comb. T-R						0			
NB Right	28	1	1.00	0.02	31	1	1.00	0.02	
Comb. L-T-R						0			
SB Left	91	2	2.00	0.03	116	2	2.00	0.04	0.733
Comb. L-T						0			
SB Thru	30	1	1.00	0.02	30	1	1.00	0.02	
Comb. T-R						0			
SB Right	45	1	1.00	0.03	60	1	1.00	0.04	
Comb. L-T-R						0			

Critical Volumes	E-W:	0.45	E-W:	0.52
	N-S:	0.05	N-S:	0.06
	Total:	0.50	Total:	0.58
Lost Time		0.10		0.10
V/C		0.602		0.677
Level of Service		B		B

E-W Street: Temple Ave
N-S Street: Bonita Dr
Scenario: PM Peak
Overlap Reduce 15%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM Existing				PM Existing + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	187	2	2.00	0.07	228	2	2.00	0.08	0.875
Comb. L-T		0				0			
EB Thru	968	1	1.95	0.31	1003	2	2.00	0.31	
Comb. T-R		1				0			
EB Right	25	0	0.05	0.31	29	1	1.00	0.02	
Comb. L-T-R		0				0			
WB Left	26	1	1.00	0.02	32	1	1.00	0.02	0.900
Comb. L-T		0				0			
WB Thru	966	2	2.00	0.30	1009	2	2.00	0.32	
Comb. T-R		0				0			
WB Right	157	1	1.00	0.10	207	1	1.00	0.13	
Comb. L-T-R		0				0			
NB Left	15	1	1.00	0.01	17	1	1.00	0.01	0.886
Comb. L-T		0				0			
NB Thru	12	1	1.00	0.01	12	1	1.00	0.01	
Comb. T-R		0				0			
NB Right	61	1	1.00	0.04	67	1	1.00	0.04	
Comb. L-T-R		0				0			
SB Left	191	2	2.00	0.07	245	2	2.00	0.09	0.787
Comb. L-T		0				0			
SB Thru	6	1	1.00	0.00	6	1	1.00	0.00	
Comb. T-R		0				0			
SB Right	88	1	1.00	0.05	118	1	1.00	0.07	
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.37	E-W:	0.39
	N-S:	0.10	N-S:	0.13
	Total:	0.47	Total:	0.52
Lost Time		0.10		0.10
V/C		0.571		0.621
Level of Service		A		B

Intersection	
Int Delay, s/veh	0

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations								
Traffic Vol, veh/h	1	1	766	0	1594	137	0	0
Future Vol, veh/h	1	1	766	0	1594	137	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	None
Storage Length	-	350	-	137	-	120	-	0
Veh in Median Storage, #	-	-	0	-	0	-	0	-
Grade, %	-	-	0	-	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2
Mvmt Flow	1	1	833	0	1733	149	0	0

Major/Minor	Major1			Major2			Minor2	
Conflicting Flow All	1733	1882	0	833	-	0	-	867
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-
Critical Hdwy	6.44	4.14	-	6.44	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.52	2.22	-	2.52	-	-	-	3.32
Pot Cap-1 Maneuver	111	315	-	425	-	-	0	296
Stage 1	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	0	-
Platoon blocked, %			-		-	-		
Mov Cap-1 Maneuver	164	164	-	425	-	-	-	296
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBU	WBT	WBR	SBLn1
Capacity (veh/h)	164	-	425	-	-	-
HCM Lane V/C Ratio	0.013	-	-	-	-	-
HCM Control Delay (s)	27.2	-	0	-	-	0
HCM Lane LOS	D	-	A	-	-	A
HCM 95th %tile Q(veh)	0	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations								
Traffic Vol, veh/h	1	1	800	0	1724	150	0	0
Future Vol, veh/h	1	1	800	0	1724	150	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	None
Storage Length	-	350	-	137	-	120	-	0
Veh in Median Storage, #	-	-	0	-	0	-	0	-
Grade, %	-	-	0	-	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2
Mvmt Flow	1	1	870	0	1874	163	0	0

Major/Minor	Major1			Major2			Minor2	
Conflicting Flow All	1874	2037	0	870	-	0	-	937
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-
Critical Hdwy	6.44	4.14	-	6.44	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.52	2.22	-	2.52	-	-	-	3.32
Pot Cap-1 Maneuver	90	274	-	402	-	-	0	266
Stage 1	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	0	-
Platoon blocked, %			-		-	-		
Mov Cap-1 Maneuver	135	135	-	402	-	-	-	266
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBU	WBT	WBR	SBLn1
Capacity (veh/h)	135	-	402	-	-	-
HCM Lane V/C Ratio	0.016	-	-	-	-	-
HCM Control Delay (s)	32	-	0	-	-	0
HCM Lane LOS	D	-	A	-	-	A
HCM 95th %tile Q(veh)	0	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations								
Traffic Vol, veh/h	1	1	1058	3	1027	19	0	0
Future Vol, veh/h	1	1	1058	3	1027	19	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	None
Storage Length	-	350	-	137	-	120	-	0
Veh in Median Storage, #	-	-	0	-	0	-	0	-
Grade, %	-	-	0	-	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2
Mvmt Flow	1	1	1150	3	1116	21	0	0

Major/Minor	Major1			Major2			Minor2	
Conflicting Flow All	1116	1137	0	1150	-	0	-	558
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-
Critical Hdwy	6.44	4.14	-	6.44	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.52	2.22	-	2.52	-	-	-	3.32
Pot Cap-1 Maneuver	280	610	-	266	-	-	0	473
Stage 1	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	0	-
Platoon blocked, %			-		-	-		
Mov Cap-1 Maneuver	384	384	-	266	-	-	-	473
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0.1	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBU	WBT	WBR	SBLn1
Capacity (veh/h)	384	-	266	-	-	-
HCM Lane V/C Ratio	0.006	-	0.012	-	-	-
HCM Control Delay (s)	14.4	-	18.7	-	-	0
HCM Lane LOS	B	-	C	-	-	A
HCM 95th %tile Q(veh)	0	-	0	-	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations								
Traffic Vol, veh/h	1	1	1136	3	1117	28	0	0
Future Vol, veh/h	1	1	1136	3	1117	28	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	None
Storage Length	-	350	-	137	-	120	-	0
Veh in Median Storage, #	-	-	0	-	0	-	0	-
Grade, %	-	-	0	-	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2
Mvmt Flow	1	1	1235	3	1214	30	0	0

Major/Minor	Major1			Major2			Minor2	
Conflicting Flow All	1214	1244	0	1235	-	0	-	607
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-
Critical Hdwy	6.44	4.14	-	6.44	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.52	2.22	-	2.52	-	-	-	3.32
Pot Cap-1 Maneuver	242	555	-	234	-	-	0	439
Stage 1	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	0	-
Platoon blocked, %			-		-	-		
Mov Cap-1 Maneuver	337	337	-	234	-	-	-	439
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0.1	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBU	WBT	WBR	SBLn1
Capacity (veh/h)	337	-	234	-	-	-
HCM Lane V/C Ratio	0.006	-	0.014	-	-	-
HCM Control Delay (s)	15.8	-	20.6	-	-	0
HCM Lane LOS	C	-	C	-	-	A
HCM 95th %tile Q(veh)	0	-	0	-	-	-

E-W Street: Temple Ave
N-S Street: University Dr
Scenario: AM Peak
Overlap Reduce 15%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM Existing				AM Existing + Project				Existing + Project with Mitigation				PHF
	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	
EB Left	332	2	2.00	0.12	332	2	2.00	0.12	332	2	2.00	0.12	
Comb. L-T						0							
EB Thru	606	2	2.00	0.19	648	2	2.00	0.20	648	2	2.00	0.20	0.814
Comb. T-R						0							
EB Right	2	1	1.00	0.00	2	1	1.00	0.00	2	1	1.00	0.00	
Comb. L-T-R						0							
WB Left	15	1	1.00	0.01	15	1	1.00	0.01	15	1	1.00	0.01	
Comb. L-T						0							
WB Thru	1622	2	2.00	0.51	1769	2	2.00	0.55	1769	2	2.33	0.47	0.983
Comb. T-R						0				1			
WB Right	434	1	1.00	0.27	434	1	1.00	0.27	511	0	0.67	0.47	
Comb. L-T-R						0							
NB Left	0	1	1.00	0.00	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. L-T						0							
NB Thru	4		0.50	0.01	4	0	0.50	0.01	4		0.50	0.01	0.500
Comb. T-R		1				1				1			
NB Right	4		0.50	0.01	4	0	0.50	0.01	4		0.50	0.01	
Comb. L-T-R						0							
SB Left	260	1	1.99	0.08	260	1	1.99	0.08	260	1	1.99	0.08	
Comb. L-T		1				1				1			
SB Thru	1		0.01	0.08	1	0	0.01	0.08	1		0.01	0.08	0.759
Comb. T-R						0							
SB Right	187	1	1.00	0.12	187	1	1.00	0.12	187	1	1.00	0.12	
Comb. L-T-R						0							

Critical Volumes	E-W:	0.62		E-W:	0.67		E-W:	0.59	
	N-S:	0.12		N-S:	0.12		N-S:	0.12	
	Total:	0.74		Total:	0.78		Total:	0.71	
Lost Time		0.10			0.10			0.10	
V/C		0.839			0.885			0.807	
Level of Service		D			D			D	

E-W Street: Temple Ave
N-S Street: University Dr
Scenario: PM Peak
Overlap Reduce 40%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM Existing				PM Existing + Project				Existing + Project with Mitigation				PHF
	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	
EB Left	145	2	2.00	0.05	145	2	2.00	0.05	145	2	2.00	0.05	0.886
Comb. L-T		0				0							
EB Thru	1042	2	2.00	0.33	1130	2	2.00	0.35	1130	2	2.00	0.35	
Comb. T-R		0				0							
EB Right	1	1	1.00	0.00	1	1	1.00	0.00	1	1	1.00	0.00	
Comb. L-T-R		0				0							
WB Left	39	1	1.00	0.02	39	1	1.00	0.02	39	1	1.00	0.02	0.897
Comb. L-T		0				0							
WB Thru	980	2	2.00	0.31	1091	2	2.00	0.34	1091	2	2.39	0.28	
Comb. T-R		0				0				1			
WB Right	166	1	1.00	0.10	166	1	1.00	0.10	277	0	0.61	0.28	
Comb. L-T-R		0				0							
NB Left	4	1	1.00	0.00	4	1	1.00	0.00	4	1	1.00	0.00	0.563
Comb. L-T		0				0							
NB Thru	7	0	0.57	0.01	7	0	0.57	0.01	7		0.57	0.01	
Comb. T-R		1				1				1			
NB Right	5	0	0.43	0.01	5	0	0.43	0.01	5		0.43	0.01	
Comb. L-T-R		0				0							
SB Left	699	1	1.95	0.22	699	1	1.95	0.22	699	1	1.95	0.22	0.790
Comb. L-T		1				1				1			
SB Thru	16	0	0.05	0.22	16	0	0.05	0.22	16		0.05	0.22	
Comb. T-R		0				0							
SB Right	213	1	1.00	0.13	213	1	1.00	0.13	213	1	1.00	0.13	
Comb. L-T-R		0				0							

Critical Volumes			E-W:	0.36			E-W:	0.39			E-W:	0.38	
			N-S:	0.23			N-S:	0.23			N-S:	0.23	
			Total:	0.59			Total:	0.62			Total:	0.61	
Lost Time				0.10				0.10				0.10	
V/C				0.688				0.722				0.709	
Level of Service				B				C				C	

E-W Street: Temple Ave
N-S Street: Campus Dr
Scenario: AM Peak
Overlap Reduce 10%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM Existing				AM Existing + Project				Existing + Project with Mitigation				PHF
	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	
EB Left	351	2	2.00	0.12	372	2	2.00	0.13	372	2	2.00	0.13	
Comb. L-T						0				0			
EB Thru	433	2	2.89	0.09	450	2	2.90	0.10	450	2	2.90	0.10	0.883
Comb. T-R		1				1				1			
EB Right	16		0.11	0.09	16	0	0.10	0.10	16	0	0.10	0.10	
Comb. L-T-R						0				0			
WB Left	22	1	1.00	0.01	22	1	1.00	0.01	22	1	1.00	0.01	
Comb. L-T						0				0			
WB Thru	1354	2	2.00	0.42	1419	2	2.00	0.44	1419	2	2.46	0.36	0.993
Comb. T-R						0				1			
WB Right	312	1	1.00	0.20	312	1	1.00	0.20	312	0	0.54	0.36	
Comb. L-T-R						0				0			
NB Left	57	1	1.00	0.04	57	1	1.00	0.04	57	1	1.00	0.04	
Comb. L-T						0				0			
NB Thru	45	1	1.27	0.02	45	1	1.27	0.02	45	1	1.27	0.02	0.688
Comb. T-R		1				1				1			
NB Right	26		0.73	0.02	26	0	0.73	0.02	26	0	0.73	0.02	
Comb. L-T-R						0				0			
SB Left	144	1	1.69	0.05	144	1	1.69	0.05	144	1	1.69	0.05	
Comb. L-T		1				1				1			
SB Thru	26		0.31	0.05	26	0	0.31	0.05	26	0	0.31	0.05	0.837
Comb. T-R						0				0			
SB Right	1031	2	2.00	0.32	1115	2	2.00	0.35	1115	2	2.00	0.35	
Comb. L-T-R						0				0			

Critical Volumes			E-W:	0.54			E-W:	0.57			E-W:	0.49	
			N-S:	0.36			N-S:	0.38			N-S:	0.38	
			Total:	0.90			Total:	0.96			Total:	0.87	
Lost Time				0.10				0.10				0.10	
V/C				1.003				1.056				0.973	
Level of Service				F				F				E	

E-W Street: Temple Ave
N-S Street: Campus Dr
Scenario: PM Peak
Overlap Reduce 25%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM Existing				PM Existing + Project				Existing + Project with Mitigation				PHF
	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	
EB Left	658	2	2.00	0.23	706	2	2.00	0.24	706	2	2.00	0.24	0.904
Comb. L-T		0				0				0			
EB Thru	978	2	2.89	0.21	1016	2	2.90	0.22	1016	2	2.90	0.22	
Comb. T-R		1				1				1			
EB Right	36	0	0.11	0.21	36	0	0.10	0.22	36	0	0.10	0.22	
Comb. L-T-R		0				0				0			
WB Left	56	1	1.00	0.04	56	1	1.00	0.04	56	1	1.00	0.04	0.892
Comb. L-T		0				0				0			
WB Thru	834	2	2.00	0.26	884	2	2.00	0.28	884	2	2.02	0.27	
Comb. T-R		0				0				1			
WB Right	430	1	1.00	0.27	430	1	1.00	0.27	430	0	0.98	0.27	
Comb. L-T-R		0				0				0			
NB Left	46	1	1.00	0.03	46	1	1.00	0.03	46	1	1.00	0.03	0.825
Comb. L-T		0				0				0			
NB Thru	55	1	0.96	0.04	55	1	0.96	0.04	55	1	0.96	0.04	
Comb. T-R		1				1				1			
NB Right	59	0	1.04	0.04	59	0	1.04	0.04	59	0	1.04	0.04	
Comb. L-T-R		0				0				0			
SB Left	361	1	1.79	0.13	361	1	1.79	0.13	361	1	1.79	0.13	0.863
Comb. L-T		1				1				1			
SB Thru	43	0	0.21	0.13	43	0	0.21	0.13	43	0	0.21	0.13	
Comb. T-R		0				0				0			
SB Right	363	2	2.00	0.11	410	2	2.00	0.13	410	2	2.00	0.13	
Comb. L-T-R		0				0				0			

Critical Volumes			E-W:	0.50			E-W:	0.52			E-W:	0.52	
			N-S:	0.16			N-S:	0.16			N-S:	0.16	
			Total:	0.66			Total:	0.68			Total:	0.68	
Lost Time				0.10				0.10				0.10	
V/C				0.759				0.783				0.780	
Level of Service				C				C				C	

E-W Street: Kellogg Dr
N-S Street: Campus Dr
Scenario: AM Peak
Overlap Reduce 20%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM Existing				AM Existing + Project				Existing + Project with Mitigation				PHF
	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	
EB Left	49	1	1.00	0.03	49	1	1.00	0.03	49	1	1.00	0.03	
Comb. L-T						0							
EB Thru	164	1	1.53	0.07	164	1	1.49	0.07	164	1	1.00	0.10	0.917
Comb. T-R		1				1				0			
EB Right	457	1	1.47	0.19	507	1	1.51	0.21	507	2	2.00	0.16	
Comb. L-T-R						0							
WB Left	216	1	1.00	0.14	216	1	1.00	0.14	216	1	1.00	0.14	
Comb. L-T						0							
WB Thru	470	2	2.00	0.15	470	2	2.00	0.15	470	2	2.00	0.15	0.717
Comb. T-R						0							
WB Right	70	1	1.00	0.04	70	1	1.00	0.04	70	1	1.00	0.04	
Comb. L-T-R						0							
NB Left	401	2	2.00	0.14	404	2	2.00	0.14	404	2	2.00	0.14	
Comb. L-T						0							
NB Thru	306	1	1.82	0.10	323	1	1.83	0.11	323	1	1.83	0.11	0.876
Comb. T-R		1				1				1			
NB Right	30		0.18	0.10	30	0	0.17	0.11	30		0.17	0.11	
Comb. L-T-R						0							
SB Left	72	1	1.00	0.05	72	1	1.00	0.05	72	1	1.00	0.05	
Comb. L-T						0							
SB Thru	701	1	1.69	0.26	728	1	1.70	0.27	728	1	1.70	0.27	0.814
Comb. T-R		1				1				1			
SB Right	130		0.31	0.26	130	0	0.30	0.27	130		0.30	0.27	
Comb. L-T-R						0							

Critical Volumes			E-W:	0.33			E-W:	0.34			E-W:	0.29	
			N-S:	0.40			N-S:	0.41			N-S:	0.41	
			Total:	0.73			Total:	0.75			Total:	0.70	
Lost Time				0.10				0.10				0.10	
V/C				0.828				0.853				0.802	
Level of Service				D				D				D	

E-W Street: Kellogg Dr
N-S Street: Campus Dr
Scenario: PM Peak
Overlap Reduce 25%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM Existing				PM Existing + Project				Existing + Project with Mitigation				PHF
	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	
EB Left	90	1	1.00	0.06	90	1	1.00	0.06	90	1	1.00	0.06	0.891
Comb. L-T		0				0							
EB Thru	227	1	1.68	0.08	227	1	1.64	0.09	227	1	1.00	0.14	
Comb. T-R		1				1				0			
EB Right	444	1	1.32	0.21	476	1	1.36	0.22	476	2	2.00	0.15	
Comb. L-T-R		0				0							
WB Left	35	1	1.00	0.02	35	1	1.00	0.02	35	1	1.00	0.02	0.925
Comb. L-T		0				0							
WB Thru	235	2	2.00	0.07	235	2	2.00	0.07	235	2	2.00	0.07	
Comb. T-R		0				0							
WB Right	143	1	1.00	0.09	143	1	1.00	0.09	143	1	1.00	0.09	
Comb. L-T-R		0				0							
NB Left	370	2	2.00	0.13	378	2	2.00	0.13	378	2	2.00	0.13	0.914
Comb. L-T		0				0							
NB Thru	715	1	1.93	0.23	753	1	1.93	0.24	753	1	1.93	0.24	
Comb. T-R		1				1				1			
NB Right	27	0	0.07	0.23	27	0	0.07	0.24	27		0.07	0.24	
Comb. L-T-R		0				0							
SB Left	25	1	1.00	0.02	25	1	1.00	0.02	25	1	1.00	0.02	0.887
Comb. L-T		0				0							
SB Thru	204	1	1.48	0.09	221	1	1.51	0.09	221	1	1.51	0.09	
Comb. T-R		1				1				1			
SB Right	71	0	0.52	0.09	71	0	0.49	0.09	71		0.49	0.09	
Comb. L-T-R		0				0							

Critical Volumes			E-W:	0.23			E-W:	0.24			E-W:	0.17	
			N-S:	0.25			N-S:	0.26			N-S:	0.26	
			Total:	0.48			Total:	0.50			Total:	0.43	
Lost Time				0.10				0.10				0.10	
V/C				0.579				0.601				0.530	
Level of Service				A				B				A	

E-W Street: Temple Ave
N-S Street: Valley Blvd
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM Existing				AM Existing + Project				Existing + Project with Mitigation				PHF
	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	
EB Left	109	1	1.00	0.07	112	1	1.00	0.07	112	1	1.00	0.07	
Comb. L-T						0							
EB Thru	326	2	2.19	0.09	339	2	2.21	0.10	339	2	2.21	0.10	0.924
Comb. T-R		1				1				1			
EB Right	121		0.81	0.09	121	0	0.79	0.10	121		0.79	0.10	
Comb. L-T-R						0							
WB Left	51	1	1.00	0.03	51	1	1.00	0.03	51	1	1.00	0.03	
Comb. L-T						0							
WB Thru	1313	2	2.78	0.30	1373	2	2.79	0.31	1373	2	2.79	0.31	0.863
Comb. T-R		1				1				1			
WB Right	104		0.22	0.30	104	0	0.21	0.31	104		0.21	0.31	
Comb. L-T-R						0							
NB Left	377	1	1.00	0.24	377	1	1.00	0.24	377	2	2.00	0.13	
Comb. L-T						0							
NB Thru	543	2	2.00	0.17	543	2	2.00	0.17	543	2	2.00	0.17	0.812
Comb. T-R						0							
NB Right	64	1	1.00	0.04	64	1	1.00	0.04	64	1	1.00	0.04	
Comb. L-T-R						0							
SB Left	77	1	1.00	0.05	77	1	1.00	0.05	77	1	1.00	0.05	
Comb. L-T						0							
SB Thru	631	1	1.79	0.22	631	1	1.77	0.22	631	1	1.77	0.22	0.924
Comb. T-R		1				1				1			
SB Right	424	1	1.21	0.22	438	1	1.23	0.22	438	1	1.23	0.22	
Comb. L-T-R						0							

Critical Volumes			E-W:	0.36			E-W:	0.38			E-W:	0.38	
			N-S:	0.46			N-S:	0.46			N-S:	0.35	
			Total:	0.82			Total:	0.84			Total:	0.73	
Lost Time				0.10				0.10				0.10	
V/C				0.919				0.936				0.832	
Level of Service				E				E				D	

E-W Street: Temple Ave
N-S Street: Valley Blvd
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM Existing				PM Existing + Project				Existing + Project with Mitigation				PHF
	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	
EB Left	170	1	1.00	0.11	178	1	1.00	0.11	178	1	1.00	0.11	
Comb. L-T		0				0							
EB Thru	999	2	2.52	0.25	1030	2	2.53	0.25	1030	2	2.53	0.25	0.904
Comb. T-R		1				1				1			
EB Right	190	0	0.48	0.25	190	0	0.47	0.25	190		0.47	0.25	
Comb. L-T-R		0				0							
WB Left	88	1	1.00	0.05	88	1	1.00	0.05	88	1	1.00	0.05	
Comb. L-T		0				0							
WB Thru	854	2	2.62	0.20	895	2	2.64	0.21	895	2	2.64	0.21	0.865
Comb. T-R		1				1				1			
WB Right	123	0	0.38	0.20	123	0	0.36	0.21	123		0.36	0.21	
Comb. L-T-R		0				0							
NB Left	324	1	1.00	0.20	324	1	1.00	0.20	324	2	2.00	0.11	
Comb. L-T		0				0							
NB Thru	691	2	2.00	0.22	691	2	2.00	0.22	691	2	2.00	0.22	0.874
Comb. T-R		0				0							
NB Right	65	1	1.00	0.04	65	1	1.00	0.04	65	1	1.00	0.04	
Comb. L-T-R		0				0							
SB Left	219	1	1.00	0.14	219	1	1.00	0.14	219	1	1.00	0.14	
Comb. L-T		0				0							
SB Thru	374	1	2.00	0.12	374	1	1.98	0.12	374	1	1.98	0.12	0.923
Comb. T-R		1				1				1			
SB Right	183	1	1.00	0.11	193	1	1.02	0.12	193	1	1.02	0.12	
Comb. L-T-R		0				0							

Critical Volumes	E-W:	0.31	E-W:	0.32	E-W:	0.32
	N-S:	0.35	N-S:	0.35	N-S:	0.35
	Total:	0.66	Total:	0.68	Total:	0.68
Lost Time		0.10		0.10		0.10
V/C		0.763		0.776		0.776
Level of Service		C		C		C

E-W Street: Temple Ave
N-S Street: Pomona Blvd
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM Existing				AM Existing + Project				Existing + Project with Mitigation				PHF
	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	
EB Left	110	1	1.00	0.07	110	1	1.00	0.07	110	1	1.00	0.07	
Comb. L-T						0				0			
EB Thru	406	2	2.91	0.09	421	2	2.91	0.09	421	2	2.91	0.09	0.784
Comb. T-R		1				1				1			
EB Right	13		0.09	0.09	13	0	0.09	0.09	13	0	0.09	0.09	
Comb. L-T-R						0				0			
WB Left	706	1	1.00	0.44	706	1	1.00	0.44	706	1	1.00	0.44	
Comb. L-T						0				0			
WB Thru	1299	2	2.71	0.30	1361	2	2.72	0.31	1361	2	2.72	0.31	0.837
Comb. T-R		1				1				1			
WB Right	139		0.29	0.30	139	0	0.28	0.31	139	0	0.28	0.31	
Comb. L-T-R						0				0			
NB Left	55	1	1.00	0.03	55	1	1.00	0.03	55	1	1.00	0.03	
Comb. L-T						0				0			
NB Thru	132	1	1.00	0.08	132	1	1.00	0.08	132	1	1.00	0.08	0.757
Comb. T-R						0				0			
NB Right	372	1	1.00	0.23	372	1	1.00	0.23	372	1	1.00	0.23	
Comb. L-T-R						0				0			
SB Left	64	1	0.36	0.11	64	1	0.36	0.11	64	2	2.00	0.02	
Comb. L-T		1				1				0			
SB Thru	286		1.64	0.11	286	0	1.64	0.11	286	0	0.66	0.27	0.782
Comb. T-R						0				1			
SB Right	146	1	1.00	0.09	146	1	1.00	0.09	146	0	0.34	0.27	
Comb. L-T-R						0				0			

Critical Volumes	E-W:	0.53	E-W:	0.53	E-W:	0.53
	N-S:	0.34	N-S:	0.34	N-S:	0.30
	Total:	0.87	Total:	0.87	Total:	0.84
Lost Time		0.10		0.10		0.10
V/C		0.971		0.974		0.936
Level of Service		E		E		E

E-W Street: Temple Ave
N-S Street: Pomona Blvd
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

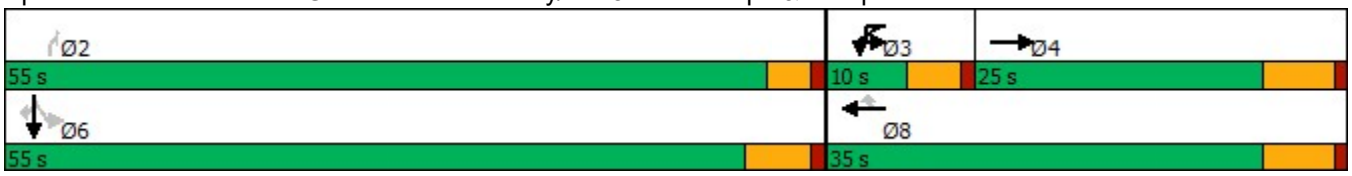
Movement	PM Existing				PM Existing + Project				Existing + Project with Mitigation				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	135	1	1.00	0.08	135	1	1.00	0.08	135	1	1.00	0.08	0.887
Comb. L-T		0				0				0			
EB Thru	1154	2	2.96	0.24	1186	2	2.96	0.25	1186	2	2.96	0.25	
Comb. T-R		1				1				1			
EB Right	15	0	0.04	0.24	15	0	0.04	0.25	15	0	0.04	0.25	
Comb. L-T-R		0				0				0			
WB Left	361	1	1.00	0.23	361	1	1.00	0.23	361	1	1.00	0.23	0.887
Comb. L-T		0				0				0			
WB Thru	793	2	2.78	0.18	834	2	2.79	0.19	834	2	2.79	0.19	
Comb. T-R		1				1				1			
WB Right	62	0	0.22	0.18	62	0	0.21	0.19	62	0	0.21	0.19	
Comb. L-T-R		0				0				0			
NB Left	70	1	1.00	0.04	70	1	1.00	0.04	70	1	1.00	0.04	0.960
Comb. L-T		0				0				0			
NB Thru	265	1	1.00	0.17	265	1	1.00	0.17	265	1	1.00	0.17	
Comb. T-R		0				0				0			
NB Right	601	1	1.00	0.38	601	1	1.00	0.38	601	1	1.00	0.38	
Comb. L-T-R		0				0				0			
SB Left	240	1	1.19	0.13	240	1	1.19	0.13	240	2	2.00	0.08	0.757
Comb. L-T		1				1				0			
SB Thru	164	0	0.81	0.13	164	0	0.81	0.13	164	0	0.49	0.21	
Comb. T-R		0				0				1			
SB Right	168	1	1.00	0.10	168	1	1.00	0.10	168	0	0.51	0.21	
Comb. L-T-R		0				0				0			

Critical Volumes			E-W:	0.47			E-W:	0.48			E-W:	0.48	
			N-S:	0.50			N-S:	0.50			N-S:	0.46	
			Total:	0.97			Total:	0.98			Total:	0.93	
Lost Time				0.10				0.10				0.10	
V/C				1.071				1.077				1.034	
Level of Service				F				F				F	

Lane Group	EBT	WBL	WBT	WBR	NBR	SBL	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	640	4	1112	21	4	666	9	940
Future Volume (vph)	640	4	1112	21	4	666	9	940
Turn Type	NA	Prot	NA	Perm	Perm	Perm	NA	Perm
Protected Phases	4	3	8				6	
Permitted Phases				8	2	6		6
Detector Phase	4	3	8	8	2	6	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	10.0	24.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	25.0	10.0	35.0	35.0	55.0	55.0	55.0	55.0
Total Split (%)	27.8%	11.1%	38.9%	38.9%	61.1%	61.1%	61.1%	61.1%
Yellow Time (s)	4.8	3.6	4.8	4.8	3.0	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	4.6	5.8	5.8	4.0	5.4	5.4	5.4
Lead/Lag	Lag	Lead						
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	20.3	5.7	25.6	25.6	41.5	40.0	40.0	40.0
Actuated g/C Ratio	0.26	0.07	0.33	0.33	0.54	0.52	0.52	0.52
v/c Ratio	0.53	0.31	0.72	0.02	0.00	0.71	0.75	0.68
Control Delay	28.9	46.2	26.6	7.0	0.0	19.6	22.1	16.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.9	46.2	26.6	7.0	0.0	19.6	22.1	16.5
LOS	C	D	C	A	A	B	C	B
Approach Delay	28.9		26.9				19.4	
Approach LOS	C		C				B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 77.3	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 23.7	Intersection LOS: C
Intersection Capacity Utilization 68.3%	ICU Level of Service C
Analysis Period (min) 15	

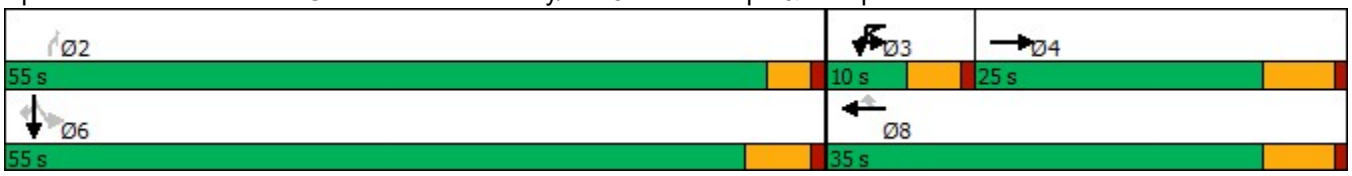
Splits and Phases: 14: Gas Station Driveway/SR-57 SB Ramps & Temple Ave



Lane Group	EBT	WBL	WBT	WBR	NBR	SBL	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	650	4	1125	21	4	666	9	979
Future Volume (vph)	650	4	1125	21	4	666	9	979
Turn Type	NA	Prot	NA	Perm	Perm	Perm	NA	Perm
Protected Phases	4	3	8				6	
Permitted Phases				8	2	6		6
Detector Phase	4	3	8	8	2	6	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	10.0	24.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	25.0	10.0	35.0	35.0	55.0	55.0	55.0	55.0
Total Split (%)	27.8%	11.1%	38.9%	38.9%	61.1%	61.1%	61.1%	61.1%
Yellow Time (s)	4.8	3.6	4.8	4.8	3.0	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	4.6	5.8	5.8	4.0	5.4	5.4	5.4
Lead/Lag	Lag	Lead						
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	20.5	5.6	25.7	25.7	42.1	40.6	40.6	40.6
Actuated g/C Ratio	0.26	0.07	0.33	0.33	0.54	0.52	0.52	0.52
v/c Ratio	0.54	0.31	0.73	0.02	0.00	0.71	0.77	0.71
Control Delay	29.3	46.7	27.2	7.0	0.0	19.7	22.7	17.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.3	46.7	27.2	7.0	0.0	19.7	22.7	17.4
LOS	C	D	C	A	A	B	C	B
Approach Delay	29.3		27.4				19.9	
Approach LOS	C		C				B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 78.1	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 24.2	Intersection LOS: C
Intersection Capacity Utilization 70.1%	ICU Level of Service C
Analysis Period (min) 15	

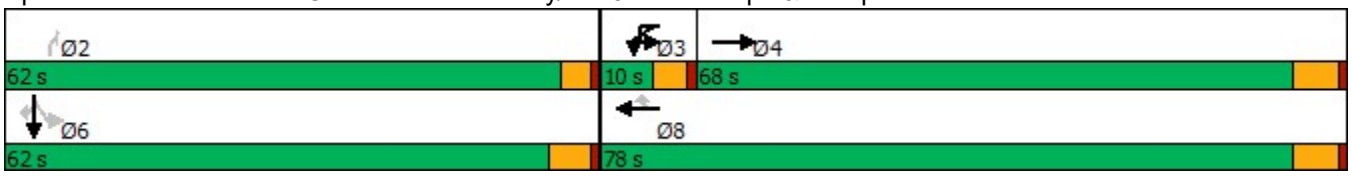
Splits and Phases: 14: Gas Station Driveway/SR-57 SB Ramps & Temple Ave



Lane Group	EBT	WBL	WBT	WBR	NBR	SBL	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	1863	7	501	40	7	1126	5	513
Future Volume (vph)	1863	7	501	40	7	1126	5	513
Turn Type	NA	Prot	NA	Perm	Perm	Perm	NA	Perm
Protected Phases	4	3	8				6	
Permitted Phases				8	2	6		6
Detector Phase	4	3	8	8	2	6	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	10.0	24.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	68.0	10.0	78.0	78.0	62.0	62.0	62.0	62.0
Total Split (%)	48.6%	7.1%	55.7%	55.7%	44.3%	44.3%	44.3%	44.3%
Yellow Time (s)	4.8	3.6	4.8	4.8	3.0	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	4.6	5.8	5.8	4.0	5.4	5.4	5.4
Lead/Lag	Lag	Lead						
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	60.7	5.4	68.5	68.5	58.0	56.6	56.6	56.6
Actuated g/C Ratio	0.45	0.04	0.50	0.50	0.43	0.42	0.42	0.42
v/c Ratio	0.91	0.67	0.21	0.03	0.01	0.93	0.95	0.64
Control Delay	42.3	107.2	19.0	4.7	0.0	60.0	64.7	18.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.3	107.2	19.0	4.7	0.0	60.0	64.7	18.2
LOS	D	F	B	A	A	E	E	B
Approach Delay	42.3		24.5				49.9	
Approach LOS	D		C				D	

Intersection Summary	
Cycle Length: 140	
Actuated Cycle Length: 136.3	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 42.8	Intersection LOS: D
Intersection Capacity Utilization 92.6%	ICU Level of Service F
Analysis Period (min) 15	

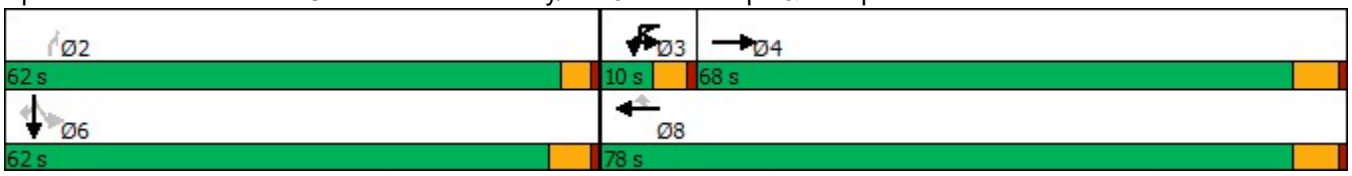
Splits and Phases: 14: Gas Station Driveway/SR-57 SB Ramps & Temple Ave



Lane Group	EBT	WBL	WBT	WBR	NBR	SBL	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	1887	7	510	40	7	1126	5	540
Future Volume (vph)	1887	7	510	40	7	1126	5	540
Turn Type	NA	Prot	NA	Perm	Perm	Perm	NA	Perm
Protected Phases	4	3	8				6	
Permitted Phases				8	2	6		6
Detector Phase	4	3	8	8	2	6	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	10.0	24.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	68.0	10.0	78.0	78.0	62.0	62.0	62.0	62.0
Total Split (%)	48.6%	7.1%	55.7%	55.7%	44.3%	44.3%	44.3%	44.3%
Yellow Time (s)	4.8	3.6	4.8	4.8	3.0	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	4.6	5.8	5.8	4.0	5.4	5.4	5.4
Lead/Lag	Lag	Lead						
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	61.1	5.4	68.9	68.9	58.1	56.7	56.7	56.7
Actuated g/C Ratio	0.45	0.04	0.50	0.50	0.42	0.41	0.41	0.41
v/c Ratio	0.92	0.67	0.22	0.03	0.01	0.93	0.96	0.68
Control Delay	43.2	107.9	19.0	4.7	0.0	60.5	66.5	20.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.2	107.9	19.0	4.7	0.0	60.5	66.5	20.5
LOS	D	F	B	A	A	E	E	C
Approach Delay	43.2		24.5				51.0	
Approach LOS	D		C				D	

Intersection Summary	
Cycle Length: 140	
Actuated Cycle Length: 136.9	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay: 43.6	Intersection LOS: D
Intersection Capacity Utilization 92.9%	ICU Level of Service F
Analysis Period (min) 15	

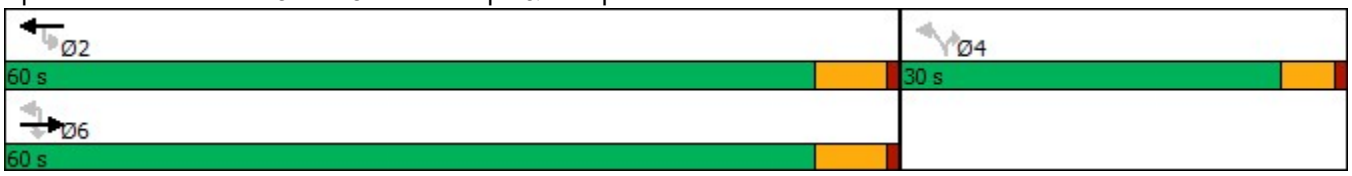
Splits and Phases: 14: Gas Station Driveway/SR-57 SB Ramps & Temple Ave



Lane Group	EBT	EBR	WBU	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	968	267	1	1554	350	247
Future Volume (vph)	968	267	1	1554	350	247
Turn Type	NA	Perm	Perm	NA	Perm	Perm
Protected Phases	6			2		
Permitted Phases		6	2		4	4
Detector Phase	6	6	2	2	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	26.0	26.0	26.0	26.0	26.0	26.0
Total Split (s)	60.0	60.0	60.0	60.0	30.0	30.0
Total Split (%)	66.7%	66.7%	66.7%	66.7%	33.3%	33.3%
Yellow Time (s)	4.8	4.8	4.8	4.8	3.6	3.6
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
Total Lost Time (s)	5.8	5.8		5.8	4.6	4.6
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	32.1	32.1		32.1	13.3	13.3
Actuated g/C Ratio	0.57	0.57		0.57	0.24	0.24
v/c Ratio	0.36	0.17		0.62	0.54	0.48
Control Delay	7.0	1.2		9.3	21.9	15.1
Queue Delay	0.0	0.0		0.0	0.0	0.0
Total Delay	7.0	1.2		9.3	21.9	15.1
LOS	A	A		A	C	B
Approach Delay	5.7			9.3	19.8	
Approach LOS	A			A	B	

Intersection Summary			
Cycle Length: 90			
Actuated Cycle Length: 56.4			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 9.8		Intersection LOS: A	
Intersection Capacity Utilization 50.8%		ICU Level of Service A	
Analysis Period (min) 15			

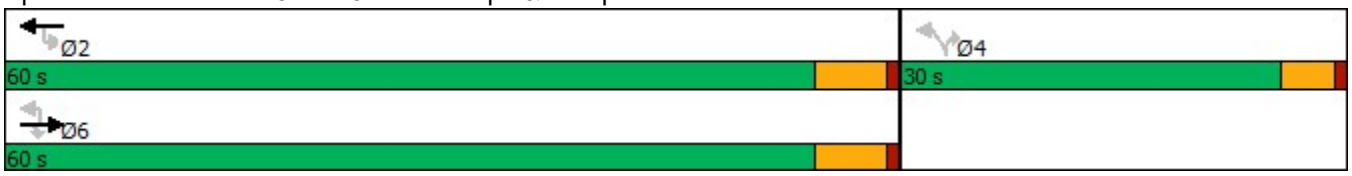
Splits and Phases: 15: SR-57 NB Ramps & Temple Ave



Lane Group	EBT	EBR	WBU	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	969	276	1	1558	359	247
Future Volume (vph)	969	276	1	1558	359	247
Turn Type	NA	Perm	Perm	NA	Perm	Perm
Protected Phases	6			2		
Permitted Phases		6	2		4	4
Detector Phase	6	6	2	2	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	26.0	26.0	26.0	26.0	26.0	26.0
Total Split (s)	60.0	60.0	60.0	60.0	30.0	30.0
Total Split (%)	66.7%	66.7%	66.7%	66.7%	33.3%	33.3%
Yellow Time (s)	4.8	4.8	4.8	4.8	3.6	3.6
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
Total Lost Time (s)	5.8	5.8		5.8	4.6	4.6
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	32.3	32.3		32.3	13.5	13.5
Actuated g/C Ratio	0.57	0.57		0.57	0.24	0.24
v/c Ratio	0.36	0.18		0.62	0.55	0.48
Control Delay	7.1	1.2		9.4	22.2	15.4
Queue Delay	0.0	0.0		0.0	0.0	0.0
Total Delay	7.1	1.2		9.4	22.2	15.4
LOS	A	A		A	C	B
Approach Delay	5.8			9.4	20.0	
Approach LOS	A			A	C	

Intersection Summary			
Cycle Length: 90			
Actuated Cycle Length: 56.8			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 10.0		Intersection LOS: A	
Intersection Capacity Utilization 51.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 15: SR-57 NB Ramps & Temple Ave



Lane Group	EBT	EBR	WBU	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2030	651	1	806	100	278
Future Volume (vph)	2030	651	1	806	100	278
Turn Type	NA	Perm	Perm	NA	Perm	Perm
Protected Phases	6			2		
Permitted Phases		6	2		4	4
Detector Phase	6	6	2	2	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	26.0	26.0	26.0	26.0	26.0	26.0
Total Split (s)	44.0	44.0	44.0	44.0	26.0	26.0
Total Split (%)	62.9%	62.9%	62.9%	62.9%	37.1%	37.1%
Yellow Time (s)	4.8	4.8	4.8	4.8	3.6	3.6
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
Total Lost Time (s)	5.8	5.8		5.8	4.6	4.6
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	38.3	38.3		38.3	11.4	11.4
Actuated g/C Ratio	0.64	0.64		0.64	0.19	0.19
v/c Ratio	0.68	0.35		0.29	0.42	0.55
Control Delay	9.0	1.1		5.6	22.9	29.0
Queue Delay	0.0	0.0		0.0	0.0	0.0
Total Delay	9.0	1.1		5.6	22.9	29.0
LOS	A	A		A	C	C
Approach Delay	7.0			5.6	25.2	
Approach LOS	A			A	C	

Intersection Summary			
Cycle Length: 70			
Actuated Cycle Length: 60.2			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 8.5		Intersection LOS: A	
Intersection Capacity Utilization 58.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 15: SR-57 NB Ramps & Temple Ave



Lane Group	EBT	EBR	WBU	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2032	672	1	809	106	278
Future Volume (vph)	2032	672	1	809	106	278
Turn Type	NA	Perm	Perm	NA	Perm	Perm
Protected Phases	6			2		
Permitted Phases		6	2		4	4
Detector Phase	6	6	2	2	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	26.0	26.0	26.0	26.0	26.0	26.0
Total Split (s)	44.0	44.0	44.0	44.0	26.0	26.0
Total Split (%)	62.9%	62.9%	62.9%	62.9%	37.1%	37.1%
Yellow Time (s)	4.8	4.8	4.8	4.8	3.6	3.6
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
Total Lost Time (s)	5.8	5.8		5.8	4.6	4.6
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	38.3	38.3		38.3	11.5	11.5
Actuated g/C Ratio	0.64	0.64		0.64	0.19	0.19
v/c Ratio	0.68	0.36		0.29	0.43	0.55
Control Delay	9.0	1.1		5.6	23.0	28.9
Queue Delay	0.0	0.0		0.0	0.0	0.0
Total Delay	9.0	1.1		5.6	23.0	28.9
LOS	A	A		A	C	C
Approach Delay	7.0			5.6	25.2	
Approach LOS	A			A	C	

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 60.2	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 8.5	Intersection LOS: A
Intersection Capacity Utilization 58.2%	ICU Level of Service B
Analysis Period (min) 15	

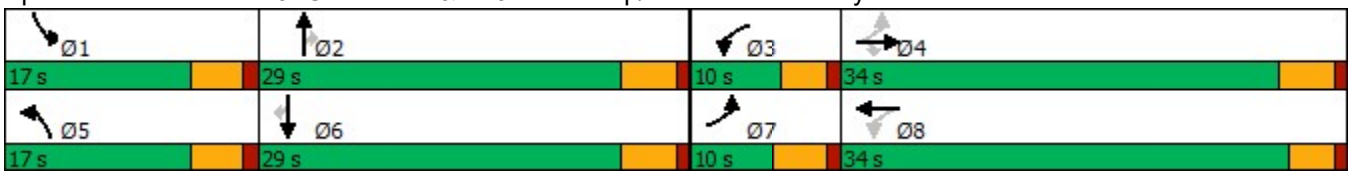
Splits and Phases: 15: SR-57 NB Ramps & Temple Ave



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBT	SBR	Ø1
Lane Configurations											
Traffic Volume (vph)	325	14	112	23	10	116	815	26	884	183	
Future Volume (vph)	325	14	112	23	10	116	815	26	884	183	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Prot	NA	Perm	NA	Perm	
Protected Phases	7	4		3	8	5	2		6		1
Permitted Phases	4		4	8				2		6	
Detector Phase	7	4	4	3	8	5	2	2	6	6	
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.7	22.7	22.7	9.5	22.5	9.7	22.7	22.7	22.7	22.7	9.7
Total Split (s)	10.0	34.0	34.0	10.0	34.0	17.0	29.0	29.0	29.0	29.0	17.0
Total Split (%)	11.1%	37.8%	37.8%	11.1%	37.8%	18.9%	32.2%	32.2%	32.2%	32.2%	19%
Yellow Time (s)	3.6	3.7	3.7	3.0	3.0	3.6	3.7	3.7	3.7	3.7	3.6
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	
Total Lost Time (s)		4.7	4.7		4.0	4.6	4.7	4.7	4.7	4.7	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)		24.0	24.0		24.7	10.1	36.8	36.8	25.2	25.2	
Actuated g/C Ratio		0.34	0.34		0.35	0.14	0.52	0.52	0.36	0.36	
v/c Ratio		0.83	0.20		0.10	0.50	0.48	0.03	0.76	0.29	
Control Delay		40.3	4.0		13.4	37.8	12.3	0.1	28.1	4.8	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay		40.3	4.0		13.4	37.8	12.3	0.1	28.1	4.8	
LOS		D	A		B	D	B	A	C	A	
Approach Delay		31.3			13.4		15.1		24.1		
Approach LOS		C			B		B		C		

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 70.5	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 21.8	Intersection LOS: C
Intersection Capacity Utilization 65.3%	ICU Level of Service C
Analysis Period (min) 15	

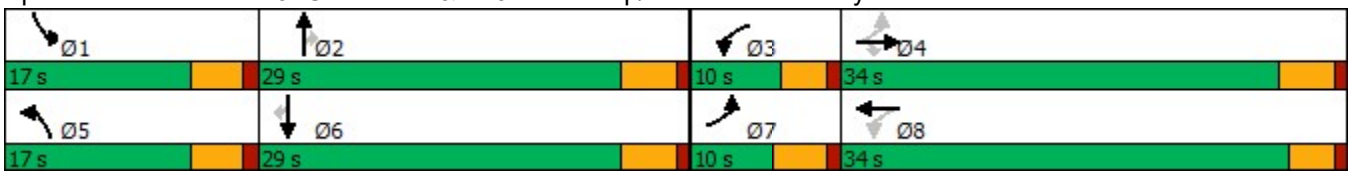
Splits and Phases: 16: Grand Ave & I-10 WB Ramp/7-Eleven Driveway



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBT	SBR	Ø1
Lane Configurations											
Traffic Volume (vph)	325	14	112	23	10	136	819	26	901	183	
Future Volume (vph)	325	14	112	23	10	136	819	26	901	183	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Prot	NA	Perm	NA	Perm	
Protected Phases	7	4		3	8	5	2		6		1
Permitted Phases	4		4	8				2		6	
Detector Phase	7	4	4	3	8	5	2	2	6	6	
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.7	22.7	22.7	9.5	22.5	9.7	22.7	22.7	22.7	22.7	9.7
Total Split (s)	10.0	34.0	34.0	10.0	34.0	17.0	29.0	29.0	29.0	29.0	17.0
Total Split (%)	11.1%	37.8%	37.8%	11.1%	37.8%	18.9%	32.2%	32.2%	32.2%	32.2%	19%
Yellow Time (s)	3.6	3.7	3.7	3.0	3.0	3.6	3.7	3.7	3.7	3.7	3.6
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	
Total Lost Time (s)		4.7	4.7		4.0	4.6	4.7	4.7	4.7	4.7	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)		24.0	24.0		24.7	10.6	39.9	39.9	24.6	24.6	
Actuated g/C Ratio		0.33	0.33		0.34	0.14	0.54	0.54	0.34	0.34	
v/c Ratio		0.86	0.20		0.10	0.58	0.46	0.03	0.83	0.30	
Control Delay		44.7	4.0		13.5	40.3	12.0	0.1	31.7	4.8	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay		44.7	4.0		13.5	40.3	12.0	0.1	31.7	4.8	
LOS		D	A		B	D	B	A	C	A	
Approach Delay		34.6			13.5		15.6		27.2		
Approach LOS		C			B		B		C		

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 73.4	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 23.8	Intersection LOS: C
Intersection Capacity Utilization 66.9%	ICU Level of Service C
Analysis Period (min) 15	

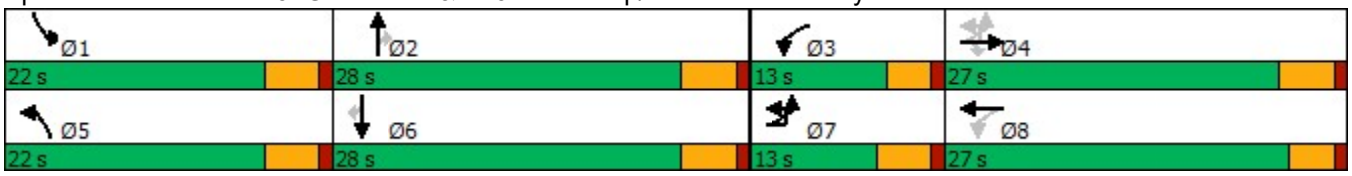
Splits and Phases: 16: Grand Ave & I-10 WB Ramp/7-Eleven Driveway



Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	218	13	63	37	19	270	843	45	5	820	340
Future Volume (vph)	1	218	13	63	37	19	270	843	45	5	820	340
Turn Type	pm+pt	pm+pt	NA	Perm	pm+pt	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	7	4		3	8	5	2		1	6	
Permitted Phases	4	4		4	8				2			6
Detector Phase	7	7	4	4	3	8	5	2	2	1	6	6
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	5.0
Minimum Split (s)	9.6	9.6	22.7	22.7	9.5	22.5	9.6	22.7	22.7	9.6	22.7	22.7
Total Split (s)	13.0	13.0	27.0	27.0	13.0	27.0	22.0	28.0	28.0	22.0	28.0	28.0
Total Split (%)	14.4%	14.4%	30.0%	30.0%	14.4%	30.0%	24.4%	31.1%	31.1%	24.4%	31.1%	31.1%
Yellow Time (s)	3.6	3.6	3.7	3.7	3.0	3.0	3.6	3.7	3.7	3.6	3.7	3.7
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	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)			4.7	4.7		4.0	4.6	4.7	4.7	4.6	4.7	4.7
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)			18.1	18.1		18.8	16.1	42.1	42.1	5.8	23.4	23.4
Actuated g/C Ratio			0.25	0.25		0.26	0.22	0.59	0.59	0.08	0.33	0.33
v/c Ratio			0.74	0.14		0.21	0.74	0.44	0.05	0.03	0.77	0.48
Control Delay			39.1	1.0		17.5	39.5	10.6	0.1	33.2	28.7	5.0
Queue Delay			0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay			39.1	1.0		17.5	39.5	10.6	0.1	33.2	28.7	5.0
LOS			D	A		B	D	B	A	C	C	A
Approach Delay			31.0			17.5		16.9			21.8	
Approach LOS			C			B		B			C	

Intersection Summary			
Cycle Length: 90			
Actuated Cycle Length: 71.7			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 20.6		Intersection LOS: C	
Intersection Capacity Utilization 66.2%		ICU Level of Service C	
Analysis Period (min) 15			

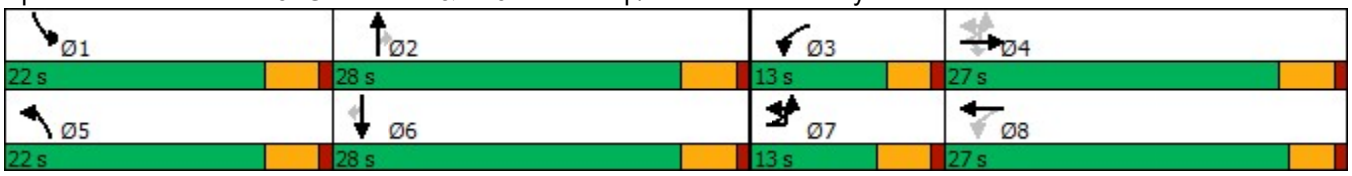
Splits and Phases: 16: Grand Ave & I-10 WB Ramp/7-Eleven Driveway



Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	218	13	63	37	19	317	852	45	5	832	340
Future Volume (vph)	1	218	13	63	37	19	317	852	45	5	832	340
Turn Type	pm+pt	pm+pt	NA	Perm	pm+pt	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	7	4		3	8	5	2		1	6	
Permitted Phases	4	4		4	8				2			6
Detector Phase	7	7	4	4	3	8	5	2	2	1	6	6
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	5.0
Minimum Split (s)	9.6	9.6	22.7	22.7	9.5	22.5	9.6	22.7	22.7	9.6	22.7	22.7
Total Split (s)	13.0	13.0	27.0	27.0	13.0	27.0	22.0	28.0	28.0	22.0	28.0	28.0
Total Split (%)	14.4%	14.4%	30.0%	30.0%	14.4%	30.0%	24.4%	31.1%	31.1%	24.4%	31.1%	31.1%
Yellow Time (s)	3.6	3.6	3.7	3.7	3.0	3.0	3.6	3.7	3.7	3.6	3.7	3.7
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	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)			4.7	4.7		4.0	4.6	4.7	4.7	4.6	4.7	4.7
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)			18.2	18.2		18.9	17.5	43.4	43.4	5.8	23.4	23.4
Actuated g/C Ratio			0.25	0.25		0.26	0.24	0.59	0.59	0.08	0.32	0.32
v/c Ratio			0.75	0.14		0.22	0.82	0.44	0.05	0.04	0.80	0.49
Control Delay			40.4	1.0		17.6	45.4	10.5	0.1	33.2	30.2	5.0
Queue Delay			0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay			40.4	1.0		17.6	45.4	10.5	0.1	33.2	30.2	5.0
LOS			D	A		B	D	B	A	C	C	A
Approach Delay			32.0			17.6		19.3			22.9	
Approach LOS			C			B		B			C	

Intersection Summary			
Cycle Length: 90			
Actuated Cycle Length: 73.1			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 22.1		Intersection LOS: C	
Intersection Capacity Utilization 69.1%		ICU Level of Service C	
Analysis Period (min) 15			

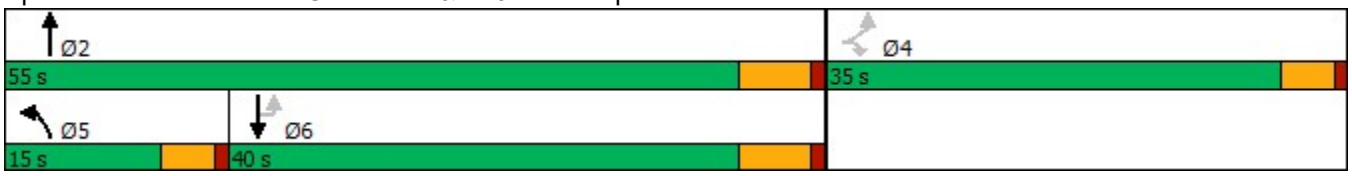
Splits and Phases: 16: Grand Ave & I-10 WB Ramp/7-Eleven Driveway



Lane Group	EBL	EBR	NBL	NBT	SBU	SBT
Lane Configurations						
Traffic Volume (vph)	278	594	40	682	2	796
Future Volume (vph)	278	594	40	682	2	796
Turn Type	Perm	Perm	Prot	NA	Perm	NA
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)	23.0	23.0	11.0	24.0	24.0	24.0
Total Split (s)	35.0	35.0	15.0	55.0	40.0	40.0
Total Split (%)	38.9%	38.9%	16.7%	61.1%	44.4%	44.4%
Yellow Time (s)	3.6	3.6	3.6	4.8	4.8	4.8
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
Total Lost Time (s)	4.6	4.6	4.6	5.8		5.8
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	25.5	25.5	7.8	36.4		29.8
Actuated g/C Ratio	0.35	0.35	0.11	0.50		0.41
v/c Ratio	0.49	0.87	0.23	0.42		0.82
Control Delay	24.3	27.9	39.1	12.4		26.9
Queue Delay	0.0	0.0	0.0	0.0		0.0
Total Delay	24.3	27.9	39.1	12.4		26.9
LOS	C	C	D	B		C
Approach Delay	26.8			13.9		26.9
Approach LOS	C			B		C

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 73.3	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 23.2	Intersection LOS: C
Intersection Capacity Utilization 73.4%	ICU Level of Service D
Analysis Period (min) 15	

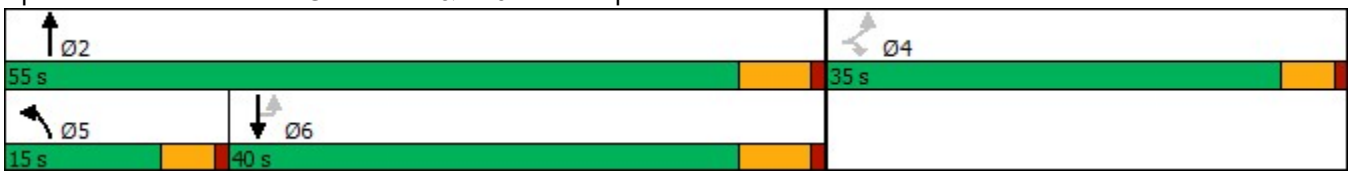
Splits and Phases: 17: Grand Ave & I-10 EB Ramps



Lane Group	EBL	EBR	NBL	NBT	SBU	SBT
Lane Configurations						
Traffic Volume (vph)	278	681	40	706	2	813
Future Volume (vph)	278	681	40	706	2	813
Turn Type	Perm	Perm	Prot	NA	Perm	NA
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)	23.0	23.0	11.0	24.0	24.0	24.0
Total Split (s)	35.0	35.0	15.0	55.0	40.0	40.0
Total Split (%)	38.9%	38.9%	16.7%	61.1%	44.4%	44.4%
Yellow Time (s)	3.6	3.6	3.6	4.8	4.8	4.8
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
Total Lost Time (s)	4.6	4.6	4.6	5.8		5.8
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	31.0	31.0	7.6	38.1		30.9
Actuated g/C Ratio	0.39	0.39	0.10	0.48		0.39
v/c Ratio	0.44	0.93	0.26	0.45		0.87
Control Delay	23.1	37.2	40.3	14.1		31.5
Queue Delay	0.0	0.0	0.0	0.0		0.0
Total Delay	23.1	37.2	40.3	14.1		31.5
LOS	C	D	D	B		C
Approach Delay	33.1			15.5		31.5
Approach LOS	C			B		C

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 79.7	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 27.7	Intersection LOS: C
Intersection Capacity Utilization 79.3%	ICU Level of Service D
Analysis Period (min) 15	

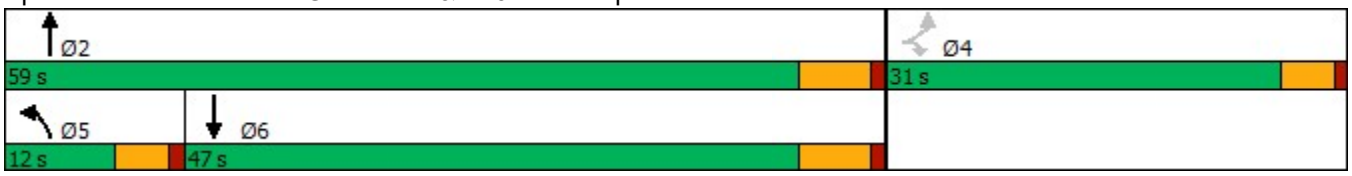
Splits and Phases: 17: Grand Ave & I-10 EB Ramps



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	262	191	48	889	574
Future Volume (vph)	262	191	48	889	574
Turn Type	Perm	Perm	Prot	NA	NA
Protected Phases			5	2	6
Permitted Phases	4	4			
Detector Phase	4	4	5	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	11.0	24.0	24.0
Total Split (s)	31.0	31.0	12.0	59.0	47.0
Total Split (%)	34.4%	34.4%	13.3%	65.6%	52.2%
Yellow Time (s)	3.6	3.6	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	5.8	5.8
Lead/Lag			Lead		Lag
Lead-Lag Optimize?					
Recall Mode	None	None	None	None	None
Act Effct Green (s)	15.6	15.6	7.4	29.3	23.5
Actuated g/C Ratio	0.27	0.27	0.13	0.51	0.41
v/c Ratio	0.59	0.36	0.23	0.53	0.67
Control Delay	26.3	5.6	33.1	9.9	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	26.3	5.6	33.1	9.9	14.6
LOS	C	A	C	A	B
Approach Delay	17.5			11.1	14.6
Approach LOS	B			B	B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 56.9	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 13.8	Intersection LOS: B
Intersection Capacity Utilization 55.7%	ICU Level of Service B
Analysis Period (min) 15	

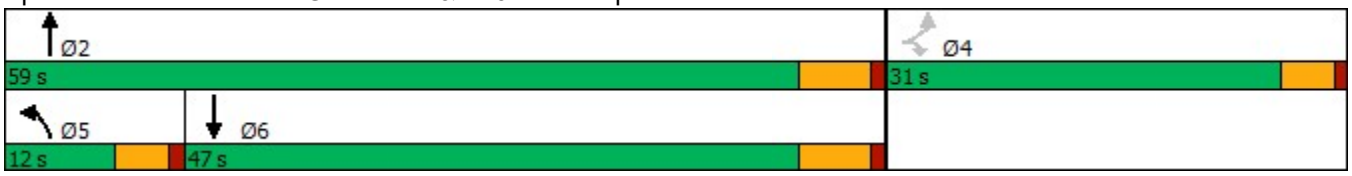
Splits and Phases: 17: Grand Ave & I-10 EB Ramps



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	262	251	48	946	586
Future Volume (vph)	262	251	48	946	586
Turn Type	Perm	Perm	Prot	NA	NA
Protected Phases			5	2	6
Permitted Phases	4	4			
Detector Phase	4	4	5	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	11.0	24.0	24.0
Total Split (s)	31.0	31.0	12.0	59.0	47.0
Total Split (%)	34.4%	34.4%	13.3%	65.6%	52.2%
Yellow Time (s)	3.6	3.6	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	5.8	5.8
Lead/Lag			Lead		Lag
Lead-Lag Optimize?					
Recall Mode	None	None	None	None	None
Act Effct Green (s)	15.7	15.7	7.4	30.6	24.8
Actuated g/C Ratio	0.27	0.27	0.13	0.53	0.43
v/c Ratio	0.60	0.44	0.23	0.55	0.66
Control Delay	27.0	5.7	33.8	10.1	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	27.0	5.7	33.8	10.1	14.6
LOS	C	A	C	B	B
Approach Delay	16.5			11.3	14.6
Approach LOS	B			B	B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 58.1	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 13.7	Intersection LOS: B
Intersection Capacity Utilization 56.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 17: Grand Ave & I-10 EB Ramps



E-W Street: Holt Ave
N-S Street: Grand Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM Existing				AM Existing + Project				Existing + Project with Mitigation				PHF
	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	
EB Left	47		0.22	0.13	47	0	0.22	0.13	47	0	0.22	0.13	
Comb. L-T						0				0			
EB Thru	19		0.09	0.13	19	0	0.09	0.13	19	0	0.09	0.13	0.722
Comb. T-R						0				0			
EB Right	145		0.69	0.13	145	0	0.69	0.13	145	0	0.69	0.13	
Comb. L-T-R		1				1				1			
WB Left	535	1	1.00	0.33	540	1	1.00	0.34	540	1	1.00	0.34	
Comb. L-T						0				0			
WB Thru	121	1	1.00	0.08	121	1	1.00	0.08	121	1	1.00	0.08	0.751
Comb. T-R						0				0			
WB Right	56	1	1.00	0.03	56	1	1.00	0.03	56	1	1.00	0.03	
Comb. L-T-R						0				0			
NB Left	27	1	1.00	0.02	27	1	1.00	0.02	27	1	1.00	0.02	
Comb. L-T						0				0			
NB Thru	748	2	2.00	0.23	776	2	2.00	0.24	776	2	2.00	0.24	0.863
Comb. T-R						0				0			
NB Right	197	1	1.00	0.12	198	1	1.00	0.12	198	1	1.00	0.12	
Comb. L-T-R						0				0			
SB Left	25	1	1.00	0.02	25	1	1.00	0.02	25	1	1.00	0.02	
Comb. L-T						0				0			
SB Thru	1392	2	2.00	0.43	1503	2	2.00	0.47	1503	2	2.90	0.32	0.934
Comb. T-R						0				1			
SB Right	51	1	1.00	0.03	51	1	1.00	0.03	51	0	0.10	0.32	
Comb. L-T-R						0				0			

Critical Volumes			E-W:	0.47			E-W:	0.47			E-W:	0.47	
			N-S:	0.45			N-S:	0.49			N-S:	0.34	
			Total:	0.92			Total:	0.96			Total:	0.81	
Lost Time				0.10				0.10				0.10	
V/C				1.019				1.057				0.911	
Level of Service				F				F				E	

E-W Street: Holt Ave
N-S Street: Grand Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM Existing				PM Existing + Project				Existing + Project with Mitigation				PHF
	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	
EB Left	22	0	0.24	0.06	22	0	0.24	0.06	22	0	0.24	0.06	
Comb. L-T		0				0				0			
EB Thru	34	0	0.37	0.06	34	0	0.37	0.06	34	0	0.37	0.06	0.913
Comb. T-R		0				0				0			
EB Right	36	0	0.39	0.06	36	0	0.39	0.06	36	0	0.39	0.06	
Comb. L-T-R		1				1				1			
WB Left	235	1	1.00	0.15	238	1	1.00	0.15	238	1	1.00	0.15	
Comb. L-T		0				0				0			
WB Thru	49	1	1.00	0.03	49	1	1.00	0.03	49	1	1.00	0.03	0.945
Comb. T-R		0				0				0			
WB Right	44	1	1.00	0.03	44	1	1.00	0.03	44	1	1.00	0.03	
Comb. L-T-R		0				0				0			
NB Left	52	1	1.00	0.03	52	1	1.00	0.03	52	1	1.00	0.03	
Comb. L-T		0				0				0			
NB Thru	927	2	2.00	0.29	989	2	2.00	0.31	989	2	2.00	0.31	0.927
Comb. T-R		0				0				0			
NB Right	193	1	1.00	0.12	195	1	1.00	0.12	195	1	1.00	0.12	
Comb. L-T-R		0				0				0			
SB Left	36	1	1.00	0.02	36	1	1.00	0.02	36	1	1.00	0.02	
Comb. L-T		0				0				0			
SB Thru	735	2	2.00	0.23	812	2	2.00	0.25	812	2	2.86	0.18	0.940
Comb. T-R		0				0				1			
SB Right	40	1	1.00	0.03	40	1	1.00	0.03	40	0	0.14	0.18	
Comb. L-T-R		0				0				0			

Critical Volumes	E-W:	0.20	E-W:	0.21	E-W:	0.21
	N-S:	0.31	N-S:	0.33	N-S:	0.33
	Total:	0.52	Total:	0.54	Total:	0.54
Lost Time		0.10		0.10		0.10
V/C		0.617		0.638		0.638
Level of Service		B		B		B

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	14	25	27	821	1620	121
Future Vol, veh/h	14	25	27	821	1620	121
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Free
Storage Length	52	0	50	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	27	29	892	1761	132

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2265	-	1761	0	-	0
Stage 1	1761	-	-	-	-	-
Stage 2	504	-	-	-	-	-
Critical Hdwy	6.84	-	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	-	2.22	-	-	-
Pot Cap-1 Maneuver	34	0	351	-	-	0
Stage 1	123	0	-	-	-	0
Stage 2	572	0	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	31	-	351	-	-	-
Mov Cap-2 Maneuver	31	-	-	-	-	-
Stage 1	113	-	-	-	-	-
Stage 2	572	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	203.5	0.5	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	351	-	31	-	-
HCM Lane V/C Ratio	0.084	-	0.491	-	-
HCM Control Delay (s)	16.2	-	203.5	0	-
HCM Lane LOS	C	-	F	A	-
HCM 95th %tile Q(veh)	0.3	-	1.6	-	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	14	25	27	847	1729	121
Future Vol, veh/h	14	25	27	847	1729	121
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Free
Storage Length	52	0	50	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	27	29	921	1879	132

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2398	-	1879	0	-	0
Stage 1	1879	-	-	-	-	-
Stage 2	519	-	-	-	-	-
Critical Hdwy	6.84	-	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	-	2.22	-	-	-
Pot Cap-1 Maneuver	28	0	316	-	-	0
Stage 1	106	0	-	-	-	0
Stage 2	562	0	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	25	-	316	-	-	-
Mov Cap-2 Maneuver	25	-	-	-	-	-
Stage 1	96	-	-	-	-	-
Stage 2	562	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	278.2	0.5	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	316	-	25	-	-
HCM Lane V/C Ratio	0.093	-	0.609	-	-
HCM Control Delay (s)	17.6	-	278.2	0	-
HCM Lane LOS	C	-	F	A	-
HCM 95th %tile Q(veh)	0.3	-	1.9	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	11	30	1128	889	31
Future Vol, veh/h	5	11	30	1128	889	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Free
Storage Length	52	0	50	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	12	33	1226	966	34

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1645	-	966	0	-	0
Stage 1	966	-	-	-	-	-
Stage 2	679	-	-	-	-	-
Critical Hdwy	6.84	-	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	-	2.22	-	-	-
Pot Cap-1 Maneuver	90	0	709	-	-	0
Stage 1	330	0	-	-	-	0
Stage 2	465	0	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	86	-	709	-	-	-
Mov Cap-2 Maneuver	86	-	-	-	-	-
Stage 1	314	-	-	-	-	-
Stage 2	465	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	49.7	0.3	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	709	-	86	-	-
HCM Lane V/C Ratio	0.046	-	0.063	-	-
HCM Control Delay (s)	10.3	-	49.7	0	-
HCM Lane LOS	B	-	E	A	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	11	30	1187	974	31
Future Vol, veh/h	5	11	30	1187	974	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Free
Storage Length	52	0	50	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	12	33	1290	1059	34

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1770	-	1059	0	-	0
Stage 1	1059	-	-	-	-	-
Stage 2	711	-	-	-	-	-
Critical Hdwy	6.84	-	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	-	2.22	-	-	-
Pot Cap-1 Maneuver	74	0	653	-	-	0
Stage 1	295	0	-	-	-	0
Stage 2	448	0	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	70	-	653	-	-	-
Mov Cap-2 Maneuver	70	-	-	-	-	-
Stage 1	280	-	-	-	-	-
Stage 2	448	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	60.7	0.3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	653	-	70	-	-
HCM Lane V/C Ratio	0.05	-	0.078	-	-
HCM Control Delay (s)	10.8	-	60.7	0	-
HCM Lane LOS	B	-	F	A	-
HCM 95th %tile Q(veh)	0.2	-	0.2	-	-

Intersection	
Intersection Delay, s/veh	48.2
Intersection LOS	E

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	260	548	453	109	180	305
Future Vol, veh/h	260	548	453	109	180	305
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	283	596	492	118	196	332
Number of Lanes	0	2	2	0	2	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	3	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	3	2
HCM Control Delay	80.7	29.9	15.1
HCM LOS	F	D	C

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	59%	0%	0%	0%	100%	100%	0%
Vol Thru, %	41%	100%	100%	58%	0%	0%	0%
Vol Right, %	0%	0%	0%	42%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	443	365	302	260	90	90	305
LT Vol	260	0	0	0	90	90	0
Through Vol	183	365	302	151	0	0	0
RT Vol	0	0	0	109	0	0	305
Lane Flow Rate	481	397	328	283	98	98	332
Geometry Grp	8	8	8	8	7	7	7
Degree of Util (X)	1.117	0.889	0.765	0.636	0.238	0.238	0.535
Departure Headway (Hd)	8.361	8.06	8.657	8.356	9.015	9.015	5.996
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	438	449	420	435	401	401	607
Service Time	6.105	5.803	6.357	6.056	6.715	6.715	3.696
HCM Lane V/C Ratio	1.098	0.884	0.781	0.651	0.244	0.244	0.547
HCM Control Delay	107.6	48	34.5	24.5	14.5	14.5	15.4
HCM Lane LOS	F	E	D	C	B	B	C
HCM 95th-tile Q	16.9	9.5	6.4	4.3	0.9	0.9	3.2

Intersection	
Intersection Delay, s/veh	51.4
Intersection LOS	F

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	260	565	457	110	184	305
Future Vol, veh/h	260	565	457	110	184	305
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	283	614	497	120	200	332
Number of Lanes	0	2	2	0	2	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	3	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	3	2
HCM Control Delay	86.8	30.9	15.3
HCM LOS	F	D	C

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	58%	0%	0%	0%	100%	100%	0%
Vol Thru, %	42%	100%	100%	58%	0%	0%	0%
Vol Right, %	0%	0%	0%	42%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	448	377	305	262	92	92	305
LT Vol	260	0	0	0	92	92	0
Through Vol	188	377	305	152	0	0	0
RT Vol	0	0	0	110	0	0	305
Lane Flow Rate	487	409	331	285	100	100	332
Geometry Grp	8	8	8	8	7	7	7
Degree of Util (X)	1.137	0.921	0.776	0.645	0.244	0.244	0.539
Departure Headway (Hd)	8.399	8.102	8.721	8.42	9.074	9.074	6.055
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	434	446	417	431	398	398	600
Service Time	6.144	5.847	6.421	6.12	6.774	6.774	3.755
HCM Lane V/C Ratio	1.122	0.917	0.794	0.661	0.251	0.251	0.553
HCM Control Delay	114.6	53.8	35.8	25.2	14.7	14.7	15.6
HCM Lane LOS	F	F	E	D	B	B	C
HCM 95th-tile Q	17.6	10.4	6.6	4.4	0.9	0.9	3.2

Intersection	
Intersection Delay, s/veh	29.1
Intersection LOS	D

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	299	320	450	112	132	213
Future Vol, veh/h	299	320	450	112	132	213
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	325	348	489	122	143	232
Number of Lanes	0	2	2	0	2	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	3	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	3	2
HCM Control Delay	44.5	22.9	11.7
HCM LOS	E	C	B

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	74%	0%	0%	0%	100%	100%	0%
Vol Thru, %	26%	100%	100%	57%	0%	0%	0%
Vol Right, %	0%	0%	0%	43%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	406	213	300	262	66	66	213
LT Vol	299	0	0	0	66	66	0
Through Vol	107	213	300	150	0	0	0
RT Vol	0	0	0	112	0	0	213
Lane Flow Rate	441	232	326	285	72	72	232
Geometry Grp	8	8	8	8	7	7	7
Degree of Util (X)	0.954	0.477	0.69	0.579	0.168	0.168	0.348
Departure Headway (Hd)	7.786	7.41	7.618	7.313	8.43	8.43	5.418
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	467	487	476	493	426	426	662
Service Time	5.528	5.153	5.362	5.056	6.17	6.17	3.157
HCM Lane V/C Ratio	0.944	0.476	0.685	0.578	0.169	0.169	0.35
HCM Control Delay	59.1	16.8	25.7	19.7	12.9	12.9	11
HCM Lane LOS	F	C	D	C	B	B	B
HCM 95th-tile Q	11.6	2.5	5.2	3.6	0.6	0.6	1.6

Intersection	
Intersection Delay, s/veh	30.6
Intersection LOS	D

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	299	332	459	114	135	213
Future Vol, veh/h	299	332	459	114	135	213
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	325	361	499	124	147	232
Number of Lanes	0	2	2	0	2	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	3	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	3	2
HCM Control Delay	46.8	24	11.9
HCM LOS	E	C	B

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	73%	0%	0%	0%	100%	100%	0%
Vol Thru, %	27%	100%	100%	57%	0%	0%	0%
Vol Right, %	0%	0%	0%	43%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	410	221	306	267	68	68	213
LT Vol	299	0	0	0	68	68	0
Through Vol	111	221	306	153	0	0	0
RT Vol	0	0	0	114	0	0	213
Lane Flow Rate	445	241	333	290	73	73	232
Geometry Grp	8	8	8	8	7	7	7
Degree of Util (X)	0.969	0.499	0.709	0.594	0.173	0.173	0.352
Departure Headway (Hd)	7.835	7.462	7.671	7.366	8.487	8.487	5.474
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	463	484	472	490	423	423	658
Service Time	5.583	5.211	5.419	5.113	6.227	6.227	3.213
HCM Lane V/C Ratio	0.961	0.498	0.706	0.592	0.173	0.173	0.353
HCM Control Delay	62.7	17.5	27.1	20.4	13	13	11.2
HCM Lane LOS	F	C	D	C	B	B	B
HCM 95th-tile Q	12	2.7	5.5	3.8	0.6	0.6	1.6

E-W Street: Cameron Ave
N-S Street: Grand Ave
Scenario: AM Peak
Overlap Reduce 15%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM Existing				AM Existing + Project				Existing + Project with Mitigation				PHF
	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	
EB Left	124	1	1.00	0.08	124	1	1.00	0.08	124	1	1.00	0.08	0.889
Comb. L-T						0				0			
EB Thru	0		0.00		0	0	0.00		0	0	0.00		
Comb. T-R						0				0			
EB Right	616	1	1.00	0.38	637	1	1.00	0.40	637	2	2.00	0.20	
Comb. L-T-R						0				0			
WB Left	0		0.00		0	0	0.00		0	0	0.00		1.000
Comb. L-T						0				0			
WB Thru	0		0.00		0	0	0.00		0	0	0.00		
Comb. T-R						0				0			
WB Right	0		0.00		0	0	0.00		0	0	0.00		
Comb. L-T-R						0				0			
NB Left	375	2	2.00	0.13	381	2	2.00	0.13	381	2	2.00	0.13	0.893
Comb. L-T						0				0			
NB Thru	793	2	2.00	0.25	822	2	2.00	0.26	822	2	2.00	0.26	
Comb. T-R						0				0			
NB Right	0		0.00		0	0	0.00		0	0	0.00		
Comb. L-T-R						0				0			
SB Left	0		0.00		0	0	0.00		0	0	0.00		0.893
Comb. L-T						0				0			
SB Thru	1651	2	2.00	0.52	1773	2	2.00	0.55	1773	2	2.00	0.55	
Comb. T-R						0				0			
SB Right	189	1	1.00	0.12	189	1	1.00	0.12	189	1	1.00	0.12	
Comb. L-T-R						0				0			

Critical Volumes			E-W:	0.38			E-W:	0.40			E-W:	0.20	
			N-S:	0.65			N-S:	0.69			N-S:	0.69	
			Total:	1.03			Total:	1.08			Total:	0.89	
Lost Time				0.10				0.10				0.10	
V/C				1.131				1.184				0.985	
Level of Service				F				F				E	

E-W Street: Cameron Ave
N-S Street: Grand Ave
Scenario: PM Peak
Overlap Reduce 25%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM Existing				PM Existing + Project				Existing + Project with Mitigation				PHF
	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	
EB Left	72	1	1.00	0.04	72	1	1.00	0.04	72	1	1.00	0.04	0.918
Comb. L-T		0				0				0			
EB Thru	0	0	0.00		0	0	0.00		0	0	0.00		
Comb. T-R		0				0				0			
EB Right	330	1	1.00	0.21	342	1	1.00	0.21	342	2	2.00	0.11	
Comb. L-T-R		0				0				0			
WB Left	0	0	0.00		0	0	0.00		0	0	0.00		1.000
Comb. L-T		0				0				0			
WB Thru	0	0	0.00		0	0	0.00		0	0	0.00		
Comb. T-R		0				0				0			
WB Right	0	0	0.00		0	0	0.00		0	0	0.00		
Comb. L-T-R		0				0				0			
NB Left	526	2	2.00	0.18	539	2	2.00	0.19	539	2	2.00	0.19	0.916
Comb. L-T		0				0				0			
NB Thru	1186	2	2.00	0.37	1250	2	2.00	0.39	1250	2	2.00	0.39	
Comb. T-R		0				0				0			
NB Right	0	0	0.00		0	0	0.00		0	0	0.00		
Comb. L-T-R		0				0				0			
SB Left	0	0	0.00		0	0	0.00		0	0	0.00		0.911
Comb. L-T		0				0				0			
SB Thru	903	2	2.00	0.28	986	2	2.00	0.31	986	2	2.00	0.31	
Comb. T-R		0				0				0			
SB Right	109	1	1.00	0.07	109	1	1.00	0.07	109	1	1.00	0.07	
Comb. L-T-R		0				0				0			

Critical Volumes			E-W:	0.21			E-W:	0.21			E-W:	0.11	
			N-S:	0.47			N-S:	0.50			N-S:	0.50	
			Total:	0.67			Total:	0.71			Total:	0.60	
Lost Time				0.10				0.10				0.10	
V/C				0.771				0.809				0.702	
Level of Service				C				D				C	

E-W Street: Mountaineer Rd
N-S Street: Grand Ave
Scenario: AM Peak
Overlap Reduce 25%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM Existing				AM Existing + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	0		0.00		0	0	0.00		1.000
Comb. L-T						0			
EB Thru	0		0.00		0	0	0.00		
Comb. T-R						0			
EB Right	0		0.00		0	0	0.00		
Comb. L-T-R						0			
WB Left	165	2	2.00	0.06	176	2	2.00	0.06	0.895
Comb. L-T						0			
WB Thru	0		0.00		0	0	0.00		
Comb. T-R						0			
WB Right	68	2	2.00	0.02	78	2	2.00	0.02	
Comb. L-T-R						0			
NB Left	0		0.00		0	0	0.00		0.903
Comb. L-T						0			
NB Thru	1130	2	2.00	0.35	1150	2	2.00	0.36	
Comb. T-R						0			
NB Right	430	1	1.00	0.27	473	1	1.00	0.30	
Comb. L-T-R						0			
SB Left	601	2	2.00	0.21	656	2	2.00	0.23	0.941
Comb. L-T						0			
SB Thru	1783	2	2.00	0.56	1866	2	2.00	0.58	
Comb. T-R						0			
SB Right	0		0.00		0	0	0.00		
Comb. L-T-R						0			

Critical Volumes	E-W:	0.06	E-W:	0.06
	N-S:	0.56	N-S:	0.59
	Total:	0.62	Total:	0.65

Lost Time	0.10	0.10

V/C	0.719	0.748
Level of Service	C	C

E-W Street: Mountaineer Rd
N-S Street: Grand Ave
Scenario: PM Peak
Overlap Reduce 11%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM Existing				PM Existing + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	0	0	0.00		0	0	0.00		1.000
Comb. L-T		0				0			
EB Thru	0	0	0.00		0	0	0.00		
Comb. T-R		0				0			
EB Right	0	0	0.00		0	0	0.00		
Comb. L-T-R		0				0			
WB Left	188	2	2.00	0.07	215	2	2.00	0.07	0.773
Comb. L-T		0				0			
WB Thru	0	0	0.00		0	0	0.00		
Comb. T-R		0				0			
WB Right	146	2	2.00	0.05	179	2	2.00	0.06	
Comb. L-T-R		0				0			
NB Left	0	0	0.00		0	0	0.00		0.911
Comb. L-T		0				0			
NB Thru	1696	2	2.00	0.53	1743	2	2.00	0.54	
Comb. T-R		0				0			
NB Right	184	1	1.00	0.12	214	1	1.00	0.13	
Comb. L-T-R		0				0			
SB Left	166	2	2.00	0.06	204	2	2.00	0.07	0.948
Comb. L-T		0				0			
SB Thru	1114	2	2.00	0.35	1171	2	2.00	0.37	
Comb. T-R		0				0			
SB Right	0	0	0.00		0	0	0.00		
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.07	E-W:	0.07
	N-S:	0.59	N-S:	0.62
	Total:	0.65	Total:	0.69
Lost Time		0.10		0.10
V/C		0.753		0.790
Level of Service		C		C

E-W Street: San Jose Hills Rd
N-S Street: Grand Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM Existing				AM Existing + Project				Existing + Project with Mitigation				PHF
	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	
EB Left	236	1	1.00	0.15	236	1	1.00	0.15	236	1	1.00	0.15	0.780
Comb. L-T						0				0			
EB Thru	105		0.45	0.15	110	0	0.46	0.15	110	0	0.46	0.15	
Comb. T-R		1				1				1			
EB Right	127		0.55	0.15	127	0	0.54	0.15	127	0	0.54	0.15	
Comb. L-T-R						0				0			
WB Left	107	1	1.00	0.07	126	1	1.00	0.08	126	1	1.62	0.05	0.745
Comb. L-T						0				1			
WB Thru	28	1	1.00	0.02	30	1	1.00	0.02	30	0	0.38	0.05	
Comb. T-R						0				0			
WB Right	64	1	1.00	0.04	75	1	1.00	0.05	75	1	1.00	0.05	
Comb. L-T-R						0				0			
NB Left	115	1	1.00	0.07	115	1	1.00	0.07	115	1	1.00	0.07	0.862
Comb. L-T						0				0			
NB Thru	1359	2	2.00	0.42	1416	2	2.00	0.44	1416	2	2.21	0.40	
Comb. T-R						0				1			
NB Right	438	1	1.00	0.27	509	1	1.00	0.32	509	0	0.79	0.40	
Comb. L-T-R						0				0			
SB Left	316	1	1.00	0.20	355	1	1.00	0.22	355	1	1.00	0.22	0.895
Comb. L-T						0				0			
SB Thru	1564	2	2.00	0.49	1624	2	2.00	0.51	1624	2	2.00	0.51	
Comb. T-R						0				0			
SB Right	155	1	1.00	0.10	155	1	1.00	0.10	155	1	1.00	0.10	
Comb. L-T-R						0				0			

Critical Volumes	E-W:	0.21	E-W:	0.23	E-W:	0.20
	N-S:	0.62	N-S:	0.66	N-S:	0.62
	Total:	0.83	Total:	0.89	Total:	0.82
Lost Time		0.10		0.10		0.10
V/C		0.934		0.992		0.920
Level of Service		E		E		E

E-W Street: San Jose Hills Rd
N-S Street: Grand Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM Existing				PM Existing + Project				Existing + Project with Mitigation				PHF
	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	
EB Left	108	1	1.00	0.07	108	1	1.00	0.07	108	1	1.00	0.07	0.890
Comb. L-T		0				0				0			
EB Thru	17	0	0.14	0.08	20	0	0.16	0.08	20	0	0.16	0.08	
Comb. T-R		1				1				1			
EB Right	103	0	0.86	0.08	103	0	0.84	0.08	103	0	0.84	0.08	
Comb. L-T-R		0				0				0			
WB Left	233	1	1.00	0.15	276	1	1.00	0.17	276	1	1.79	0.10	0.760
Comb. L-T		0				0				1			
WB Thru	29	1	1.00	0.02	32	1	1.00	0.02	32	0	0.21	0.10	
Comb. T-R		0				0				0			
WB Right	138	1	1.00	0.09	163	1	1.00	0.10	163	1	1.00	0.10	
Comb. L-T-R		0				0				0			
NB Left	91	1	1.00	0.06	91	1	1.00	0.06	91	1	1.00	0.06	0.896
Comb. L-T		0				0				0			
NB Thru	1692	2	2.00	0.53	1749	2	2.00	0.55	1749	2	2.65	0.41	
Comb. T-R		0				0				1			
NB Right	184	1	1.00	0.12	231	1	1.00	0.14	231	0	0.35	0.41	
Comb. L-T-R		0				0				0			
SB Left	75	1	1.00	0.05	101	1	1.00	0.06	101	1	1.00	0.06	0.940
Comb. L-T		0				0				0			
SB Thru	1119	2	2.00	0.35	1173	2	2.00	0.37	1173	2	2.00	0.37	
Comb. T-R		0				0				0			
SB Right	98	1	1.00	0.06	98	1	1.00	0.06	98	1	1.00	0.06	
Comb. L-T-R		0				0				0			

Critical Volumes			E-W:	0.22			E-W:	0.25			E-W:	0.17	
			N-S:	0.58			N-S:	0.61			N-S:	0.48	
			Total:	0.80			Total:	0.86			Total:	0.65	
Lost Time				0.10				0.10				0.10	
V/C				0.897				0.960				0.749	
Level of Service				D				E				C	

E-W Street: La Puente Rd
N-S Street: Grand Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Overlap Reduce 20% 10%

Movement	AM Existing				AM Existing + Project				Existing + Project with Mitigation				PHF
	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	
EB Left	594	1	1.71	0.22	599	1	1.71	0.22	599	1	1.71	0.22	
Comb. L-T		1				1				1			
EB Thru	101		0.29	0.22	101	0	0.29	0.22	101	0	0.29	0.22	0.751
Comb. T-R						0				0			
EB Right	541	1	1.00	0.34	541	1	1.00	0.34	487	1	1.00	0.30	
Comb. L-T-R						0				0			
WB Left	198	1	1.15	0.11	198	1	1.15	0.11	198	1	1.15	0.11	
Comb. L-T		1				1				1			
WB Thru	145		1.74	0.05	145	0	1.74	0.05	145	0	1.74	0.05	0.628
Comb. T-R		1				1				1			
WB Right	18		0.11	0.10	18	0	0.11	0.10	18	0	0.11	0.10	
Comb. L-T-R						0				0			
NB Left	173	1	1.00	0.11	173	1	1.00	0.11	173	1	1.00	0.11	
Comb. L-T						0				0			
NB Thru	1543	2	2.00	0.48	1655	2	2.00	0.52	1655	2	2.00	0.52	0.972
Comb. T-R						0				0			
NB 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			
SB Left	2	1	1.00	0.00	2	1	1.00	0.00	2	1	1.00	0.00	
Comb. L-T						0				0			
SB Thru	1067	2	2.00	0.33	1095	2	2.00	0.34	1095	2	2.00	0.34	0.953
Comb. T-R						0				0			
SB Right	261	1	1.00	0.16	262	1	1.00	0.16	262	1	1.00	0.16	
Comb. L-T-R						0				0			

Critical Volumes			E-W:	0.44			E-W:	0.44			E-W:	0.41	
			N-S:	0.48			N-S:	0.52			N-S:	0.52	
			Total:	0.93			Total:	0.96			Total:	0.93	
Lost Time				0.10				0.10				0.10	
V/C				1.028				1.063				1.030	
Level of Service				F				F				F	

E-W Street: La Puente Rd
N-S Street: Grand Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Overlap Reduce 15% 10%

Movement	PM Existing				PM Existing + Project				Existing + Project with Mitigation				PHF
	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	
EB Left	336	1	1.67	0.13	339	1	1.67	0.13	339	1	1.67	0.13	0.946
Comb. L-T		1				1				1			
EB Thru	67	0	0.33	0.13	67	0	0.33	0.13	67	0	0.33	0.13	
Comb. T-R		0				0				0			
EB Right	337	1	1.00	0.21	337	1	1.00	0.21	304	1	1.00	0.19	
Comb. L-T-R		0				0				0			
WB Left	96	1	1.33	0.05	96	1	1.33	0.05	96	1	1.33	0.05	0.840
Comb. L-T		1				1				1			
WB Thru	49	0	1.49	0.02	49	0	1.49	0.02	49	0	1.49	0.02	
Comb. T-R		1				1				1			
WB Right	11	0	0.18	0.04	11	0	0.18	0.04	11	0	0.18	0.04	
Comb. L-T-R		0				0				0			
NB Left	294	1	1.00	0.18	294	1	1.00	0.18	294	1	1.00	0.18	0.961
Comb. L-T		0				0				0			
NB Thru	1557	2	2.00	0.49	1636	2	2.00	0.51	1636	2	2.00	0.51	
Comb. T-R		0				0				0			
NB Right	125	1	1.00	0.08	125	1	1.00	0.08	125	1	1.00	0.08	
Comb. L-T-R		0				0				0			
SB Left	13	1	1.00	0.01	13	1	1.00	0.01	13	1	1.00	0.01	0.918
Comb. L-T		0				0				0			
SB Thru	1074	2	2.00	0.34	1138	2	2.00	0.36	1138	2	2.00	0.36	
Comb. T-R		0				0				0			
SB Right	178	1	1.00	0.11	180	1	1.00	0.11	180	1	1.00	0.11	
Comb. L-T-R		0				0				0			

Critical Volumes			E-W:	0.26			E-W:	0.26			E-W:	0.24	
			N-S:	0.52			N-S:	0.54			N-S:	0.54	
			Total:	0.78			Total:	0.80			Total:	0.77	
Lost Time				0.10				0.10				0.10	
V/C				0.875				0.895				0.874	
Level of Service				D				D				D	

E-W Street: Valley Blvd
N-S Street: Grand Ave
Scenario: AM Peak
Free Right Turn 100%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM Existing				AM Existing + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	481	2	2.00	0.17	486	2	2.00	0.17	0.864
Comb. L-T						0			
EB Thru	728	3	3.00	0.15	728	3	3.00	0.15	
Comb. T-R						0			
EB Right	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. L-T-R						0			
WB Left	194	2	2.00	0.07	194	2	2.00	0.07	0.813
Comb. L-T						0			
WB Thru	1338	3	3.00	0.28	1338	3	3.00	0.28	
Comb. T-R						0			
WB Right	204	1	1.00	0.13	204	1	1.00	0.13	
Comb. L-T-R						0			
NB Left	339	2	2.00	0.12	339	2	2.00	0.12	0.896
Comb. L-T						0			
NB Thru	1252	3	3.00	0.26	1368	3	3.00	0.29	
Comb. T-R						0			
NB Right	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. L-T-R						0			
SB Left	289	2	2.00	0.10	289	2	2.00	0.10	0.855
Comb. L-T						0			
SB Thru	888	3	3.00	0.18	916	3	3.00	0.19	
Comb. T-R						0			
SB Right	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. L-T-R						0			

Critical Volumes	E-W:	0.45	E-W:	0.45
	N-S:	0.36	N-S:	0.39
	Total:	0.81	Total:	0.83
Lost Time		0.10		0.10
V/C		0.907		0.933
Level of Service		E		E

E-W Street: Valley Blvd
N-S Street: Grand Ave
Scenario: PM Peak
Free Right Turn 100%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM Existing				PM Existing + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	592	2	2.00	0.21	595	2	2.00	0.21	0.968
Comb. L-T		0				0			
EB Thru	1413	3	3.00	0.29	1413	3	3.00	0.29	
Comb. T-R		0				0			
EB Right	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. L-T-R		0				0			
WB Left	243	2	2.00	0.08	243	2	2.00	0.08	0.914
Comb. L-T		0				0			
WB Thru	771	3	3.00	0.16	771	3	3.00	0.16	
Comb. T-R		0				0			
WB Right	290	1	1.00	0.18	290	1	1.00	0.18	
Comb. L-T-R		0				0			
NB Left	302	2	2.00	0.10	302	2	2.00	0.10	0.965
Comb. L-T		0				0			
NB Thru	1035	3	3.00	0.22	1110	3	3.00	0.23	
Comb. T-R		0				0			
NB Right	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. L-T-R		0				0			
SB Left	351	2	2.00	0.12	351	2	2.00	0.12	0.943
Comb. L-T		0				0			
SB Thru	737	3	3.00	0.15	797	3	3.00	0.17	
Comb. T-R		0				0			
SB Right	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.39	E-W:	0.39
	N-S:	0.34	N-S:	0.35
	Total:	0.72	Total:	0.74
Lost Time		0.10		0.10
V/C		0.824		0.841
Level of Service		D		D

E-W Street: Baker Pkwy
N-S Street: Grand Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM Existing				AM Existing + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	19	2	2.00	0.01	19	2	2.00	0.01	0.775
Comb. L-T						0			
EB Thru	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. T-R						0			
EB Right	61	1	1.00	0.04	61	1	1.00	0.04	
Comb. L-T-R						0			
WB Left	0	2	2.00	0.00	0	2	2.00	0.00	1.000
Comb. L-T						0			
WB Thru	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. T-R						0			
WB Right	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. L-T-R									
NB Left	114	2	2.00	0.04	114	2	2.00	0.04	0.913
Comb. L-T						0			
NB Thru	2125	3	3.00	0.44	2239	3	3.00	0.47	
Comb. T-R						0			
NB Right	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. L-T-R						0			
SB Left	0	2	2.00	0.00	0	2	2.00	0.00	0.927
Comb. L-T						0			
SB Thru	802	3	3.00	0.17	827	3	3.00	0.17	
Comb. T-R						0			
SB Right	74	1	1.00	0.05	74	1	1.00	0.05	
Comb. L-T-R						0			

Critical Volumes	E-W:	0.04	E-W:	0.04
	N-S:	0.44	N-S:	0.47
	Total:	0.48	Total:	0.50

Lost Time	0.10	0.10

V/C	0.581	0.604
Level of Service	A	B

E-W Street: Baker Pkwy
N-S Street: Grand Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM Existing				PM Existing + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	115	2	2.00	0.04	115	2	2.00	0.04	0.783
Comb. L-T		0				0			
EB Thru	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. T-R		0				0			
EB Right	189	1	1.00	0.12	189	1	1.00	0.12	
Comb. L-T-R		0				0			
WB Left	0	2	2.00	0.00	0	2	2.00	0.00	1.000
Comb. L-T		0				0			
WB Thru	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. T-R		0				0			
WB Right	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. L-T-R		0				0			
NB Left	46	2	2.00	0.02	46	2	2.00	0.02	0.889
Comb. L-T		0				0			
NB Thru	1370	3	3.00	0.29	1451	3	3.00	0.30	
Comb. T-R		0				0			
NB Right	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. L-T-R		0				0			
SB Left	0	2	2.00	0.00	0	2	2.00	0.00	0.892
Comb. L-T		0				0			
SB Thru	1438	3	3.00	0.30	1502	3	3.00	0.31	
Comb. T-R		0				0			
SB Right	30	1	1.00	0.02	30	1	1.00	0.02	
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.12	E-W:	0.12
	N-S:	0.32	N-S:	0.33
	Total:	0.43	Total:	0.45

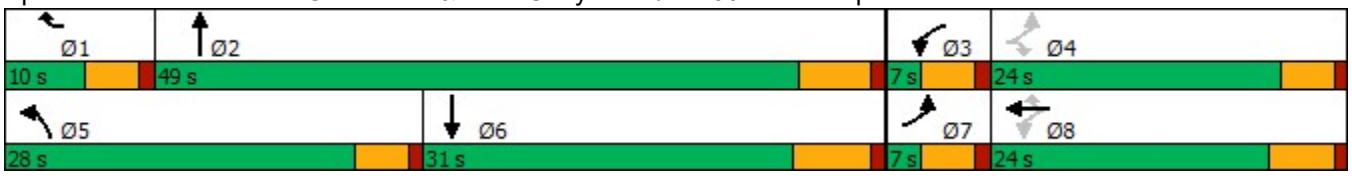
Lost Time	0.10	0.10

V/C	0.534	0.547
Level of Service	A	A

Lane Group	EBR	WBL	WBT	WBR	NBL	NBT	SBT	Ø7
Lane Configurations								
Traffic Volume (vph)	3	138	1	631	242	1446	759	
Future Volume (vph)	3	138	1	631	242	1446	759	
Turn Type	Perm	pm+pt	NA	custom	Prot	NA	NA	
Protected Phases		3	8	1	5	2	6	7
Permitted Phases	4	8		8				
Detector Phase	4	3	8	1	5	2	6	
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.6	9.6	23.4	9.6	9.6	23.8	24.2	9.6
Total Split (s)	24.0	7.0	24.0	10.0	28.0	49.0	31.0	7.0
Total Split (%)	26.7%	7.8%	26.7%	11.1%	31.1%	54.4%	34.4%	8%
Yellow Time (s)	3.6	3.6	4.4	3.6	3.6	4.8	5.2	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	4.6	5.4	4.6	4.6	5.8	6.2	
Lead/Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.0	16.0	15.1	26.1	16.7	40.3	28.7	
Actuated g/C Ratio	0.09	0.21	0.20	0.34	0.22	0.52	0.37	
v/c Ratio	0.02	0.39	0.88	0.57	0.68	0.85	0.35	
Control Delay	33.0	30.5	41.5	16.1	37.9	21.8	19.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	33.0	30.5	41.5	16.1	37.9	21.8	19.2	
LOS	C	C	D	B	D	C	B	
Approach Delay			29.1			24.1	19.2	
Approach LOS			C			C	B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 77	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 24.2	Intersection LOS: C
Intersection Capacity Utilization 73.4%	ICU Level of Service D
Analysis Period (min) 15	

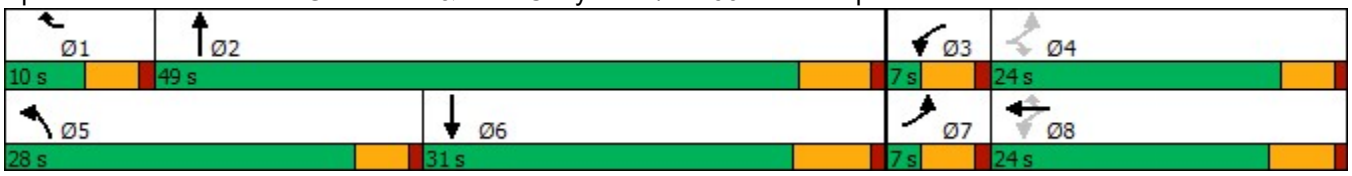
Splits and Phases: 27: Grand Ave & Brea Canyon Rd/SR-60 WB Ramps



Lane Group	EBR	WBL	WBT	WBR	NBL	NBT	SBT	Ø7
Lane Configurations								
Traffic Volume (vph)	3	138	1	709	242	1472	780	
Future Volume (vph)	3	138	1	709	242	1472	780	
Turn Type	Perm	pm+pt	NA	custom	Prot	NA	NA	
Protected Phases		3	8	1	5	2	6	7
Permitted Phases	4	8		8				
Detector Phase	4	3	8	1	5	2	6	
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.6	9.6	23.4	9.6	9.6	23.8	24.2	9.6
Total Split (s)	24.0	7.0	24.0	10.0	28.0	49.0	31.0	7.0
Total Split (%)	26.7%	7.8%	26.7%	11.1%	31.1%	54.4%	34.4%	8%
Yellow Time (s)	3.6	3.6	4.4	3.6	3.6	4.8	5.2	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	4.6	5.4	4.6	4.6	5.8	6.2	
Lead/Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.0	17.4	16.6	27.5	17.0	41.3	29.4	
Actuated g/C Ratio	0.09	0.22	0.21	0.35	0.21	0.52	0.37	
v/c Ratio	0.02	0.37	0.94	0.63	0.70	0.87	0.36	
Control Delay	33.0	29.9	53.7	18.6	39.1	23.4	19.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	33.0	29.9	53.7	18.6	39.1	23.4	19.8	
LOS	C	C	D	B	D	C	B	
Approach Delay			35.3			25.7	19.8	
Approach LOS			D			C	B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 79.3	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 26.7	Intersection LOS: C
Intersection Capacity Utilization 77.4%	ICU Level of Service D
Analysis Period (min) 15	

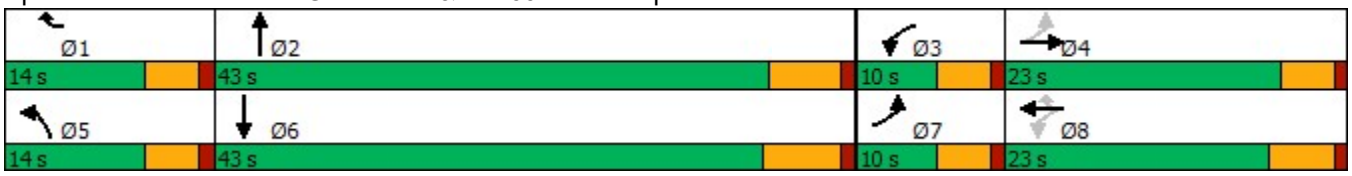
Splits and Phases: 27: Grand Ave & Brea Canyon Rd/SR-60 WB Ramps



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	Ø4	Ø7
Lane Configurations								
Traffic Volume (vph)	133	0	520	185	731	1437		
Future Volume (vph)	133	0	520	185	731	1437		
Turn Type	pm+pt	NA	custom	Prot	NA	NA		
Protected Phases	3	8	1	5	2	6	4	7
Permitted Phases	8		8					
Detector Phase	3	8	1	5	2	6		
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	23.4	9.6	9.6	23.8	24.2	22.6	9.6
Total Split (s)	10.0	23.0	14.0	14.0	43.0	43.0	23.0	10.0
Total Split (%)	11.1%	25.6%	15.6%	15.6%	47.8%	47.8%	26%	11%
Yellow Time (s)	3.6	4.4	3.6	3.6	4.8	5.2	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	5.4	4.6	4.6	5.8	6.2		
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.9	8.1	19.6	9.6	30.2	26.0		
Actuated g/C Ratio	0.15	0.13	0.32	0.16	0.50	0.43		
v/c Ratio	0.53	0.69	0.46	0.71	0.45	0.57		
Control Delay	33.3	13.8	8.0	44.1	10.9	13.8		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	33.3	13.8	8.0	44.1	10.9	13.8		
LOS	C	B	A	D	B	B		
Approach Delay		15.0			17.6	13.8		
Approach LOS		B			B	B		

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 60.4	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 15.2	Intersection LOS: B
Intersection Capacity Utilization 51.7%	ICU Level of Service A
Analysis Period (min) 15	

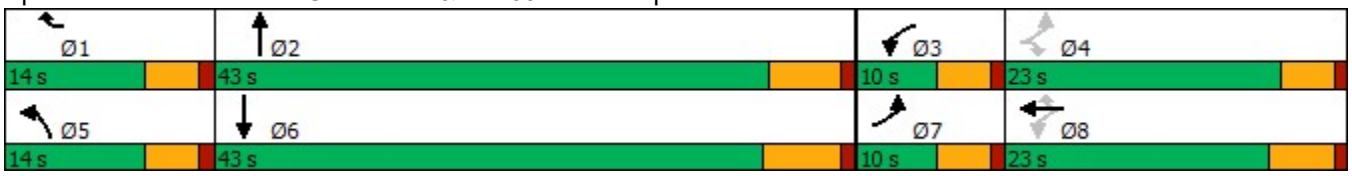
Splits and Phases: 27: Grand Ave & SR-60 WB Ramps



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	Ø4	Ø7
Lane Configurations								
Traffic Volume (vph)	133	0	574	185	749	1487		
Future Volume (vph)	133	0	574	185	749	1487		
Turn Type	pm+pt	NA	custom	Prot	NA	NA		
Protected Phases	3	8	1	5	2	6	4	7
Permitted Phases	8		8					
Detector Phase	3	8	1	5	2	6		
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	23.4	9.6	9.6	23.8	24.2	22.6	9.6
Total Split (s)	10.0	23.0	14.0	14.0	43.0	43.0	23.0	10.0
Total Split (%)	11.1%	25.6%	15.6%	15.6%	47.8%	47.8%	26%	11%
Yellow Time (s)	3.6	4.4	3.6	3.6	4.8	5.2	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	5.4	4.6	4.6	5.8	6.2		
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	9.8	9.0	20.6	9.7	31.1	27.1		
Actuated g/C Ratio	0.16	0.14	0.33	0.16	0.50	0.43		
v/c Ratio	0.49	0.71	0.50	0.73	0.46	0.59		
Control Delay	32.1	15.0	9.6	47.6	11.5	14.4		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	32.1	15.0	9.6	47.6	11.5	14.4		
LOS	C	B	A	D	B	B		
Approach Delay		15.7			18.6	14.4		
Approach LOS		B			B	B		

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 62.4	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 15.9	Intersection LOS: B
Intersection Capacity Utilization 53.1%	ICU Level of Service A
Analysis Period (min) 15	

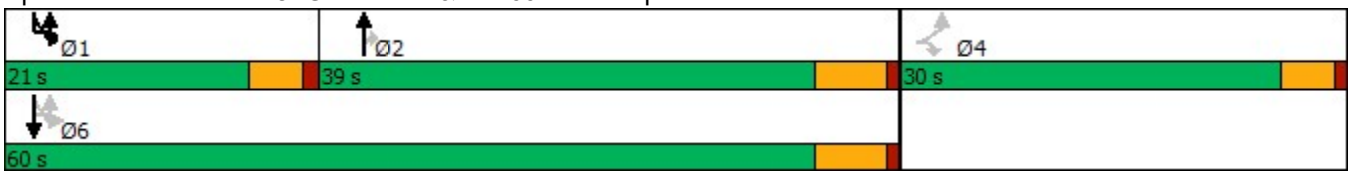
Splits and Phases: 27: Grand Ave & SR-60 WB Ramps



Lane Group	EBL	EBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	701	250	976	283	9	262	643
Future Volume (vph)	701	250	976	283	9	262	643
Turn Type	Perm	Perm	NA	Perm	pm+pt	pm+pt	NA
Protected Phases			2		1	1	6
Permitted Phases	4	4		2	6	6	
Detector Phase	4	4	2	2	1	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	24.0	24.0	11.0	11.0	24.0
Total Split (s)	30.0	30.0	39.0	39.0	21.0	21.0	60.0
Total Split (%)	33.3%	33.3%	43.3%	43.3%	23.3%	23.3%	66.7%
Yellow Time (s)	3.6	3.6	4.8	4.8	3.6	3.6	4.8
All-Red Time (s)	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
Total Lost Time (s)	4.6	4.6	5.8	5.8		4.6	5.8
Lead/Lag			Lag	Lag	Lead	Lead	
Lead-Lag Optimize?							
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	22.5	22.5	30.2	30.2		49.7	48.4
Actuated g/C Ratio	0.28	0.28	0.37	0.37		0.61	0.59
v/c Ratio	0.80	0.45	0.81	0.40		0.76	0.23
Control Delay	35.9	7.8	29.8	4.1		30.3	8.2
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	35.9	7.8	29.8	4.1		30.3	8.2
LOS	D	A	C	A		C	A
Approach Delay			24.0				14.7
Approach LOS			C				B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 81.6	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 22.7	Intersection LOS: C
Intersection Capacity Utilization 72.3%	ICU Level of Service C
Analysis Period (min) 15	

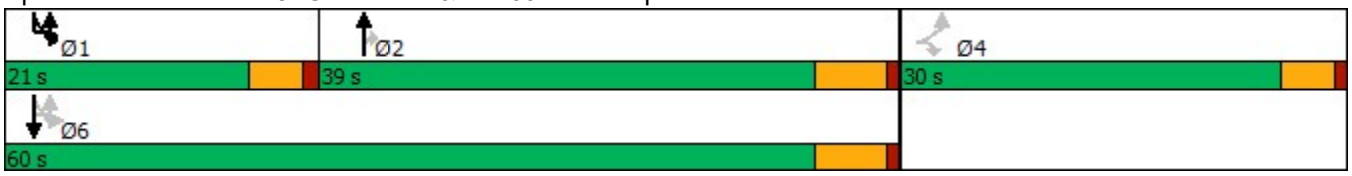
Splits and Phases: 28: Grand Ave & SR-60 EB Ramps



Lane Group	EBL	EBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	714	250	989	283	9	280	646
Future Volume (vph)	714	250	989	283	9	280	646
Turn Type	Perm	Perm	NA	Perm	pm+pt	pm+pt	NA
Protected Phases			2		1	1	6
Permitted Phases	4	4		2	6	6	
Detector Phase	4	4	2	2	1	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	24.0	24.0	11.0	11.0	24.0
Total Split (s)	30.0	30.0	39.0	39.0	21.0	21.0	60.0
Total Split (%)	33.3%	33.3%	43.3%	43.3%	23.3%	23.3%	66.7%
Yellow Time (s)	3.6	3.6	4.8	4.8	3.6	3.6	4.8
All-Red Time (s)	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
Total Lost Time (s)	4.6	4.6	5.8	5.8		4.6	5.8
Lead/Lag			Lag	Lag	Lead	Lead	
Lead-Lag Optimize?							
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	22.8	22.8	30.6	30.6		50.7	49.4
Actuated g/C Ratio	0.28	0.28	0.37	0.37		0.61	0.60
v/c Ratio	0.82	0.45	0.82	0.40		0.79	0.23
Control Delay	37.1	8.0	30.8	4.1		33.8	8.2
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	37.1	8.0	30.8	4.1		33.8	8.2
LOS	D	A	C	A		C	A
Approach Delay			24.9				16.1
Approach LOS			C				B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 82.9	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 23.7	Intersection LOS: C
Intersection Capacity Utilization 74.0%	ICU Level of Service D
Analysis Period (min) 15	

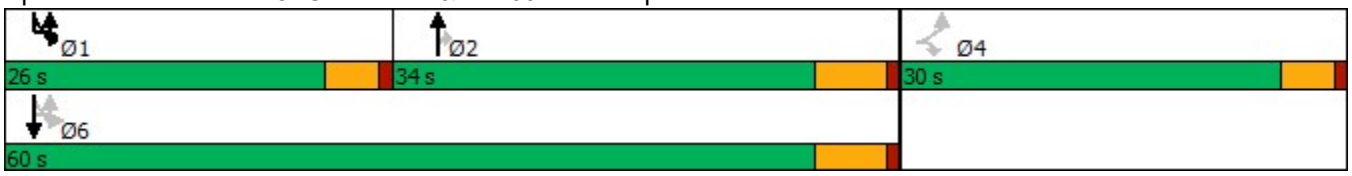
Splits and Phases: 28: Grand Ave & SR-60 EB Ramps



Lane Group	EBL	EBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	133	243	757	604	4	362	1234
Future Volume (vph)	133	243	757	604	4	362	1234
Turn Type	Perm	Perm	NA	Perm	pm+pt	pm+pt	NA
Protected Phases			2		1	1	6
Permitted Phases	4	4		2	6	6	
Detector Phase	4	4	2	2	1	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	24.0	24.0	11.0	11.0	24.0
Total Split (s)	30.0	30.0	34.0	34.0	26.0	26.0	60.0
Total Split (%)	33.3%	33.3%	37.8%	37.8%	28.9%	28.9%	66.7%
Yellow Time (s)	3.6	3.6	4.8	4.8	3.6	3.6	4.8
All-Red Time (s)	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
Total Lost Time (s)	4.6	4.6	5.8	5.8		4.6	5.8
Lead/Lag			Lag	Lag	Lead	Lead	
Lead-Lag Optimize?							
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	13.8	13.8	24.4	24.4		45.9	44.6
Actuated g/C Ratio	0.20	0.20	0.35	0.35		0.66	0.64
v/c Ratio	0.21	0.68	0.66	0.67		0.72	0.41
Control Delay	25.6	27.7	23.5	5.9		18.4	6.8
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	25.6	27.7	23.5	5.9		18.4	6.8
LOS	C	C	C	A		B	A
Approach Delay			15.7				9.4
Approach LOS			B				A

Intersection Summary			
Cycle Length: 90			
Actuated Cycle Length: 69.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay: 13.9		Intersection LOS: B	
Intersection Capacity Utilization 65.1%		ICU Level of Service C	
Analysis Period (min) 15			

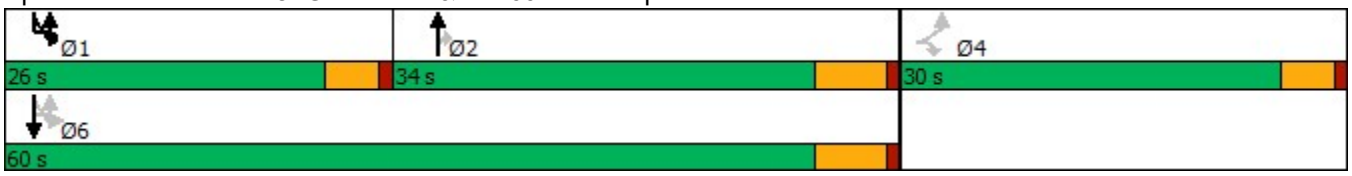
Splits and Phases: 28: Grand Ave & SR-60 EB Ramps



Lane Group	EBL	EBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	142	243	766	604	4	405	1241
Future Volume (vph)	142	243	766	604	4	405	1241
Turn Type	Perm	Perm	NA	Perm	pm+pt	pm+pt	NA
Protected Phases			2		1	1	6
Permitted Phases	4	4		2	6	6	
Detector Phase	4	4	2	2	1	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	24.0	24.0	11.0	11.0	24.0
Total Split (s)	30.0	30.0	34.0	34.0	26.0	26.0	60.0
Total Split (%)	33.3%	33.3%	37.8%	37.8%	28.9%	28.9%	66.7%
Yellow Time (s)	3.6	3.6	4.8	4.8	3.6	3.6	4.8
All-Red Time (s)	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
Total Lost Time (s)	4.6	4.6	5.8	5.8		4.6	5.8
Lead/Lag			Lag	Lag	Lead	Lead	
Lead-Lag Optimize?							
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	14.0	14.0	25.0	25.0		48.6	47.3
Actuated g/C Ratio	0.19	0.19	0.35	0.35		0.67	0.66
v/c Ratio	0.23	0.69	0.68	0.67		0.77	0.40
Control Delay	26.6	29.0	24.8	5.9		22.9	6.6
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	26.6	29.0	24.8	5.9		22.9	6.6
LOS	C	C	C	A		C	A
Approach Delay			16.5				10.7
Approach LOS			B				B

Intersection Summary			
Cycle Length: 90			
Actuated Cycle Length: 72.2			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 15.0		Intersection LOS: B	
Intersection Capacity Utilization 67.5%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 28: Grand Ave & SR-60 EB Ramps



Appendix C – ICU Spreadsheets and HCM Reports – 2021 Conditions

E-W Street: Amar Rd
N-S Street: Nogales St
Scenario: AM Peak
Overlap Reduce 35%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2021 without Project				AM 2021 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	22	1	1.00	0.01	22	1	1.00	0.01	0.878
Comb. L-T		0				0			
EB Thru	1392	2	2.00	0.43	1405	2	2.00	0.44	
Comb. T-R		0				0			
EB Right	398	1	1.00	0.25	398	1	1.00	0.25	
Comb. L-T-R		0				0			
WB Left	137	1	1.00	0.09	137	1	1.00	0.09	0.907
Comb. L-T		0				0			
WB Thru	1027	2	2.00	0.32	1030	2	2.00	0.32	
Comb. T-R		0				0			
WB Right	3	1	1.00	0.00	3	1	1.00	0.00	
Comb. L-T-R		0				0			
NB Left	700	1	1.97	0.22	700	1	1.97	0.22	0.956
Comb. L-T		1				1			
NB Thru	10	0	0.03	0.22	10	0	0.03	0.22	
Comb. T-R		0				0			
NB Right	228	1	1.00	0.14	230	1	1.00	0.14	
Comb. L-T-R		0				0			
SB Left	15	0	0.27	0.04	15	0	0.27	0.04	0.875
Comb. L-T		0				0			
SB Thru	17	0	0.31	0.04	17	0	0.31	0.04	
Comb. T-R		0				0			
SB Right	24	0	0.43	0.04	24	0	0.43	0.04	
Comb. L-T-R		1				1			

Critical Volumes	E-W:	0.52	E-W:	0.52
	N-S:	0.26	N-S:	0.26
	Total:	0.78	Total:	0.78

Lost Time	0.10	0.10

V/C	0.877	0.882
Level of Service	D	D

E-W Street: Amar Rd
N-S Street: Nogales St
Scenario: PM Peak
Overlap Reduce 40%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM 2021 without Project				PM 2021 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	26	1	1.00	0.02	26	1	1.00	0.02	0.956
Comb. L-T		0				0			
EB Thru	1143	2	2.00	0.36	1151	2	2.00	0.36	
Comb. T-R		0				0			
EB Right	335	1	1.00	0.21	335	1	1.00	0.21	
Comb. L-T-R		0				0			
WB Left	225	1	1.00	0.14	226	1	1.00	0.14	0.895
Comb. L-T		0				0			
WB Thru	1028	2	2.00	0.32	1034	2	2.00	0.32	
Comb. T-R		0				0			
WB Right	7	1	1.00	0.00	7	1	1.00	0.00	
Comb. L-T-R		0				0			
NB Left	728	1	1.97	0.23	728	1	1.97	0.23	0.971
Comb. L-T		1				1			
NB Thru	11	0	0.03	0.23	11	0	0.03	0.23	
Comb. T-R		0				0			
NB Right	215	1	1.00	0.13	216	1	1.00	0.14	
Comb. L-T-R		0				0			
SB Left	9	0	0.32	0.02	9	0	0.32	0.02	0.786
Comb. L-T		0				0			
SB Thru	10	0	0.36	0.02	10	0	0.36	0.02	
Comb. T-R		0				0			
SB Right	9	0	0.32	0.02	9	0	0.32	0.02	
Comb. L-T-R		1				1			

Critical Volumes	E-W:	0.50	E-W:	0.50
	N-S:	0.25	N-S:	0.25
	Total:	0.75	Total:	0.75

Lost Time	0.10	0.10

V/C	0.846	0.849
Level of Service	D	D

E-W Street: Amar Rd
N-S Street: Lemon Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2021 without Project				AM 2021 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	19	1	1.00	0.01	19	1	1.00	0.01	0.856
Comb. L-T		0				0			
EB Thru	1229	1	1.54	0.50	1244	1	1.54	0.51	
Comb. T-R		1				1			
EB Right	372	0	0.46	0.50	372	0	0.46	0.51	
Comb. L-T-R		0				0			
WB Left	73	1	1.00	0.05	73	1	1.00	0.05	0.974
Comb. L-T		0				0			
WB Thru	709	2	2.00	0.22	712	2	2.00	0.22	
Comb. T-R		0				0			
WB Right	12	1	1.00	0.01	12	1	1.00	0.01	
Comb. L-T-R		0				0			
NB Left	254	1	1.70	0.09	254	1	1.70	0.09	0.901
Comb. L-T		1				1			
NB Thru	44	0	0.30	0.09	44	0	0.30	0.09	
Comb. T-R		0				0			
NB Right	101	1	1.00	0.06	103	1	1.00	0.06	
Comb. L-T-R		0				0			
SB Left	43	0	0.40	0.07	43	0	0.40	0.07	0.818
Comb. L-T		1				1			
SB Thru	64	0	0.60	0.07	64	0	0.60	0.07	
Comb. T-R		0				0			
SB Right	28	1	1.00	0.02	28	1	1.00	0.02	
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.55	E-W:	0.55
	N-S:	0.16	N-S:	0.16
	Total:	0.71	Total:	0.71

Lost Time	0.10	0.10

V/C	0.806	0.810
Level of Service	D	D

E-W Street: Amar Rd
N-S Street: Lemon Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM 2021 without Project				PM 2021 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	23	1	1.00	0.01	23	1	1.00	0.01	0.968
Comb. L-T		0				0			
EB Thru	937	1	1.68	0.35	947	1	1.68	0.35	
Comb. T-R		1				1			
EB Right	179	0	0.32	0.35	179	0	0.32	0.35	
Comb. L-T-R		0				0			
WB Left	97	1	1.00	0.06	98	1	1.00	0.06	0.944
Comb. L-T		0				0			
WB Thru	934	2	2.00	0.29	941	2	2.00	0.29	
Comb. T-R		0				0			
WB Right	32	1	1.00	0.02	32	1	1.00	0.02	
Comb. L-T-R		0				0			
NB Left	323	1	1.74	0.12	323	1	1.74	0.12	0.933
Comb. L-T		1				1			
NB Thru	47	0	0.26	0.12	47	0	0.26	0.12	
Comb. T-R		0				0			
NB Right	116	1	1.00	0.07	117	1	1.00	0.07	
Comb. L-T-R		0				0			
SB Left	32	0	0.55	0.04	32	0	0.55	0.04	0.838
Comb. L-T		1				1			
SB Thru	26	0	0.45	0.04	26	0	0.45	0.04	
Comb. T-R		0				0			
SB Right	21	1	1.00	0.01	21	1	1.00	0.01	
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.41	E-W:	0.41
	N-S:	0.15	N-S:	0.15
	Total:	0.56	Total:	0.57
Lost Time		0.10		0.10
V/C		0.662		0.665
Level of Service		B		B

E-W Street: Amar Rd
N-S Street: Meadow Pass Rd
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2021 without Project				AM 2021 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	27	1	1.00	0.02	27	1	1.00	0.02	0.862
Comb. L-T		0				0			
EB Thru	1267	2	2.00	0.40	1285	2	2.00	0.40	
Comb. T-R		0				0			
EB Right	46	1	1.00	0.03	46	1	1.00	0.03	
Comb. L-T-R		0				0			
WB Left	164	1	1.00	0.10	164	1	1.00	0.10	0.890
Comb. L-T		0				0			
WB Thru	858	2	2.00	0.27	863	2	2.00	0.27	
Comb. T-R		0				0			
WB Right	12	1	1.00	0.01	12	1	1.00	0.01	
Comb. L-T-R		0				0			
NB Left	75	1	1.00	0.05	75	1	1.00	0.05	0.709
Comb. L-T		0				0			
NB Thru	212	1	1.00	0.13	212	1	1.00	0.13	
Comb. T-R		0				0			
NB Right	279	1	1.00	0.17	282	1	1.00	0.18	
Comb. L-T-R		0				0			
SB Left	48	1	1.00	0.03	48	1	1.00	0.03	0.727
Comb. L-T		0				0			
SB Thru	171	0	0.77	0.14	171	0	0.77	0.14	
Comb. T-R		1				1			
SB Right	51	0	0.23	0.14	51	0	0.23	0.14	
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.50	E-W:	0.50
	N-S:	0.20	N-S:	0.21
	Total:	0.70	Total:	0.71
Lost Time		0.10		0.10
V/C		0.803		0.810
Level of Service		D		D

E-W Street: Amar Rd
N-S Street: Meadow Pass Rd
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM 2021 without Project				PM 2021 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	31	1	1.00	0.02	31	1	1.00	0.02	0.827
Comb. L-T		0				0			
EB Thru	1205	2	2.00	0.38	1217	2	2.00	0.38	
Comb. T-R		0				0			
EB Right	27	1	1.00	0.02	27	1	1.00	0.02	
Comb. L-T-R		0				0			
WB Left	156	1	1.00	0.10	157	1	1.00	0.10	0.947
Comb. L-T		0				0			
WB Thru	1063	2	2.00	0.33	1072	2	2.00	0.33	
Comb. T-R		0				0			
WB Right	46	1	1.00	0.03	46	1	1.00	0.03	
Comb. L-T-R		0				0			
NB Left	22	1	1.00	0.01	22	1	1.00	0.01	0.878
Comb. L-T		0				0			
NB Thru	104	1	1.00	0.06	104	1	1.00	0.06	
Comb. T-R		0				0			
NB Right	205	1	1.00	0.13	206	1	1.00	0.13	
Comb. L-T-R		0				0			
SB Left	45	1	1.00	0.03	45	1	1.00	0.03	0.778
Comb. L-T		0				0			
SB Thru	59	0	0.58	0.06	59	0	0.58	0.06	
Comb. T-R		1				1			
SB Right	42	0	0.42	0.06	42	0	0.42	0.06	
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.47	E-W:	0.48
	N-S:	0.16	N-S:	0.16
	Total:	0.63	Total:	0.64

Lost Time	0.10	0.10

V/C	0.730	0.736
Level of Service	C	C

E-W Street: Temple Ave
N-S Street: Grand Ave
Scenario: AM Peak
Overlap Reduce 10%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2021 without Project				AM 2021 + Project				2021 + Project with Mitigation				PHF
	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	
EB Left	372	2	2.00	0.13	380	2	2.00	0.13	380	2	2.00	0.13	0.844
Comb. L-T		0				0				0			
EB Thru	872	2	2.00	0.27	883	2	2.00	0.28	883	2	2.48	0.22	
Comb. T-R		0				0				1			
EB Right	168	1	1.00	0.11	168	1	1.00	0.11	187	0	0.52	0.22	
Comb. L-T-R		0				0				0			
WB Left	92	2	2.00	0.03	98	2	2.00	0.03	98	2	2.00	0.03	0.912
Comb. L-T		0				0				0			
WB Thru	492	2	2.00	0.15	495	2	2.00	0.15	495	2	2.05	0.15	
Comb. T-R		0				0				1			
WB Right	193	1	1.00	0.12	206	1	1.00	0.13	229	0	0.95	0.15	
Comb. L-T-R		0				0				0			
NB Left	218	2	2.00	0.08	218	2	2.00	0.08	218	2	2.00	0.08	0.848
Comb. L-T		0				0				0			
NB Thru	1425	3	3.00	0.30	1452	3	3.00	0.30	1452	3	3.00	0.30	
Comb. T-R		0				0				0			
NB Right	660	1	1.00	0.41	682	1	1.00	0.43	682	1	1.00	0.43	
Comb. L-T-R		0				0				0			
SB Left	377	2	2.00	0.13	396	2	2.00	0.14	396	2	2.00	0.14	0.853
Comb. L-T		0				0				0			
SB Thru	1260	2	2.48	0.32	1267	2	2.48	0.32	1267	2	2.48	0.32	
Comb. T-R		1				1				1			
SB Right	261	0	0.52	0.32	264	0	0.52	0.32	264	0	0.52	0.32	
Comb. L-T-R		0				0				0			

Critical Volumes	E-W:	0.30	E-W:	0.31	E-W:	0.28
	N-S:	0.54	N-S:	0.56	N-S:	0.56
	Total:	0.85	Total:	0.87	Total:	0.85
Lost Time		0.10		0.10		0.10
V/C		0.948		0.974		0.946
Level of Service		E		E		E

E-W Street: Temple Ave
N-S Street: Grand Ave
Scenario: PM Peak
Overlap Reduce 15%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM 2021 without Project				PM 2021 + Project				2021 + Project with Mitigation				PHF
	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	
EB Left	397	2	2.00	0.14	402	2	2.00	0.14	402	2	2.00	0.14	0.933
Comb. L-T		0				0				0			
EB Thru	652	2	2.00	0.20	659	2	2.00	0.21	659	2	2.14	0.19	
Comb. T-R		0				0				1			
EB Right	224	1	1.00	0.14	224	1	1.00	0.14	264	0	0.86	0.19	
Comb. L-T-R		0				0				0			
WB Left	241	2	2.00	0.08	252	2	2.00	0.09	252	2	2.00	0.09	0.923
Comb. L-T		0				0				0			
WB Thru	677	2	2.00	0.21	683	2	2.00	0.21	683	2	2.10	0.20	
Comb. T-R		0				0				1			
WB Right	237	1	1.00	0.15	250	1	1.00	0.16	294	0	0.90	0.20	
Comb. L-T-R		0				0				0			
NB Left	371	2	2.00	0.13	371	2	2.00	0.13	371	2	2.00	0.13	0.880
Comb. L-T		0				0				0			
NB Thru	1406	3	3.00	0.29	1424	3	3.00	0.30	1424	3	3.00	0.30	
Comb. T-R		0				0				0			
NB Right	310	1	1.00	0.19	324	1	1.00	0.20	324	1	1.00	0.20	
Comb. L-T-R		0				0				0			
SB Left	287	2	2.00	0.10	303	2	2.00	0.11	303	2	2.00	0.11	0.934
Comb. L-T		0				0				0			
SB Thru	896	2	2.17	0.26	910	2	2.17	0.26	910	2	2.17	0.26	
Comb. T-R		1				1				1			
SB Right	345	0	0.83	0.26	349	0	0.83	0.26	349	0	0.83	0.26	
Comb. L-T-R		0				0				0			

Critical Volumes			E-W:	0.35			E-W:	0.35			E-W:	0.34	
			N-S:	0.39			N-S:	0.40			N-S:	0.40	
			Total:	0.74			Total:	0.75			Total:	0.74	
Lost Time				0.10				0.10				0.10	
V/C				0.842				0.855				0.845	
Level of Service				D				D				D	

E-W Street: Temple Ave
N-S Street: Mt SAC Way
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2021 without Project				AM 2021 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	337	1	1.00	0.21	355	1	1.00	0.22	0.932
Comb. L-T		0				0			
EB Thru	1278	2	2.00	0.40	1303	2	2.00	0.41	
Comb. T-R		0				0			
EB Right	179	1	1.00	0.11	185	1	1.00	0.12	
Comb. L-T-R		0				0			
WB Left	64	1	1.00	0.04	66	1	1.00	0.04	0.904
Comb. L-T		0				0			
WB Thru	708	2	2.00	0.22	725	2	2.00	0.23	
Comb. T-R		0				0			
WB Right	246	1	1.00	0.15	257	1	1.00	0.16	
Comb. L-T-R		0				0			
NB Left	10	0	0.41	0.01	11	0	0.44	0.02	0.714
Comb. L-T		1				1			
NB Thru	14	0	0.59	0.01	14	0	0.56	0.02	
Comb. T-R		0				0			
NB Right	4	1	1.00	0.00	4	1	1.00	0.00	
Comb. L-T-R		0				0			
SB Left	69	0	0.75	0.06	72	0	0.76	0.06	0.795
Comb. L-T		1				1			
SB Thru	23	0	0.25	0.06	23	0	0.24	0.06	
Comb. T-R		0				0			
SB Right	132	1	1.00	0.08	137	1	1.00	0.09	
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.44	E-W:	0.45
	N-S:	0.10	N-S:	0.10
	Total:	0.54	Total:	0.55

Lost Time	0.10	0.10

V/C	0.637	0.650
Level of Service	B	B

E-W Street: Temple Ave
N-S Street: Mt SAC Way
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM 2021 without Project				PM 2021 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	192	1	1.00	0.12	206	1	1.00	0.13	0.915
Comb. L-T		0				0			
EB Thru	1064	2	2.00	0.33	1087	2	2.00	0.34	
Comb. T-R		0				0			
EB Right	38	1	1.00	0.02	42	1	1.00	0.03	
Comb. L-T-R		0				0			
WB Left	13	1	1.00	0.01	14	1	1.00	0.01	0.967
Comb. L-T		0				0			
WB Thru	887	2	2.00	0.28	907	2	2.00	0.28	
Comb. T-R		0				0			
WB Right	78	1	1.00	0.05	85	1	1.00	0.05	
Comb. L-T-R		0				0			
NB Left	116	0	0.88	0.08	120	0	0.89	0.08	0.717
Comb. L-T		1				1			
NB Thru	15	0	0.12	0.08	15	0	0.11	0.08	
Comb. T-R		0				0			
NB Right	22	1	1.00	0.01	24	1	1.00	0.01	
Comb. L-T-R		0				0			
SB Left	151	0	0.96	0.10	157	0	0.96	0.10	0.852
Comb. L-T		1				1			
SB Thru	6	0	0.04	0.10	6	0	0.04	0.10	
Comb. T-R		0				0			
SB Right	191	1	1.00	0.12	202	1	1.00	0.13	
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.40	E-W:	0.41
	N-S:	0.20	N-S:	0.21
	Total:	0.60	Total:	0.62

Lost Time	0.10	0.10

V/C	0.699	0.722
Level of Service	B	C

E-W Street: Temple Ave
N-S Street: Transit Center Access
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2021 without Project				AM 2021 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	26	1	1.00	0.02	26	1	1.00	0.02	0.859
Comb. L-T		0				0			
EB Thru	1536	2	2.00	0.48	1562	2	2.00	0.49	
Comb. T-R		0				0			
EB Right	0	1	1.00	0.00	6	1	1.00	0.00	
Comb. L-T-R		0				0			
WB Left (U)	0	1	1.00	0.00	4	1	1.00	0.00	0.853
Comb. L-T		0				0			
WB Thru	965	2	2.00	0.30	996	2	2.00	0.31	
Comb. T-R		0				0			
WB Right	127	1	1.00	0.08	127	1	1.00	0.08	
Comb. L-T-R		0				0			
NB Left	0	1	1.00	0.00	1	1	1.00	0.00	0.920
Comb. L-T		0				0			
NB Thru	0	0	0.00		0	0	0.00		
Comb. T-R		0				0			
NB Right	0	1	1.00	0.00	1	1	1.00	0.00	
Comb. L-T-R		0				0			
SB Left	16	0	0.50	0.02	16	0	0.50	0.02	0.750
Comb. L-T		0				0			
SB Thru	0	0	0.00		0	0	0.00		
Comb. T-R		0				0			
SB Right	16	0	0.50	0.02	16	0	0.50	0.02	
Comb. L-T-R		1				1			

Critical Volumes	E-W:	0.48	E-W:	0.49
	N-S:	0.02	N-S:	0.02
	Total:	0.50	Total:	0.51

Lost Time	0.10	0.10

V/C	0.600	0.611
Level of Service	B	B

E-W Street: Temple Ave
N-S Street: Transit Center Access
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM 2021 without Project				PM 2021 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	38	1	1.00	0.02	38	1	1.00	0.02	0.912
Comb. L-T		0				0			
EB Thru	1098	2	2.00	0.34	1123	2	2.00	0.35	
Comb. T-R		0				0			
EB Right	0	1	1.00	0.00	3	1	1.00	0.00	
Comb. L-T-R		0				0			
WB Left (U)	0	1	1.00	0.00	2	1	1.00	0.00	0.944
Comb. L-T		0				0			
WB Thru	1018	2	2.00	0.32	1043	2	2.00	0.33	
Comb. T-R		0				0			
WB Right	82	1	1.00	0.05	82	1	1.00	0.05	
Comb. L-T-R		0				0			
NB Left	0	1	1.00	0.00	3	1	1.00	0.00	0.920
Comb. L-T		0				0			
NB Thru	0	0	0.00		0	0	0.00		
Comb. T-R		0				0			
NB Right	0	1	1.00	0.00	2	1	1.00	0.00	
Comb. L-T-R		0				0			
SB Left	44	0	0.64	0.04	44	0	0.64	0.04	0.794
Comb. L-T		0				0			
SB Thru	0	0	0.00		0	0	0.00		
Comb. T-R		0				0			
SB Right	25	0	0.36	0.04	25	0	0.36	0.04	
Comb. L-T-R		1				1			

Critical Volumes	E-W:	0.34	E-W:	0.35
	N-S:	0.04	N-S:	0.05
	Total:	0.39	Total:	0.40

Lost Time	0.10	0.10

V/C	0.486	0.498
Level of Service	A	A

E-W Street: Temple Ave
N-S Street: Bonita Dr
Scenario: AM Peak
Overlap Reduce 10%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2021 without Project				AM 2021 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	333	2	2.00	0.12	352	2	2.00	0.12	0.883
Comb. L-T		0				0			
EB Thru	799	2	2.00	0.25	806	2	2.00	0.25	
Comb. T-R		0				0			
EB Right	134	1	1.00	0.08	134	1	1.00	0.08	
Comb. L-T-R		0				0			
WB Left	132	1	1.00	0.08	136	1	1.00	0.08	0.929
Comb. L-T		0				0			
WB Thru	1053	2	2.00	0.33	1080	2	2.00	0.34	
Comb. T-R		0				0			
WB Right	551	1	1.00	0.34	575	1	1.00	0.36	
Comb. L-T-R		0				0			
NB Left	28	1	1.00	0.02	28	1	1.00	0.02	0.579
Comb. L-T		0				0			
NB Thru	21	1	1.00	0.01	21	1	1.00	0.01	
Comb. T-R		0				0			
NB Right	28	1	1.00	0.02	29	1	1.00	0.02	
Comb. L-T-R		0				0			
SB Left	93	2	2.00	0.03	101	2	2.00	0.04	0.733
Comb. L-T		0				0			
SB Thru	30	1	1.00	0.02	30	1	1.00	0.02	
Comb. T-R		0				0			
SB Right	47	1	1.00	0.03	52	1	1.00	0.03	
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.46	E-W:	0.48
	N-S:	0.05	N-S:	0.05
	Total:	0.51	Total:	0.54

Lost Time	0.10	0.10

V/C	0.610	0.635
Level of Service	B	B

E-W Street: Temple Ave
N-S Street: Bonita Dr
Scenario: PM Peak
Overlap Reduce 15%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM 2021 without Project				PM 2021 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	190	2	2.00	0.07	203	2	2.00	0.07	0.875
Comb. L-T		0				0			
EB Thru	989	2	2.00	0.31	1005	2	2.00	0.31	
Comb. T-R		0				0			
EB Right	25	1	1.00	0.02	25	1	1.00	0.02	
Comb. L-T-R		0				0			
WB Left	26	1	1.00	0.02	28	1	1.00	0.02	0.900
Comb. L-T		0				0			
WB Thru	992	2	2.00	0.31	1011	2	2.00	0.32	
Comb. T-R		0				0			
WB Right	159	1	1.00	0.10	176	1	1.00	0.11	
Comb. L-T-R		0				0			
NB Left	15	1	1.00	0.01	15	1	1.00	0.01	0.886
Comb. L-T		0				0			
NB Thru	12	1	1.00	0.01	12	1	1.00	0.01	
Comb. T-R		0				0			
NB Right	62	1	1.00	0.04	64	1	1.00	0.04	
Comb. L-T-R		0				0			
SB Left	193	2	2.00	0.07	212	2	2.00	0.07	0.787
Comb. L-T		0				0			
SB Thru	6	1	1.00	0.00	6	1	1.00	0.00	
Comb. T-R		0				0			
SB Right	89	1	1.00	0.06	98	1	1.00	0.06	
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.38	E-W:	0.39
	N-S:	0.11	N-S:	0.11
	Total:	0.48	Total:	0.50

Lost Time	0.10	0.10

V/C	0.582	0.601
Level of Service	A	B

Intersection	
Int Delay, s/veh	0

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations								
Traffic Vol, veh/h	1	1	788	0	1621	139	0	0
Future Vol, veh/h	1	1	788	0	1621	139	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	None
Storage Length	-	350	-	137	-	120	-	0
Veh in Median Storage, #	-	-	0	-	0	-	0	-
Grade, %	-	-	0	-	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2
Mvmt Flow	1	1	857	0	1762	151	0	0

Major/Minor	Major1			Major2			Minor2	
Conflicting Flow All	1762	1913	0	857	-	0	-	881
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-
Critical Hdwy	6.44	4.14	-	6.44	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.52	2.22	-	2.52	-	-	-	3.32
Pot Cap-1 Maneuver	106	306	-	410	-	-	0	290
Stage 1	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	0	-
Platoon blocked, %			-		-	-		
Mov Cap-1 Maneuver	157	157	-	410	-	-	-	290
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBU	WBT	WBR	SBLn1
Capacity (veh/h)	157	-	410	-	-	-
HCM Lane V/C Ratio	0.014	-	-	-	-	-
HCM Control Delay (s)	28.2	-	0	-	-	0
HCM Lane LOS	D	-	A	-	-	A
HCM 95th %tile Q(veh)	0	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations								
Traffic Vol, veh/h	1	1	801	0	1671	144	0	0
Future Vol, veh/h	1	1	801	0	1671	144	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	None
Storage Length	-	350	-	137	-	120	-	0
Veh in Median Storage, #	-	-	0	-	0	-	0	-
Grade, %	-	-	0	-	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2
Mvmt Flow	1	1	871	0	1816	157	0	0

Major/Minor	Major1			Major2			Minor2	
Conflicting Flow All	1816	1973	0	871	-	0	-	908
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-
Critical Hdwy	6.44	4.14	-	6.44	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.52	2.22	-	2.52	-	-	-	3.32
Pot Cap-1 Maneuver	98	290	-	402	-	-	0	278
Stage 1	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	0	-
Platoon blocked, %			-		-	-		
Mov Cap-1 Maneuver	146	146	-	402	-	-	-	278
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBU	WBT	WBR	SBLn1
Capacity (veh/h)	146	-	402	-	-	-
HCM Lane V/C Ratio	0.015	-	-	-	-	-
HCM Control Delay (s)	29.9	-	0	-	-	0
HCM Lane LOS	D	-	A	-	-	A
HCM 95th %tile Q(veh)	0	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations								
Traffic Vol, veh/h	1	1	1080	3	1053	19	0	0
Future Vol, veh/h	1	1	1080	3	1053	19	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	None
Storage Length	-	350	-	137	-	120	-	0
Veh in Median Storage, #	-	-	0	-	0	-	0	-
Grade, %	-	-	0	-	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2
Mvmt Flow	1	1	1174	3	1145	21	0	0

Major/Minor	Major1			Major2			Minor2	
Conflicting Flow All	1145	1166	0	1174	-	0	-	573
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-
Critical Hdwy	6.44	4.14	-	6.44	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.52	2.22	-	2.52	-	-	-	3.32
Pot Cap-1 Maneuver	268	595	-	257	-	-	0	463
Stage 1	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	0	-
Platoon blocked, %			-		-	-		
Mov Cap-1 Maneuver	370	370	-	257	-	-	-	463
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0.1	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBU	WBT	WBR	SBLn1
Capacity (veh/h)	370	-	257	-	-	-
HCM Lane V/C Ratio	0.006	-	0.013	-	-	-
HCM Control Delay (s)	14.8	-	19.2	-	-	0
HCM Lane LOS	B	-	C	-	-	A
HCM 95th %tile Q(veh)	0	-	0	-	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations								
Traffic Vol, veh/h	1	1	1110	3	1088	22	0	0
Future Vol, veh/h	1	1	1110	3	1088	22	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	None
Storage Length	-	350	-	137	-	120	-	0
Veh in Median Storage, #	-	-	0	-	0	-	0	-
Grade, %	-	-	0	-	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2
Mvmt Flow	1	1	1207	3	1183	24	0	0

Major/Minor	Major1			Major2			Minor2	
Conflicting Flow All	1183	1207	0	1207	-	0	-	592
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-
Critical Hdwy	6.44	4.14	-	6.44	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.52	2.22	-	2.52	-	-	-	3.32
Pot Cap-1 Maneuver	253	574	-	244	-	-	0	449
Stage 1	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	0	-
Platoon blocked, %			-		-	-		
Mov Cap-1 Maneuver	351	351	-	244	-	-	-	449
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0.1	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBU	WBT	WBR	SBLn1
Capacity (veh/h)	351	-	244	-	-	-
HCM Lane V/C Ratio	0.006	-	0.013	-	-	-
HCM Control Delay (s)	15.3	-	20	-	-	0
HCM Lane LOS	C	-	C	-	-	A
HCM 95th %tile Q(veh)	0	-	0	-	-	-

E-W Street: Temple Ave
N-S Street: University Dr
Scenario: AM Peak
Overlap Reduce 15%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2021 without Project				AM 2021 + Project				2021 + Project with Mitigation				PHF
	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	
EB Left	337	2	2.00	0.12	337	2	2.00	0.12	337	2	2.00	0.12	0.814
Comb. L-T		0				0							
EB Thru	627	2	2.00	0.20	643	2	2.00	0.20	643	2	2.00	0.20	
Comb. T-R		0				0							
EB Right	2	1	1.00	0.00	2	1	1.00	0.00	2	1	1.00	0.00	
Comb. L-T-R		0				0							
WB Left	15	1	1.00	0.01	15	1	1.00	0.01	15	1	1.00	0.01	0.983
Comb. L-T		0				0							
WB Thru	1650	2	2.00	0.52	1706	2	2.00	0.53	1706	2	2.30	0.46	
Comb. T-R		0				0				1			
WB Right	443	1	1.00	0.28	443	1	1.00	0.28	522	0	0.70	0.46	
Comb. L-T-R		0				0							
NB Left	0	1	1.00	0.00	0	1	1.00	0.00	0	1	1.00	0.00	0.500
Comb. L-T		0				0							
NB Thru	4	0	0.50	0.01	4	0	0.50	0.01	4		0.50	0.01	
Comb. T-R		1				1				1			
NB Right	4	0	0.50	0.01	4	0	0.50	0.01	4		0.50	0.01	
Comb. L-T-R		0				0							
SB Left	264	1	1.99	0.08	264	1	1.99	0.08	264	1	1.99	0.08	0.759
Comb. L-T		1				1				1			
SB Thru	1	0	0.01	0.08	1	0	0.01	0.08	1		0.01	0.08	
Comb. T-R		0				0							
SB Right	190	1	1.00	0.12	190	1	1.00	0.12	190	1	1.00	0.12	
Comb. L-T-R		0				0							

Critical Volumes		E-W:	0.63		E-W:	0.65		E-W:	0.58
		N-S:	0.12		N-S:	0.12		N-S:	0.12
		Total:	0.75		Total:	0.77		Total:	0.70
Lost Time			0.10			0.10			0.10
V/C			0.851			0.868			0.800
Level of Service			D			D			C

E-W Street: Temple Ave
N-S Street: University Dr
Scenario: PM Peak
Overlap Reduce 40%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM 2021 without Project				PM 2021 + Project				2021 + Project with Mitigation				PHF
	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	
EB Left	147	2	2.00	0.05	147	2	2.00	0.05	147	2	2.00	0.05	0.886
Comb. L-T		0				0							
EB Thru	1065	2	2.00	0.33	1099	2	2.00	0.34	1099	2	2.00	0.34	
Comb. T-R		0				0							
EB Right	1	1	1.00	0.00	1	1	1.00	0.00	1	1	1.00	0.00	
Comb. L-T-R		0				0							
WB Left	39	1	1.00	0.02	39	1	1.00	0.02	39	1	1.00	0.02	0.897
Comb. L-T		0				0							
WB Thru	1007	2	2.00	0.31	1050	2	2.00	0.33	1050	2	2.36	0.28	
Comb. T-R		0				0				1			
WB Right	171	1	1.00	0.11	171	1	1.00	0.11	286	0	0.64	0.28	
Comb. L-T-R		0				0							
NB Left	4	1	1.00	0.00	4	1	1.00	0.00	4	1	1.00	0.00	0.563
Comb. L-T		0				0							
NB Thru	7	0	0.57	0.01	7	0	0.57	0.01	7		0.57	0.01	
Comb. T-R		1				1				1			
NB Right	5	0	0.43	0.01	5	0	0.43	0.01	5		0.43	0.01	
Comb. L-T-R		0				0							
SB Left	709	1	1.95	0.23	709	1	1.95	0.23	709	1	1.95	0.23	0.790
Comb. L-T		1				1				1			
SB Thru	16	0	0.05	0.23	16	0	0.05	0.23	16		0.05	0.23	
Comb. T-R		0				0							
SB Right	216	1	1.00	0.14	216	1	1.00	0.14	216	1	1.00	0.14	
Comb. L-T-R		0				0							

Critical Volumes			E-W:	0.37			E-W:	0.38			E-W:	0.37	
			N-S:	0.23			N-S:	0.23			N-S:	0.23	
			Total:	0.60			Total:	0.61			Total:	0.60	
Lost Time				0.10				0.10				0.10	
V/C				0.700				0.713				0.702	
Level of Service				C				C				C	

E-W Street: Temple Ave
N-S Street: Campus Dr
Scenario: AM Peak
Overlap Reduce 10%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2021 without Project				AM 2021 + Project				2021 + Project with Mitigation				PHF
	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	
EB Left	366	2	2.00	0.13	374	2	2.00	0.13	374	2	2.00	0.13	0.883
Comb. L-T		0				0				0			
EB Thru	442	2	2.90	0.10	449	2	2.90	0.10	449	2	2.90	0.10	
Comb. T-R		1				1				1			
EB Right	16	0	0.10	0.10	16	0	0.10	0.10	16	0	0.10	0.10	
Comb. L-T-R		0				0				0			
WB Left	22	1	1.00	0.01	22	1	1.00	0.01	22	1	1.00	0.01	0.993
Comb. L-T		0				0				0			
WB Thru	1378	2	2.00	0.43	1403	2	2.00	0.44	1403	2	2.45	0.36	
Comb. T-R		0				0				1			
WB Right	317	1	1.00	0.20	317	1	1.00	0.20	317	0	0.55	0.36	
Comb. L-T-R		0				0				0			
NB Left	58	1	1.00	0.04	58	1	1.00	0.04	58	1	1.00	0.04	0.688
Comb. L-T		0				0				0			
NB Thru	45	1	1.27	0.02	45	1	1.27	0.02	45	1	1.27	0.02	
Comb. T-R		1				1				1			
NB Right	26	0	0.73	0.02	26	0	0.73	0.02	26	0	0.73	0.02	
Comb. L-T-R		0				0				0			
SB Left	150	1	1.70	0.06	150	1	1.70	0.06	150	1	1.70	0.06	0.837
Comb. L-T		1				1				1			
SB Thru	26	0	0.30	0.06	26	0	0.30	0.06	26	0	0.30	0.06	
Comb. T-R		0				0				0			
SB Right	1048	2	2.00	0.33	1080	2	2.00	0.34	1080	2	2.00	0.34	
Comb. L-T-R		0				0				0			

Critical Volumes			E-W:	0.56			E-W:	0.57			E-W:	0.49	
			N-S:	0.36			N-S:	0.37			N-S:	0.37	
			Total:	0.92			Total:	0.94			Total:	0.86	
Lost Time				0.10				0.10				0.10	
V/C				1.021				1.042				0.962	
Level of Service				F				F				E	

E-W Street: Temple Ave
N-S Street: Campus Dr
Scenario: PM Peak
Overlap Reduce 25%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM 2021 without Project				PM 2021 + Project				2021 + Project with Mitigation				PHF
	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	
EB Left	673	2	2.00	0.23	691	2	2.00	0.24	691	2	2.00	0.24	0.904
Comb. L-T		0				0				0			
EB Thru	993	2	2.89	0.21	1009	2	2.90	0.22	1009	2	2.90	0.22	
Comb. T-R		1				1				1			
EB Right	36	0	0.11	0.21	36	0	0.10	0.22	36	0	0.10	0.22	
Comb. L-T-R		0				0				0			
WB Left	57	1	1.00	0.04	57	1	1.00	0.04	57	1	1.00	0.04	0.892
Comb. L-T		0				0				0			
WB Thru	852	2	2.00	0.27	871	2	2.00	0.27	871	2	2.00	0.27	
Comb. T-R		0				0				1			
WB Right	438	1	1.00	0.27	438	1	1.00	0.27	438	0	1.00	0.27	
Comb. L-T-R		0				0				0			
NB Left	47	1	1.00	0.03	47	1	1.00	0.03	47	1	1.00	0.03	0.825
Comb. L-T		0				0				0			
NB Thru	56	1	0.96	0.04	56	1	0.96	0.04	56	1	0.96	0.04	
Comb. T-R		1				1				1			
NB Right	61	0	1.04	0.04	61	0	1.04	0.04	61	0	1.04	0.04	
Comb. L-T-R		0				0				0			
SB Left	373	1	1.79	0.13	373	1	1.79	0.13	373	1	1.79	0.13	0.863
Comb. L-T		1				1				1			
SB Thru	44	0	0.21	0.13	44	0	0.21	0.13	44	0	0.21	0.13	
Comb. T-R		0				0				0			
SB Right	376	2	2.00	0.12	394	2	2.00	0.12	394	2	2.00	0.12	
Comb. L-T-R		0				0				0			

Critical Volumes			E-W:	0.51			E-W:	0.51			E-W:	0.51	
			N-S:	0.17			N-S:	0.17			N-S:	0.17	
			Total:	0.67			Total:	0.68			Total:	0.68	
Lost Time				0.10				0.10				0.10	
V/C				0.774				0.781				0.779	
Level of Service				C				C				C	

E-W Street: Kellogg Dr
N-S Street: Campus Dr
Scenario: AM Peak
Overlap Reduce 20%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2021 without Project				AM 2021 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	50	1	1.00	0.03	50	1	1.00	0.03	0.917
Comb. L-T		0				0			
EB Thru	166	1	1.52	0.07	166	1	1.51	0.07	
Comb. T-R		1				1			
EB Right	468	1	1.48	0.20	488	1	1.49	0.20	
Comb. L-T-R		0				0			
WB Left	219	1	1.00	0.14	219	1	1.00	0.14	0.717
Comb. L-T		0				0			
WB Thru	477	2	2.00	0.15	477	2	2.00	0.15	
Comb. T-R		0				0			
WB Right	71	1	1.00	0.04	71	1	1.00	0.04	
Comb. L-T-R		0				0			
NB Left	410	2	2.00	0.14	411	2	2.00	0.14	0.876
Comb. L-T		0				0			
NB Thru	316	1	1.83	0.11	323	1	1.83	0.11	
Comb. T-R		1				1			
NB Right	30	0	0.17	0.11	30	0	0.17	0.11	
Comb. L-T-R		0				0			
SB Left	74	1	1.00	0.05	74	1	1.00	0.05	0.814
Comb. L-T		0				0			
SB Thru	712	1	1.69	0.26	722	1	1.69	0.27	
Comb. T-R		1				1			
SB Right	133	0	0.31	0.26	133	0	0.31	0.27	
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.34	E-W:	0.34
	N-S:	0.41	N-S:	0.41
	Total:	0.74	Total:	0.75
Lost Time		0.10		0.10
V/C		0.841		0.851
Level of Service		D		D

E-W Street: Kellogg Dr
N-S Street: Campus Dr
Scenario: PM Peak
Overlap Reduce 25%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM 2021 without Project				PM 2021 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	91	1	1.00	0.06	91	1	1.00	0.06	0.891
Comb. L-T		0				0			
EB Thru	230	1	1.67	0.09	230	1	1.65	0.09	
Comb. T-R		1				1			
EB Right	461	1	1.33	0.22	474	1	1.35	0.22	
Comb. L-T-R		0				0			
WB Left	35	1	1.00	0.02	35	1	1.00	0.02	0.925
Comb. L-T		0				0			
WB Thru	238	2	2.00	0.07	238	2	2.00	0.07	
Comb. T-R		0				0			
WB Right	145	1	1.00	0.09	145	1	1.00	0.09	
Comb. L-T-R		0				0			
NB Left	379	2	2.00	0.13	382	2	2.00	0.13	0.914
Comb. L-T		0				0			
NB Thru	729	1	1.93	0.24	744	1	1.93	0.24	
Comb. T-R		1				1			
NB Right	27	0	0.07	0.24	27	0	0.07	0.24	
Comb. L-T-R		0				0			
SB Left	25	1	1.00	0.02	25	1	1.00	0.02	0.887
Comb. L-T		0				0			
SB Thru	209	1	1.49	0.09	215	1	1.50	0.09	
Comb. T-R		1				1			
SB Right	72	0	0.51	0.09	72	0	0.50	0.09	
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.24	E-W:	0.24
	N-S:	0.25	N-S:	0.26
	Total:	0.49	Total:	0.50
Lost Time		0.10		0.10
V/C		0.590		0.598
Level of Service		A		A

E-W Street: Temple Ave
N-S Street: Valley Blvd
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2021 without Project				AM 2021 + Project				2021 + Project with Mitigation				PHF
	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	
EB Left	110	1	1.00	0.07	111	1	1.00	0.07	111	1	1.00	0.07	0.924
Comb. L-T		0				0							
EB Thru	333	2	2.17	0.10	339	2	2.18	0.10	339	2	2.18	0.10	
Comb. T-R		1				1				1			
EB Right	127	0	0.83	0.10	127	0	0.82	0.10	127		0.82	0.10	
Comb. L-T-R		0				0							
WB Left	53	1	1.00	0.03	53	1	1.00	0.03	53	1	1.00	0.03	0.863
Comb. L-T		0				0							
WB Thru	1334	2	2.78	0.30	1357	2	2.78	0.30	1357	2	2.78	0.30	
Comb. T-R		1				1				1			
WB Right	105	0	0.22	0.30	105	0	0.22	0.30	105		0.22	0.30	
Comb. L-T-R		0				0							
NB Left	388	1	1.00	0.24	388	1	1.00	0.24	388	2	2.00	0.13	0.812
Comb. L-T		0				0							
NB Thru	552	2	2.00	0.17	552	2	2.00	0.17	552	2	2.00	0.17	
Comb. T-R		0				0							
NB Right	65	1	1.00	0.04	65	1	1.00	0.04	65	1	1.00	0.04	
Comb. L-T-R		0				0							
SB Left	78	1	1.00	0.05	78	1	1.00	0.05	78	1	1.00	0.05	0.924
Comb. L-T		0				0							
SB Thru	641	1	1.79	0.22	641	1	1.78	0.22	641	1	1.78	0.22	
Comb. T-R		1				1				1			
SB Right	431	1	1.21	0.22	436	1	1.22	0.22	436	1	1.22	0.22	
Comb. L-T-R		0				0							

Critical Volumes			E-W:	0.37			E-W:	0.37			E-W:	0.37	
			N-S:	0.47			N-S:	0.47			N-S:	0.36	
			Total:	0.83			Total:	0.84			Total:	0.73	
Lost Time				0.10				0.10				0.10	
V/C				0.934				0.941				0.833	
Level of Service				E				E				D	

E-W Street: Temple Ave
N-S Street: Valley Blvd
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM 2021 without Project				PM 2021 + Project				2021 + Project with Mitigation				PHF
	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	
EB Left	173	1	1.00	0.11	176	1	1.00	0.11	176	1	1.00	0.11	0.904
Comb. L-T		0				0							
EB Thru	1016	2	2.51	0.25	1028	2	2.51	0.26	1028	2	2.51	0.26	
Comb. T-R		1				1				1			
EB Right	199	0	0.49	0.25	199	0	0.49	0.26	199		0.49	0.26	
Comb. L-T-R		0				0							
WB Left	90	1	1.00	0.06	90	1	1.00	0.06	90	1	1.00	0.06	0.865
Comb. L-T		0				0							
WB Thru	869	2	2.62	0.21	885	2	2.63	0.21	885	2	2.63	0.21	
Comb. T-R		1				1				1			
WB Right	125	0	0.38	0.21	125	0	0.37	0.21	125		0.37	0.21	
Comb. L-T-R		0				0							
NB Left	334	1	1.00	0.21	334	1	1.00	0.21	334	2	2.00	0.12	0.874
Comb. L-T		0				0							
NB Thru	701	2	2.00	0.22	701	2	2.00	0.22	701	2	2.00	0.22	
Comb. T-R		0				0							
NB Right	66	1	1.00	0.04	66	1	1.00	0.04	66	1	1.00	0.04	
Comb. L-T-R		0				0							
SB Left	222	1	1.00	0.14	222	1	1.00	0.14	222	1	1.00	0.14	0.923
Comb. L-T		0				0							
SB Thru	379	1	2.00	0.12	379	1	2.00	0.12	379	1	2.00	0.12	
Comb. T-R		1				1				1			
SB Right	187	1	1.00	0.12	191	1	1.00	0.12	191	1	1.00	0.12	
Comb. L-T-R		0				0							

Critical Volumes			E-W:	0.31			E-W:	0.32			E-W:	0.32	
			N-S:	0.36			N-S:	0.36			N-S:	0.36	
			Total:	0.67			Total:	0.68			Total:	0.68	
Lost Time				0.10				0.10				0.10	
V/C				0.773				0.778				0.778	
Level of Service				C				C				C	

E-W Street: Temple Ave
N-S Street: Pomona Blvd
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2021 without Project				AM 2021 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	111	1	1.00	0.07	111	1	1.00	0.07	0.784
Comb. L-T		0				0			
EB Thru	421	2	2.91	0.09	427	2	2.91	0.09	
Comb. T-R		1				1			
EB Right	13	0	0.09	0.09	13	0	0.09	0.09	
Comb. L-T-R		0				0			
WB Left	739	1	1.00	0.46	739	1	1.00	0.46	0.837
Comb. L-T		0				0			
WB Thru	1322	2	2.71	0.30	1346	2	2.72	0.31	
Comb. T-R		1				1			
WB Right	141	0	0.29	0.30	141	0	0.28	0.31	
Comb. L-T-R		0				0			
NB Left	57	1	1.00	0.04	57	1	1.00	0.04	0.757
Comb. L-T		0				0			
NB Thru	141	1	1.00	0.09	141	1	1.00	0.09	
Comb. T-R		0				0			
NB Right	423	1	1.00	0.26	423	1	1.00	0.26	
Comb. L-T-R		0				0			
SB Left	65	1	0.36	0.11	65	1	0.36	0.11	0.782
Comb. L-T		1				1			
SB Thru	298	0	1.64	0.11	298	0	1.64	0.11	
Comb. T-R		0				0			
SB Right	148	1	1.00	0.09	148	1	1.00	0.09	
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.55	E-W:	0.55
	N-S:	0.38	N-S:	0.38
	Total:	0.93	Total:	0.93

Lost Time	0.10	0.10

V/C	1.030	1.031
Level of Service	F	F

E-W Street: Temple Ave
N-S Street: Pomona Blvd
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM 2021 without Project				PM 2021 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	138	1	1.00	0.09	138	1	1.00	0.09	0.887
Comb. L-T		0				0			
EB Thru	1179	2	2.96	0.25	1191	2	2.96	0.25	
Comb. T-R		1				1			
EB Right	15	0	0.04	0.25	15	0	0.04	0.25	
Comb. L-T-R		0				0			
WB Left	433	1	1.00	0.27	433	1	1.00	0.27	0.887
Comb. L-T		0				0			
WB Thru	817	2	2.78	0.18	833	2	2.79	0.19	
Comb. T-R		1				1			
WB Right	63	0	0.22	0.18	63	0	0.21	0.19	
Comb. L-T-R		0				0			
NB Left	71	1	1.00	0.04	71	1	1.00	0.04	0.960
Comb. L-T		0				0			
NB Thru	279	1	1.00	0.17	279	1	1.00	0.17	
Comb. T-R		0				0			
NB Right	651	1	1.00	0.41	651	1	1.00	0.41	
Comb. L-T-R		0				0			
SB Left	244	1	1.16	0.13	244	1	1.16	0.13	0.757
Comb. L-T		1				1			
SB Thru	177	0	0.84	0.13	177	0	0.84	0.13	
Comb. T-R		0				0			
SB Right	170	1	1.00	0.11	170	1	1.00	0.11	
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.52	E-W:	0.52
	N-S:	0.54	N-S:	0.54
	Total:	1.06	Total:	1.06

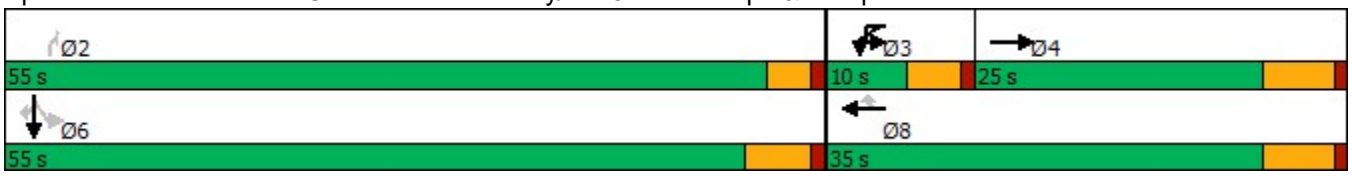
Lost Time	0.10	0.10

V/C	1.158	1.160
Level of Service	F	F

Lane Group	EBT	WBL	WBT	WBR	NBR	SBL	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	681	4	1134	37	4	676	9	968
Future Volume (vph)	681	4	1134	37	4	676	9	968
Turn Type	NA	Prot	NA	Perm	Perm	Perm	NA	Perm
Protected Phases	4	3	8				6	
Permitted Phases				8	2	6		6
Detector Phase	4	3	8	8	2	6	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	10.0	24.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	25.0	10.0	35.0	35.0	55.0	55.0	55.0	55.0
Total Split (%)	27.8%	11.1%	38.9%	38.9%	61.1%	61.1%	61.1%	61.1%
Yellow Time (s)	4.8	3.6	4.8	4.8	3.0	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	4.6	5.8	5.8	4.0	5.4	5.4	5.4
Lead/Lag	Lag	Lead						
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	20.6	5.6	25.8	25.8	42.2	40.8	40.8	40.8
Actuated g/C Ratio	0.26	0.07	0.33	0.33	0.54	0.52	0.52	0.52
v/c Ratio	0.57	0.31	0.74	0.04	0.00	0.71	0.77	0.70
Control Delay	29.7	46.7	27.4	7.3	0.0	19.8	22.8	17.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.7	46.7	27.4	7.3	0.0	19.8	22.8	17.1
LOS	C	D	C	A	A	B	C	B
Approach Delay	29.7		27.4				19.9	
Approach LOS	C		C				B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 78.3	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 24.3	Intersection LOS: C
Intersection Capacity Utilization 69.9%	ICU Level of Service C
Analysis Period (min) 15	

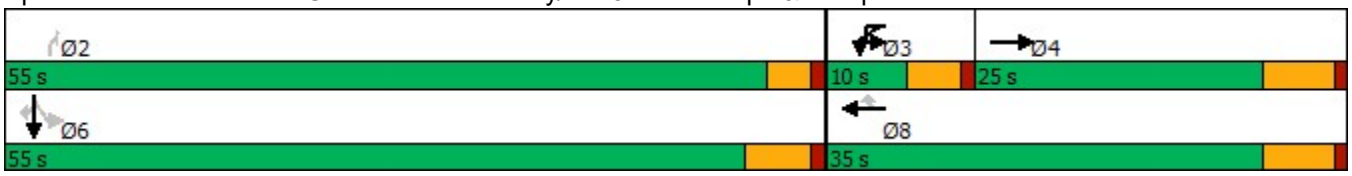
Splits and Phases: 14: Gas Station Driveway/SR-57 SB Ramps & Temple Ave



Lane Group	EBT	WBL	WBT	WBR	NBR	SBL	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	685	4	1139	37	4	676	9	983
Future Volume (vph)	685	4	1139	37	4	676	9	983
Turn Type	NA	Prot	NA	Perm	Perm	Perm	NA	Perm
Protected Phases	4	3	8				6	
Permitted Phases				8	2	6		6
Detector Phase	4	3	8	8	2	6	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	10.0	24.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	25.0	10.0	35.0	35.0	55.0	55.0	55.0	55.0
Total Split (%)	27.8%	11.1%	38.9%	38.9%	61.1%	61.1%	61.1%	61.1%
Yellow Time (s)	4.8	3.6	4.8	4.8	3.0	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	4.6	5.8	5.8	4.0	5.4	5.4	5.4
Lead/Lag	Lag	Lead						
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	20.6	5.6	25.9	25.9	42.5	41.1	41.1	41.1
Actuated g/C Ratio	0.26	0.07	0.33	0.33	0.54	0.52	0.52	0.52
v/c Ratio	0.57	0.31	0.74	0.04	0.00	0.72	0.77	0.71
Control Delay	29.8	46.8	27.6	7.3	0.0	20.1	22.9	17.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.8	46.8	27.6	7.3	0.0	20.1	22.9	17.5
LOS	C	D	C	A	A	C	C	B
Approach Delay	29.8		27.6				20.1	
Approach LOS	C		C				C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 78.7	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 24.5	Intersection LOS: C
Intersection Capacity Utilization 70.6%	ICU Level of Service C
Analysis Period (min) 15	

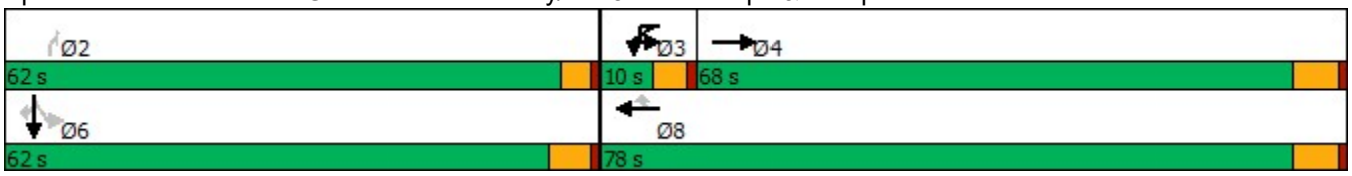
Splits and Phases: 14: Gas Station Driveway/SR-57 SB Ramps & Temple Ave



Lane Group	EBT	WBL	WBT	WBR	NBR	SBL	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	1926	7	525	49	7	1144	5	567
Future Volume (vph)	1926	7	525	49	7	1144	5	567
Turn Type	NA	Prot	NA	Perm	Perm	Perm	NA	Perm
Protected Phases	4	3	8				6	
Permitted Phases				8	2	6		6
Detector Phase	4	3	8	8	2	6	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	10.0	24.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	68.0	10.0	78.0	78.0	62.0	62.0	62.0	62.0
Total Split (%)	48.6%	7.1%	55.7%	55.7%	44.3%	44.3%	44.3%	44.3%
Yellow Time (s)	4.8	3.6	4.8	4.8	3.0	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	4.6	5.8	5.8	4.0	5.4	5.4	5.4
Lead/Lag	Lag	Lead						
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	61.7	5.4	69.6	69.6	58.1	56.7	56.7	56.7
Actuated g/C Ratio	0.45	0.04	0.51	0.51	0.42	0.41	0.41	0.41
v/c Ratio	0.93	0.70	0.22	0.04	0.01	0.95	0.98	0.72
Control Delay	44.5	110.6	19.0	4.2	0.0	64.2	71.5	23.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.5	110.6	19.0	4.2	0.0	64.2	71.5	23.7
LOS	D	F	B	A	A	E	E	C
Approach Delay	44.5		24.4				54.7	
Approach LOS	D		C				D	

Intersection Summary	
Cycle Length: 140	
Actuated Cycle Length: 137.5	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.98	
Intersection Signal Delay: 45.6	Intersection LOS: D
Intersection Capacity Utilization 94.7%	ICU Level of Service F
Analysis Period (min) 15	

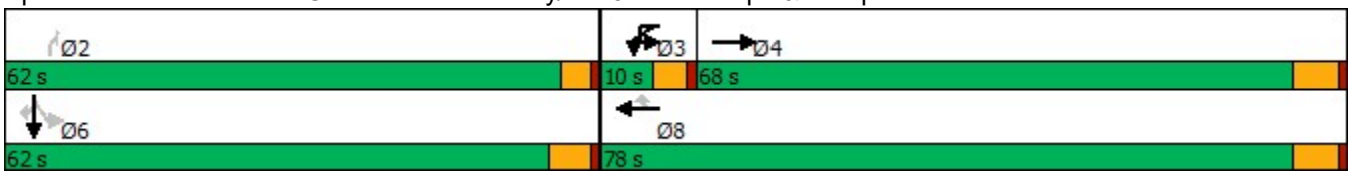
Splits and Phases: 14: Gas Station Driveway/SR-57 SB Ramps & Temple Ave



Lane Group	EBT	WBL	WBT	WBR	NBR	SBL	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	1935	7	528	49	7	1144	5	577
Future Volume (vph)	1935	7	528	49	7	1144	5	577
Turn Type	NA	Prot	NA	Perm	Perm	Perm	NA	Perm
Protected Phases	4	3	8				6	
Permitted Phases				8	2	6		6
Detector Phase	4	3	8	8	2	6	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	10.0	24.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	68.0	10.0	78.0	78.0	62.0	62.0	62.0	62.0
Total Split (%)	48.6%	7.1%	55.7%	55.7%	44.3%	44.3%	44.3%	44.3%
Yellow Time (s)	4.8	3.6	4.8	4.8	3.0	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	4.6	5.8	5.8	4.0	5.4	5.4	5.4
Lead/Lag	Lag	Lead						
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	61.9	5.4	69.7	69.7	58.1	56.7	56.7	56.7
Actuated g/C Ratio	0.45	0.04	0.51	0.51	0.42	0.41	0.41	0.41
v/c Ratio	0.93	0.70	0.22	0.04	0.01	0.95	0.99	0.73
Control Delay	44.8	110.6	19.0	4.2	0.0	64.4	72.1	24.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.8	110.6	19.0	4.2	0.0	64.4	72.1	24.7
LOS	D	F	B	A	A	E	E	C
Approach Delay	44.8		24.4				55.2	
Approach LOS	D		C				E	

Intersection Summary	
Cycle Length: 140	
Actuated Cycle Length: 137.6	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay: 45.9	Intersection LOS: D
Intersection Capacity Utilization 94.8%	ICU Level of Service F
Analysis Period (min) 15	

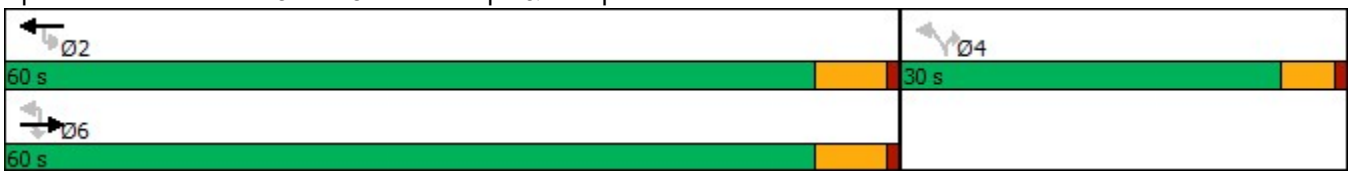
Splits and Phases: 14: Gas Station Driveway/SR-57 SB Ramps & Temple Ave



Lane Group	EBT	EBR	WBU	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	983	283	1	1603	355	255
Future Volume (vph)	983	283	1	1603	355	255
Turn Type	NA	Perm	Perm	NA	Perm	Perm
Protected Phases	6			2		
Permitted Phases		6	2		4	4
Detector Phase	6	6	2	2	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	26.0	26.0	26.0	26.0	26.0	26.0
Total Split (s)	60.0	60.0	60.0	60.0	30.0	30.0
Total Split (%)	66.7%	66.7%	66.7%	66.7%	33.3%	33.3%
Yellow Time (s)	4.8	4.8	4.8	4.8	3.6	3.6
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
Total Lost Time (s)	5.8	5.8		5.8	4.6	4.6
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	34.1	34.1		34.1	13.9	13.9
Actuated g/C Ratio	0.58	0.58		0.58	0.24	0.24
v/c Ratio	0.36	0.18		0.63	0.56	0.50
Control Delay	7.0	1.1		9.5	23.0	16.4
Queue Delay	0.0	0.0		0.0	0.0	0.0
Total Delay	7.0	1.1		9.5	23.0	16.4
LOS	A	A		A	C	B
Approach Delay	5.7			9.5	20.9	
Approach LOS	A			A	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 58.9	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 10.1	Intersection LOS: B
Intersection Capacity Utilization 52.0%	ICU Level of Service A
Analysis Period (min) 15	

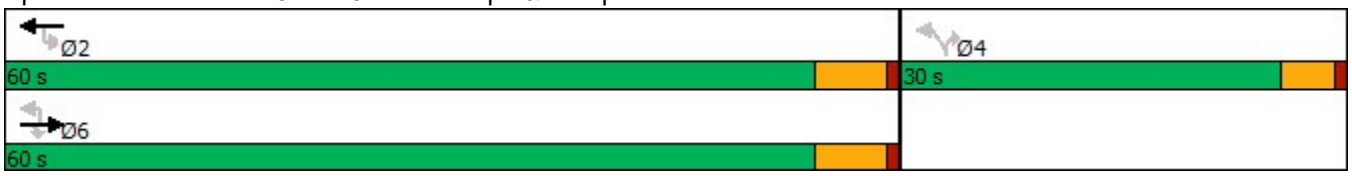
Splits and Phases: 15: SR-57 NB Ramps & Temple Ave



Lane Group	EBT	EBR	WBU	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	983	287	1	1605	358	255
Future Volume (vph)	983	287	1	1605	358	255
Turn Type	NA	Perm	Perm	NA	Perm	Perm
Protected Phases	6			2		
Permitted Phases		6	2		4	4
Detector Phase	6	6	2	2	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	26.0	26.0	26.0	26.0	26.0	26.0
Total Split (s)	60.0	60.0	60.0	60.0	30.0	30.0
Total Split (%)	66.7%	66.7%	66.7%	66.7%	33.3%	33.3%
Yellow Time (s)	4.8	4.8	4.8	4.8	3.6	3.6
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
Total Lost Time (s)	5.8	5.8		5.8	4.6	4.6
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	34.2	34.2		34.2	13.9	13.9
Actuated g/C Ratio	0.58	0.58		0.58	0.24	0.24
v/c Ratio	0.36	0.18		0.63	0.56	0.50
Control Delay	7.1	1.1		9.5	23.1	16.4
Queue Delay	0.0	0.0		0.0	0.0	0.0
Total Delay	7.1	1.1		9.5	23.1	16.4
LOS	A	A		A	C	B
Approach Delay	5.7			9.5	21.0	
Approach LOS	A			A	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 59.1	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 10.1	Intersection LOS: B
Intersection Capacity Utilization 52.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 15: SR-57 NB Ramps & Temple Ave



Lane Group	EBT	EBR	WBU	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2061	675	1	856	102	299
Future Volume (vph)	2061	675	1	856	102	299
Turn Type	NA	Perm	Perm	NA	Perm	Perm
Protected Phases	6			2		
Permitted Phases		6	2		4	4
Detector Phase	6	6	2	2	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	26.0	26.0	26.0	26.0	26.0	26.0
Total Split (s)	44.0	44.0	44.0	44.0	26.0	26.0
Total Split (%)	62.9%	62.9%	62.9%	62.9%	37.1%	37.1%
Yellow Time (s)	4.8	4.8	4.8	4.8	3.6	3.6
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
Total Lost Time (s)	5.8	5.8		5.8	4.6	4.6
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	38.3	38.3		38.3	11.9	11.9
Actuated g/C Ratio	0.63	0.63		0.63	0.20	0.20
v/c Ratio	0.70	0.36		0.31	0.43	0.57
Control Delay	9.5	1.1		5.9	22.9	29.4
Queue Delay	0.0	0.0		0.0	0.0	0.0
Total Delay	9.5	1.1		5.9	22.9	29.4
LOS	A	A		A	C	C
Approach Delay	7.4			5.9	25.3	
Approach LOS	A			A	C	

Intersection Summary		
Cycle Length: 70		
Actuated Cycle Length: 60.7		
Natural Cycle: 60		
Control Type: Actuated-Uncoordinated		
Maximum v/c Ratio: 0.70		
Intersection Signal Delay: 8.9	Intersection LOS: A	
Intersection Capacity Utilization 59.6%	ICU Level of Service B	
Analysis Period (min) 15		

Splits and Phases: 15: SR-57 NB Ramps & Temple Ave



Lane Group	EBT	EBR	WBU	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2062	683	1	857	104	299
Future Volume (vph)	2062	683	1	857	104	299
Turn Type	NA	Perm	Perm	NA	Perm	Perm
Protected Phases	6			2		
Permitted Phases		6	2		4	4
Detector Phase	6	6	2	2	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	26.0	26.0	26.0	26.0	26.0	26.0
Total Split (s)	44.0	44.0	44.0	44.0	26.0	26.0
Total Split (%)	62.9%	62.9%	62.9%	62.9%	37.1%	37.1%
Yellow Time (s)	4.8	4.8	4.8	4.8	3.6	3.6
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
Total Lost Time (s)	5.8	5.8		5.8	4.6	4.6
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	38.3	38.3		38.3	11.9	11.9
Actuated g/C Ratio	0.63	0.63		0.63	0.20	0.20
v/c Ratio	0.70	0.36		0.31	0.43	0.57
Control Delay	9.5	1.1		5.9	22.9	29.4
Queue Delay	0.0	0.0		0.0	0.0	0.0
Total Delay	9.5	1.1		5.9	22.9	29.4
LOS	A	A		A	C	C
Approach Delay	7.4			5.9	25.3	
Approach LOS	A			A	C	

Intersection Summary			
Cycle Length: 70			
Actuated Cycle Length: 60.7			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 8.9		Intersection LOS: A	
Intersection Capacity Utilization 59.6%		ICU Level of Service B	
Analysis Period (min) 15			

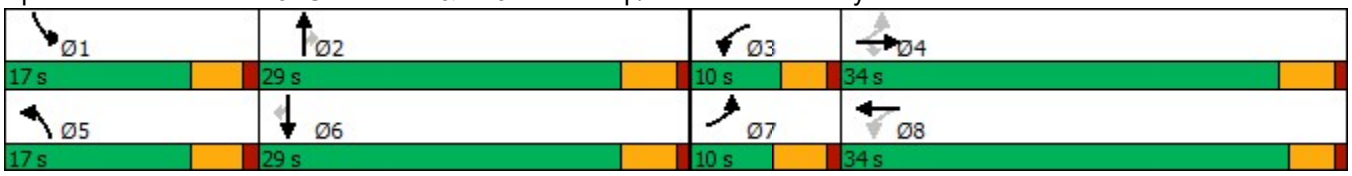
Splits and Phases: 15: SR-57 NB Ramps & Temple Ave



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBT	SBR	Ø1
Lane Configurations											
Traffic Volume (vph)	330	14	114	23	10	165	835	26	903	186	
Future Volume (vph)	330	14	114	23	10	165	835	26	903	186	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Prot	NA	Perm	NA	Perm	
Protected Phases	7	4		3	8	5	2		6		1
Permitted Phases	4		4	8				2		6	
Detector Phase	7	4	4	3	8	5	2	2	6	6	
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.7	22.7	22.7	9.5	22.5	9.7	22.7	22.7	22.7	22.7	9.7
Total Split (s)	10.0	34.0	34.0	10.0	34.0	17.0	29.0	29.0	29.0	29.0	17.0
Total Split (%)	11.1%	37.8%	37.8%	11.1%	37.8%	18.9%	32.2%	32.2%	32.2%	32.2%	19%
Yellow Time (s)	3.6	3.7	3.7	3.0	3.0	3.6	3.7	3.7	3.7	3.7	3.6
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	
Total Lost Time (s)		4.7	4.7		4.0	4.6	4.7	4.7	4.7	4.7	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)		24.6	24.6		25.3	11.4	40.6	40.6	24.5	24.5	
Actuated g/C Ratio		0.33	0.33		0.34	0.15	0.54	0.54	0.33	0.33	
v/c Ratio		0.87	0.20		0.10	0.66	0.47	0.03	0.84	0.31	
Control Delay		46.0	4.1		13.6	44.2	12.2	0.1	33.2	4.8	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay		46.0	4.1		13.6	44.2	12.2	0.1	33.2	4.8	
LOS		D	A		B	D	B	A	C	A	
Approach Delay		35.6			13.6		17.0		28.4		
Approach LOS		D			B		B		C		

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 74.6	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 24.9	Intersection LOS: C
Intersection Capacity Utilization 68.8%	ICU Level of Service C
Analysis Period (min) 15	

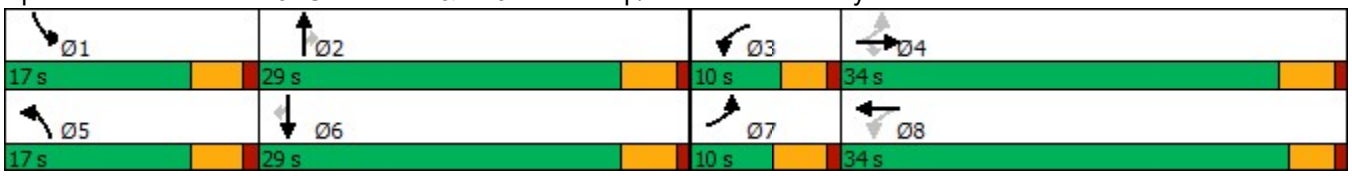
Splits and Phases: 16: Grand Ave & I-10 WB Ramp/7-Eleven Driveway



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBT	SBR	Ø1
Lane Configurations											
Traffic Volume (vph)	330	14	114	23	10	173	837	26	910	186	
Future Volume (vph)	330	14	114	23	10	173	837	26	910	186	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Prot	NA	Perm	NA	Perm	
Protected Phases	7	4		3	8	5	2		6		1
Permitted Phases	4		4	8				2		6	
Detector Phase	7	4	4	3	8	5	2	2	6	6	
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.7	22.7	22.7	9.5	22.5	9.7	22.7	22.7	22.7	22.7	9.7
Total Split (s)	10.0	34.0	34.0	10.0	34.0	17.0	29.0	29.0	29.0	29.0	17.0
Total Split (%)	11.1%	37.8%	37.8%	11.1%	37.8%	18.9%	32.2%	32.2%	32.2%	32.2%	19%
Yellow Time (s)	3.6	3.7	3.7	3.0	3.0	3.6	3.7	3.7	3.7	3.7	3.6
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	
Total Lost Time (s)		4.7	4.7		4.0	4.6	4.7	4.7	4.7	4.7	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)		24.6	24.6		25.3	11.6	40.8	40.8	24.5	24.5	
Actuated g/C Ratio		0.33	0.33		0.34	0.16	0.55	0.55	0.33	0.33	
v/c Ratio		0.88	0.20		0.10	0.68	0.47	0.03	0.85	0.31	
Control Delay		46.4	4.1		13.6	45.4	12.2	0.1	33.9	4.9	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay		46.4	4.1		13.6	45.4	12.2	0.1	33.9	4.9	
LOS		D	A		B	D	B	A	C	A	
Approach Delay		35.9			13.6		17.4		29.0		
Approach LOS		D			B		B		C		

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 74.8	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 25.4	Intersection LOS: C
Intersection Capacity Utilization 69.5%	ICU Level of Service C
Analysis Period (min) 15	

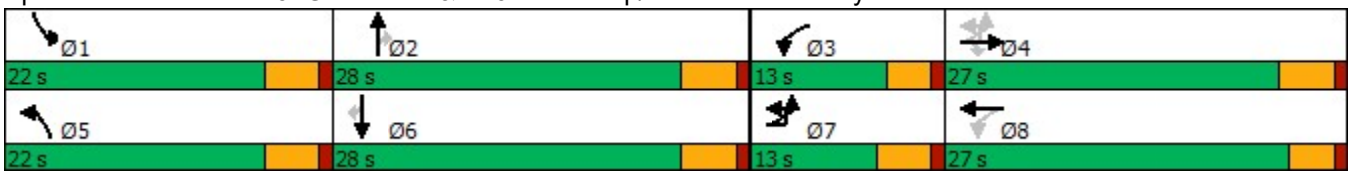
Splits and Phases: 16: Grand Ave & I-10 WB Ramp/7-Eleven Driveway



Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	221	13	64	38	19	321	872	46	5	841	345
Future Volume (vph)	1	221	13	64	38	19	321	872	46	5	841	345
Turn Type	pm+pt	pm+pt	NA	Perm	pm+pt	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	7	4		3	8	5	2		1	6	
Permitted Phases	4	4		4	8				2			6
Detector Phase	7	7	4	4	3	8	5	2	2	1	6	6
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	5.0
Minimum Split (s)	9.6	9.6	22.7	22.7	9.5	22.5	9.6	22.7	22.7	9.6	22.7	22.7
Total Split (s)	13.0	13.0	27.0	27.0	13.0	27.0	22.0	28.0	28.0	22.0	28.0	28.0
Total Split (%)	14.4%	14.4%	30.0%	30.0%	14.4%	30.0%	24.4%	31.1%	31.1%	24.4%	31.1%	31.1%
Yellow Time (s)	3.6	3.6	3.7	3.7	3.0	3.0	3.6	3.7	3.7	3.6	3.7	3.7
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	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)			4.7	4.7		4.0	4.6	4.7	4.7	4.6	4.7	4.7
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)			18.3	18.3		19.0	17.4	43.3	43.3	5.8	23.4	23.4
Actuated g/C Ratio			0.25	0.25		0.26	0.24	0.59	0.59	0.08	0.32	0.32
v/c Ratio			0.76	0.14		0.22	0.83	0.45	0.05	0.04	0.81	0.49
Control Delay			41.0	1.2		17.7	46.6	10.7	0.1	33.2	30.8	5.0
Queue Delay			0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay			41.0	1.2		17.7	46.6	10.7	0.1	33.2	30.8	5.0
LOS			D	A		B	D	B	A	C	C	A
Approach Delay			32.4			17.7		19.6			23.3	
Approach LOS			C			B		B			C	

Intersection Summary			
Cycle Length: 90			
Actuated Cycle Length: 73.2			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay: 22.5		Intersection LOS: C	
Intersection Capacity Utilization 69.7%		ICU Level of Service C	
Analysis Period (min) 15			

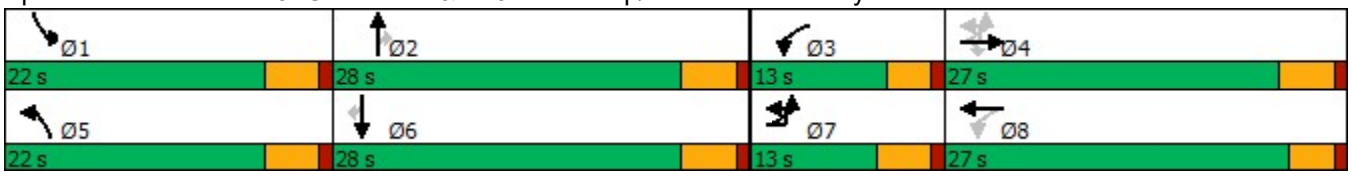
Splits and Phases: 16: Grand Ave & I-10 WB Ramp/7-Eleven Driveway



Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	221	13	64	38	19	339	876	46	5	846	345
Future Volume (vph)	1	221	13	64	38	19	339	876	46	5	846	345
Turn Type	pm+pt	pm+pt	NA	Perm	pm+pt	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	7	4		3	8	5	2		1	6	
Permitted Phases	4	4		4	8				2			6
Detector Phase	7	7	4	4	3	8	5	2	2	1	6	6
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	5.0
Minimum Split (s)	9.6	9.6	22.7	22.7	9.5	22.5	9.6	22.7	22.7	9.6	22.7	22.7
Total Split (s)	13.0	13.0	27.0	27.0	13.0	27.0	22.0	28.0	28.0	22.0	28.0	28.0
Total Split (%)	14.4%	14.4%	30.0%	30.0%	14.4%	30.0%	24.4%	31.1%	31.1%	24.4%	31.1%	31.1%
Yellow Time (s)	3.6	3.6	3.7	3.7	3.0	3.0	3.6	3.7	3.7	3.6	3.7	3.7
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	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)			4.7	4.7		4.0	4.6	4.7	4.7	4.6	4.7	4.7
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)			18.3	18.3		19.0	17.4	43.3	43.3	5.8	23.4	23.4
Actuated g/C Ratio			0.25	0.25		0.26	0.24	0.59	0.59	0.08	0.32	0.32
v/c Ratio			0.76	0.14		0.22	0.87	0.45	0.05	0.04	0.81	0.49
Control Delay			41.0	1.2		17.7	51.8	10.7	0.1	33.2	31.0	5.0
Queue Delay			0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay			41.0	1.2		17.7	51.8	10.7	0.1	33.2	31.0	5.0
LOS			D	A		B	D	B	A	C	C	A
Approach Delay			32.4			17.7		21.4			23.5	
Approach LOS			C			B		C			C	

Intersection Summary			
Cycle Length: 90			
Actuated Cycle Length: 73.2			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 23.4		Intersection LOS: C	
Intersection Capacity Utilization 70.9%		ICU Level of Service C	
Analysis Period (min) 15			

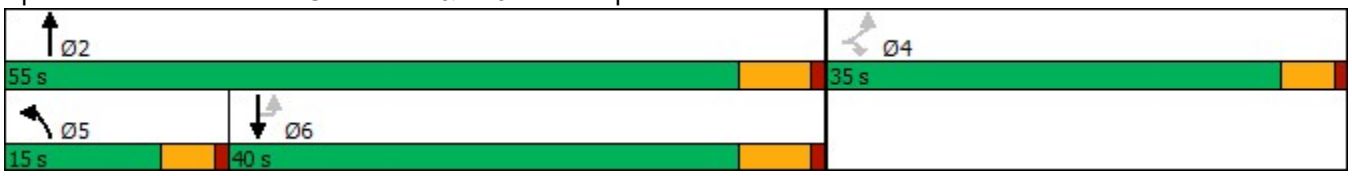
Splits and Phases: 16: Grand Ave & I-10 WB Ramp/7-Eleven Driveway



Lane Group	EBL	EBR	NBL	NBT	SBU	SBT
Lane Configurations						
Traffic Volume (vph)	282	624	41	747	2	814
Future Volume (vph)	282	624	41	747	2	814
Turn Type	Perm	Perm	Prot	NA	Perm	NA
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)	23.0	23.0	11.0	24.0	24.0	24.0
Total Split (s)	35.0	35.0	15.0	55.0	40.0	40.0
Total Split (%)	38.9%	38.9%	16.7%	61.1%	44.4%	44.4%
Yellow Time (s)	3.6	3.6	3.6	4.8	4.8	4.8
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
Total Lost Time (s)	4.6	4.6	4.6	5.8		5.8
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	27.6	27.6	7.8	37.6		30.6
Actuated g/C Ratio	0.36	0.36	0.10	0.49		0.40
v/c Ratio	0.48	0.89	0.25	0.47		0.85
Control Delay	24.1	31.2	39.8	13.4		28.9
Queue Delay	0.0	0.0	0.0	0.0		0.0
Total Delay	24.1	31.2	39.8	13.4		28.9
LOS	C	C	D	B		C
Approach Delay	29.0			14.8		28.9
Approach LOS	C			B		C

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 76.2	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 24.8	Intersection LOS: C
Intersection Capacity Utilization 75.9%	ICU Level of Service D
Analysis Period (min) 15	

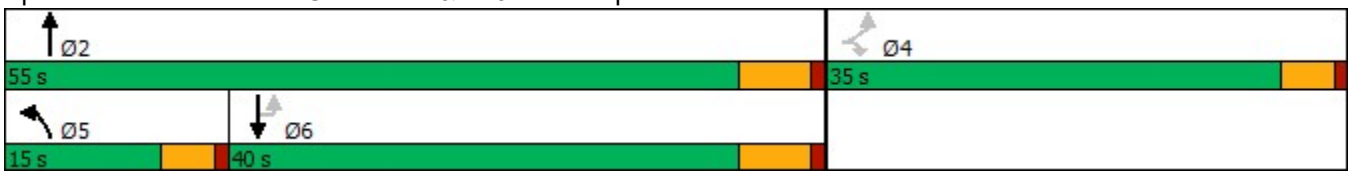
Splits and Phases: 17: Grand Ave & I-10 EB Ramps



Lane Group	EBL	EBR	NBL	NBT	SBU	SBT
Lane Configurations						
Traffic Volume (vph)	282	658	41	756	2	821
Future Volume (vph)	282	658	41	756	2	821
Turn Type	Perm	Perm	Prot	NA	Perm	NA
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)	23.0	23.0	11.0	24.0	24.0	24.0
Total Split (s)	35.0	35.0	15.0	55.0	40.0	40.0
Total Split (%)	38.9%	38.9%	16.7%	61.1%	44.4%	44.4%
Yellow Time (s)	3.6	3.6	3.6	4.8	4.8	4.8
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
Total Lost Time (s)	4.6	4.6	4.6	5.8		5.8
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	30.4	30.4	7.6	38.4		31.2
Actuated g/C Ratio	0.38	0.38	0.10	0.48		0.39
v/c Ratio	0.45	0.91	0.27	0.48		0.87
Control Delay	23.5	33.9	40.4	14.3		31.2
Queue Delay	0.0	0.0	0.0	0.0		0.0
Total Delay	23.5	33.9	40.4	14.3		31.2
LOS	C	C	D	B		C
Approach Delay	30.8			15.6		31.2
Approach LOS	C			B		C

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 79.5	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 26.6	Intersection LOS: C
Intersection Capacity Utilization 78.2%	ICU Level of Service D
Analysis Period (min) 15	

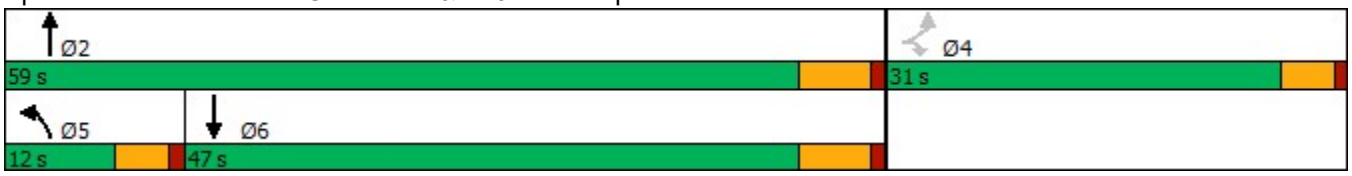
Splits and Phases: 17: Grand Ave & I-10 EB Ramps



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	266	246	49	965	592
Future Volume (vph)	266	246	49	965	592
Turn Type	Perm	Perm	Prot	NA	NA
Protected Phases			5	2	6
Permitted Phases	4	4			
Detector Phase	4	4	5	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	11.0	24.0	24.0
Total Split (s)	31.0	31.0	12.0	59.0	47.0
Total Split (%)	34.4%	34.4%	13.3%	65.6%	52.2%
Yellow Time (s)	3.6	3.6	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	5.8	5.8
Lead/Lag			Lead		Lag
Lead-Lag Optimize?					
Recall Mode	None	None	None	None	None
Act Effct Green (s)	15.8	15.8	7.4	31.0	25.1
Actuated g/C Ratio	0.27	0.27	0.13	0.53	0.43
v/c Ratio	0.61	0.43	0.24	0.56	0.67
Control Delay	27.3	5.7	34.2	10.3	14.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	27.3	5.7	34.2	10.3	14.8
LOS	C	A	C	B	B
Approach Delay	16.9			11.4	14.8
Approach LOS	B			B	B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 58.6	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 13.8	Intersection LOS: B
Intersection Capacity Utilization 56.5%	ICU Level of Service B
Analysis Period (min) 15	

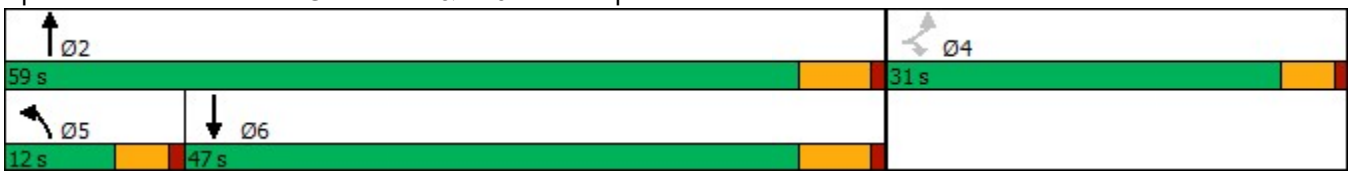
Splits and Phases: 17: Grand Ave & I-10 EB Ramps



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	266	269	49	987	597
Future Volume (vph)	266	269	49	987	597
Turn Type	Perm	Perm	Prot	NA	NA
Protected Phases			5	2	6
Permitted Phases	4	4			
Detector Phase	4	4	5	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	11.0	24.0	24.0
Total Split (s)	31.0	31.0	12.0	59.0	47.0
Total Split (%)	34.4%	34.4%	13.3%	65.6%	52.2%
Yellow Time (s)	3.6	3.6	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	5.8	5.8
Lead/Lag			Lead		Lag
Lead-Lag Optimize?					
Recall Mode	None	None	None	None	None
Act Effct Green (s)	15.9	15.9	7.4	31.3	25.4
Actuated g/C Ratio	0.27	0.27	0.13	0.53	0.43
v/c Ratio	0.61	0.46	0.24	0.57	0.67
Control Delay	27.5	5.7	34.4	10.4	14.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	27.5	5.7	34.4	10.4	14.8
LOS	C	A	C	B	B
Approach Delay	16.6			11.6	14.8
Approach LOS	B			B	B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 59	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 13.8	Intersection LOS: B
Intersection Capacity Utilization 56.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 17: Grand Ave & I-10 EB Ramps



E-W Street: Holt Ave
N-S Street: Grand Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2021 without Project				AM 2021 + Project				2021 + Project with Mitigation				PHF
	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	
EB Left	48	0	0.22	0.14	48	0	0.22	0.14	48	0	0.22	0.14	0.722
Comb. L-T		0				0				0			
EB Thru	21	0	0.10	0.14	21	0	0.10	0.14	21	0	0.10	0.14	
Comb. T-R		0				0				0			
EB Right	148	0	0.68	0.14	148	0	0.68	0.14	148	0	0.68	0.14	
Comb. L-T-R		1				1				1			
WB Left	544	1	1.00	0.34	547	1	1.00	0.34	547	1	1.00	0.34	0.751
Comb. L-T		0				0				0			
WB Thru	126	1	1.00	0.08	126	1	1.00	0.08	126	1	1.00	0.08	
Comb. T-R		0				0				0			
WB 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			
NB Left	29	1	1.00	0.02	29	1	1.00	0.02	29	1	1.00	0.02	0.863
Comb. L-T		0				0				0			
NB Thru	824	2	2.00	0.26	834	2	2.00	0.26	834	2	2.00	0.26	
Comb. T-R		0				0				0			
NB Right	202	1	1.00	0.13	202	1	1.00	0.13	202	1	1.00	0.13	
Comb. L-T-R		0				0				0			
SB Left	25	1	1.00	0.02	25	1	1.00	0.02	25	1	1.00	0.02	0.934
Comb. L-T		0				0				0			
SB Thru	1441	2	2.00	0.45	1484	2	2.00	0.46	1484	2	2.90	0.32	
Comb. T-R		0				0				1			
SB Right	52	1	1.00	0.03	52	1	1.00	0.03	52	0	0.10	0.32	
Comb. L-T-R		0				0				0			

Critical Volumes			E-W:	0.48			E-W:	0.48			E-W:	0.48	
			N-S:	0.47			N-S:	0.48			N-S:	0.34	
			Total:	0.94			Total:	0.96			Total:	0.82	
Lost Time				0.10				0.10				0.10	
V/C				1.045				1.060				0.916	
Level of Service				F				F				E	

E-W Street: Holt Ave
N-S Street: Grand Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM 2021 without Project				PM 2021 + Project				2021 + Project with Mitigation				PHF
	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	
EB Left	22	0	0.23	0.06	22	0	0.23	0.06	22	0	0.23	0.06	0.913
Comb. L-T		0				0				0			
EB Thru	37	0	0.39	0.06	37	0	0.39	0.06	37	0	0.39	0.06	
Comb. T-R		0				0				0			
EB Right	37	0	0.39	0.06	37	0	0.39	0.06	37	0	0.39	0.06	
Comb. L-T-R		1				1				1			
WB Left	240	1	1.00	0.15	241	1	1.00	0.15	241	1	1.00	0.15	0.945
Comb. L-T		0				0				0			
WB Thru	52	1	1.00	0.03	52	1	1.00	0.03	52	1	1.00	0.03	
Comb. T-R		0				0				0			
WB 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			
NB Left	54	1	1.00	0.03	54	1	1.00	0.03	54	1	1.00	0.03	0.927
Comb. L-T		0				0				0			
NB Thru	1009	2	2.00	0.32	1033	2	2.00	0.32	1033	2	2.00	0.32	
Comb. T-R		0				0				0			
NB Right	197	1	1.00	0.12	198	1	1.00	0.12	198	1	1.00	0.12	
Comb. L-T-R		0				0				0			
SB Left	36	1	1.00	0.02	36	1	1.00	0.02	36	1	1.00	0.02	0.940
Comb. L-T		0				0				0			
SB Thru	811	2	2.00	0.25	841	2	2.00	0.26	841	2	2.86	0.18	
Comb. T-R		0				0				1			
SB Right	42	1	1.00	0.03	42	1	1.00	0.03	42	0	0.14	0.18	
Comb. L-T-R		0				0				0			

Critical Volumes			E-W:	0.21			E-W:	0.21			E-W:	0.21	
			N-S:	0.34			N-S:	0.35			N-S:	0.35	
			Total:	0.55			Total:	0.56			Total:	0.56	
Lost Time				0.10				0.10				0.10	
V/C				0.648				0.656				0.656	
Level of Service				B				B				B	

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	14	25	27	893	1672	123
Future Vol, veh/h	14	25	27	893	1672	123
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Free
Storage Length	52	0	50	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	27	29	971	1817	134

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2361	-	1817	0	-	0
Stage 1	1817	-	-	-	-	-
Stage 2	544	-	-	-	-	-
Critical Hdwy	6.84	-	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	-	2.22	-	-	-
Pot Cap-1 Maneuver	30	0	334	-	-	0
Stage 1	115	0	-	-	-	0
Stage 2	546	0	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	27	-	334	-	-	-
Mov Cap-2 Maneuver	27	-	-	-	-	-
Stage 1	105	-	-	-	-	-
Stage 2	546	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	248.6	0.5	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	334	-	27	-	-
HCM Lane V/C Ratio	0.088	-	0.564	-	-
HCM Control Delay (s)	16.8	-	248.6	0	-
HCM Lane LOS	C	-	F	A	-
HCM 95th %tile Q(veh)	0.3	-	1.8	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	14	25	27	903	1714	123
Future Vol, veh/h	14	25	27	903	1714	123
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Free
Storage Length	52	0	50	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	27	29	982	1863	134

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2412	-	1863	0	-	0
Stage 1	1863	-	-	-	-	-
Stage 2	549	-	-	-	-	-
Critical Hdwy	6.84	-	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	-	2.22	-	-	-
Pot Cap-1 Maneuver	27	0	320	-	-	0
Stage 1	108	0	-	-	-	0
Stage 2	542	0	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	25	-	320	-	-	-
Mov Cap-2 Maneuver	25	-	-	-	-	-
Stage 1	98	-	-	-	-	-
Stage 2	542	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	278.2	0.5	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	320	-	25	-	-
HCM Lane V/C Ratio	0.092	-	0.609	-	-
HCM Control Delay (s)	17.4	-	278.2	0	-
HCM Lane LOS	C	-	F	A	-
HCM 95th %tile Q(veh)	0.3	-	1.9	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	11	30	1211	979	31
Future Vol, veh/h	5	11	30	1211	979	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Free
Storage Length	52	0	50	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	12	33	1316	1064	34

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1788	-	1064	0	-	0
Stage 1	1064	-	-	-	-	-
Stage 2	724	-	-	-	-	-
Critical Hdwy	6.84	-	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	-	2.22	-	-	-
Pot Cap-1 Maneuver	72	0	651	-	-	0
Stage 1	293	0	-	-	-	0
Stage 2	441	0	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	68	-	651	-	-	-
Mov Cap-2 Maneuver	68	-	-	-	-	-
Stage 1	278	-	-	-	-	-
Stage 2	441	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	62.5	0.3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	651	-	68	-	-
HCM Lane V/C Ratio	0.05	-	0.08	-	-
HCM Control Delay (s)	10.8	-	62.5	0	-
HCM Lane LOS	B	-	F	A	-
HCM 95th %tile Q(veh)	0.2	-	0.3	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	11	30	1234	1008	31
Future Vol, veh/h	5	11	30	1234	1008	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Free
Storage Length	52	0	50	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	12	33	1341	1096	34

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1833	-	1096	0	-	0
Stage 1	1096	-	-	-	-	-
Stage 2	737	-	-	-	-	-
Critical Hdwy	6.84	-	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	-	2.22	-	-	-
Pot Cap-1 Maneuver	68	0	633	-	-	0
Stage 1	282	0	-	-	-	0
Stage 2	434	0	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	64	-	633	-	-	-
Mov Cap-2 Maneuver	64	-	-	-	-	-
Stage 1	267	-	-	-	-	-
Stage 2	434	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	66.4	0.3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	633	-	64	-	-
HCM Lane V/C Ratio	0.052	-	0.085	-	-
HCM Control Delay (s)	11	-	66.4	0	-
HCM Lane LOS	B	-	F	A	-
HCM 95th %tile Q(veh)	0.2	-	0.3	-	-

Intersection	
Intersection Delay, s/veh	51.6
Intersection LOS	F

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	264	556	461	111	183	310
Future Vol, veh/h	264	556	461	111	183	310
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	287	604	501	121	199	337
Number of Lanes	0	2	2	0	2	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	3	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	3	2
HCM Control Delay	87.5	31.4	15.5
HCM LOS	F	D	C

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	59%	0%	0%	0%	100%	100%	0%
Vol Thru, %	41%	100%	100%	58%	0%	0%	0%
Vol Right, %	0%	0%	0%	42%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	449	371	307	265	92	92	310
LT Vol	264	0	0	0	92	92	0
Through Vol	185	371	307	154	0	0	0
RT Vol	0	0	0	111	0	0	310
Lane Flow Rate	488	403	334	288	99	99	337
Geometry Grp	8	8	8	8	7	7	7
Degree of Util (X)	1.143	0.91	0.783	0.651	0.243	0.243	0.548
Departure Headway (Hd)	8.428	8.127	8.731	8.429	9.085	9.085	6.065
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	430	447	418	432	398	398	600
Service Time	6.173	5.872	6.431	6.129	6.785	6.785	3.765
HCM Lane V/C Ratio	1.135	0.902	0.799	0.667	0.249	0.249	0.562
HCM Control Delay	116.8	51.9	36.5	25.5	14.7	14.7	15.9
HCM Lane LOS	F	F	E	D	B	B	C
HCM 95th-tile Q	17.8	10	6.8	4.5	0.9	0.9	3.3

Intersection	
Intersection Delay, s/veh	53.1
Intersection LOS	F

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	264	563	463	111	185	310
Future Vol, veh/h	264	563	463	111	185	310
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	287	612	503	121	201	337
Number of Lanes	0	2	2	0	2	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	3	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	3	2
HCM Control Delay	90.2	31.9	15.6
HCM LOS	F	D	C

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	58%	0%	0%	0%	100%	100%	0%
Vol Thru, %	42%	100%	100%	58%	0%	0%	0%
Vol Right, %	0%	0%	0%	42%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	452	375	309	265	93	93	310
LT Vol	264	0	0	0	93	93	0
Through Vol	188	375	309	154	0	0	0
RT Vol	0	0	0	111	0	0	310
Lane Flow Rate	491	408	336	288	101	101	337
Geometry Grp	8	8	8	8	7	7	7
Degree of Util (X)	1.152	0.923	0.789	0.655	0.246	0.246	0.55
Departure Headway (Hd)	8.448	8.148	8.76	8.459	9.112	9.112	6.092
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	432	445	416	430	396	396	596
Service Time	6.193	5.893	6.46	6.159	6.812	6.812	3.792
HCM Lane V/C Ratio	1.137	0.917	0.808	0.67	0.255	0.255	0.565
HCM Control Delay	120	54.4	37.2	25.8	14.8	14.8	16
HCM Lane LOS	F	F	E	D	B	B	C
HCM 95th-tile Q	18.1	10.4	6.9	4.6	1	1	3.3

Intersection	
Intersection Delay, s/veh	31.1
Intersection LOS	D

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	304	326	457	114	134	216
Future Vol, veh/h	304	326	457	114	134	216
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	330	354	497	124	146	235
Number of Lanes	0	2	2	0	2	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	3	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	3	2
HCM Control Delay	48.2	23.9	11.9
HCM LOS	E	C	B

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	74%	0%	0%	0%	100%	100%	0%
Vol Thru, %	26%	100%	100%	57%	0%	0%	0%
Vol Right, %	0%	0%	0%	43%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	413	217	305	266	67	67	216
LT Vol	304	0	0	0	67	67	0
Through Vol	109	217	305	152	0	0	0
RT Vol	0	0	0	114	0	0	216
Lane Flow Rate	449	236	331	289	73	73	235
Geometry Grp	8	8	8	8	7	7	7
Degree of Util (X)	0.977	0.49	0.706	0.593	0.172	0.172	0.357
Departure Headway (Hd)	7.84	7.465	7.679	7.373	8.486	8.486	5.472
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	462	482	470	489	423	423	657
Service Time	5.588	5.212	5.427	5.121	6.225	6.225	3.21
HCM Lane V/C Ratio	0.972	0.49	0.704	0.591	0.173	0.173	0.358
HCM Control Delay	64.5	17.2	26.9	20.4	13	13	11.2
HCM Lane LOS	F	C	D	C	B	B	B
HCM 95th-tile Q	12.3	2.7	5.5	3.8	0.6	0.6	1.6

Intersection	
Intersection Delay, s/veh	31.7
Intersection LOS	D

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	304	331	461	115	135	216
Future Vol, veh/h	304	331	461	115	135	216
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	330	360	501	125	147	235
Number of Lanes	0	2	2	0	2	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	3	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	3	2
HCM Control Delay	49.3	24.4	12
HCM LOS	E	C	B

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	73%	0%	0%	0%	100%	100%	0%
Vol Thru, %	27%	100%	100%	57%	0%	0%	0%
Vol Right, %	0%	0%	0%	43%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	414	221	307	269	68	68	216
LT Vol	304	0	0	0	68	68	0
Through Vol	110	221	307	154	0	0	0
RT Vol	0	0	0	115	0	0	216
Lane Flow Rate	450	240	334	292	73	73	235
Geometry Grp	8	8	8	8	7	7	7
Degree of Util (X)	0.984	0.499	0.715	0.6	0.173	0.173	0.358
Departure Headway (Hd)	7.862	7.488	7.7	7.394	8.509	8.509	5.495
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	464	482	471	488	422	422	653
Service Time	5.607	5.233	5.447	5.14	6.251	6.251	3.236
HCM Lane V/C Ratio	0.97	0.498	0.709	0.598	0.173	0.173	0.36
HCM Control Delay	66.3	17.5	27.6	20.7	13	13	11.3
HCM Lane LOS	F	C	D	C	B	B	B
HCM 95th-tile Q	12.5	2.7	5.6	3.9	0.6	0.6	1.6

E-W Street: Cameron Ave
N-S Street: Grand Ave
Scenario: AM Peak
Overlap Reduce 15%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2021 without Project				AM 2021 + Project				2021 + Project with Mitigation				PHF
	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	
EB Left	126	1	1.00	0.08	126	1	1.00	0.08	126	1	1.00	0.08	0.889
Comb. L-T		0				0				0			
EB Thru	0	0	0.00		0	0	0.00		0	0	0.00		
Comb. T-R		0				0				0			
EB Right	626	1	1.00	0.39	634	1	1.00	0.40	634	2	2.00	0.20	
Comb. L-T-R		0				0				0			
WB Left	0	0	0.00		0	0	0.00		0	0	0.00		1.000
Comb. L-T		0				0				0			
WB Thru	0	0	0.00		0	0	0.00		0	0	0.00		
Comb. T-R		0				0				0			
WB Right	0	0	0.00		0	0	0.00		0	0	0.00		
Comb. L-T-R		0				0				0			
NB Left	384	2	2.00	0.13	386	2	2.00	0.13	386	2	2.00	0.13	0.893
Comb. L-T		0				0				0			
NB Thru	872	2	2.00	0.27	884	2	2.00	0.28	884	2	2.00	0.28	
Comb. T-R		0				0				0			
NB Right	0	0	0.00		0	0	0.00		0	0	0.00		
Comb. L-T-R		0				0				0			
SB Left	0	0	0.00		0	0	0.00		0	0	0.00		0.893
Comb. L-T		0				0				0			
SB Thru	1707	2	2.00	0.53	1754	2	2.00	0.55	1754	2	2.00	0.55	
Comb. T-R		0				0				0			
SB Right	193	1	1.00	0.12	193	1	1.00	0.12	193	1	1.00	0.12	
Comb. L-T-R		0				0				0			

Critical Volumes			E-W:	0.39			E-W:	0.40			E-W:	0.20	
			N-S:	0.67			N-S:	0.68			N-S:	0.68	
			Total:	1.06			Total:	1.08			Total:	0.88	
Lost Time				0.10				0.10				0.10	
V/C				1.158				1.178				0.980	
Level of Service				F				F				E	

E-W Street: Cameron Ave
N-S Street: Grand Ave
Scenario: PM Peak
Overlap Reduce 25%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM 2021 without Project				PM 2021 + Project				2021 + Project with Mitigation				PHF
	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	
EB Left	73	1	1.00	0.05	73	1	1.00	0.05	73	1	1.00	0.05	0.918
Comb. L-T		0				0				0			
EB Thru	0	0	0.00		0	0	0.00		0	0	0.00		
Comb. T-R		0				0				0			
EB Right	339	1	1.00	0.21	344	1	1.00	0.21	344	2	2.00	0.11	
Comb. L-T-R		0				0				0			
WB Left	0	0	0.00		0	0	0.00		0	0	0.00		1.000
Comb. L-T		0				0				0			
WB Thru	0	0	0.00		0	0	0.00		0	0	0.00		
Comb. T-R		0				0				0			
WB Right	0	0	0.00		0	0	0.00		0	0	0.00		
Comb. L-T-R		0				0				0			
NB Left	538	2	2.00	0.19	544	2	2.00	0.19	544	2	2.00	0.19	0.916
Comb. L-T		0				0				0			
NB Thru	1275	2	2.00	0.40	1300	2	2.00	0.41	1300	2	2.00	0.41	
Comb. T-R		0				0				0			
NB Right	0	0	0.00		0	0	0.00		0	0	0.00		
Comb. L-T-R		0				0				0			
SB Left	0	0	0.00		0	0	0.00		0	0	0.00		0.911
Comb. L-T		0				0				0			
SB Thru	989	2	2.00	0.31	1021	2	2.00	0.32	1021	2	2.00	0.32	
Comb. T-R		0				0				0			
SB Right	110	1	1.00	0.07	110	1	1.00	0.07	110	1	1.00	0.07	
Comb. L-T-R		0				0				0			

Critical Volumes			E-W:	0.21			E-W:	0.21			E-W:	0.11	
			N-S:	0.50			N-S:	0.51			N-S:	0.51	
			Total:	0.71			Total:	0.72			Total:	0.62	
Lost Time				0.10				0.10				0.10	
V/C				0.808				0.823				0.715	
Level of Service				D				D				C	

E-W Street: Mountaineer Rd
N-S Street: Grand Ave
Scenario: AM Peak
Overlap Reduce 25%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2021 without Project				AM 2021 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	0	0	0.00		0	0	0.00		1.000
Comb. L-T		0				0			
EB Thru	0	0	0.00		0	0	0.00		
Comb. T-R		0				0			
EB Right	0	0	0.00		0	0	0.00		
Comb. L-T-R		0				0			
WB Left	168	2	2.00	0.06	173	2	2.00	0.06	0.895
Comb. L-T		0				0			
WB Thru	0	0	0.00		0	0	0.00		
Comb. T-R		0				0			
WB Right	69	2	2.00	0.02	74	2	2.00	0.02	
Comb. L-T-R		0				0			
NB Left	0	0	0.00		0	0	0.00		0.903
Comb. L-T		0				0			
NB Thru	1217	2	2.00	0.38	1223	2	2.00	0.38	
Comb. T-R		0				0			
NB Right	437	1	1.00	0.27	459	1	1.00	0.29	
Comb. L-T-R		0				0			
SB Left	610	2	2.00	0.21	635	2	2.00	0.22	0.941
Comb. L-T		0				0			
SB Thru	1842	2	2.00	0.58	1871	2	2.00	0.58	
Comb. T-R		0				0			
SB Right	0	0	0.00		0	0	0.00		
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.06	E-W:	0.06
	N-S:	0.59	N-S:	0.60
	Total:	0.65	Total:	0.66
Lost Time		0.10		0.10
V/C		0.750		0.763
Level of Service		C		C

E-W Street: Mountaineer Rd
N-S Street: Grand Ave
Scenario: PM Peak
Overlap Reduce 11%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM 2021 without Project				PM 2021 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	0	0	0.00		0	0	0.00		1.000
Comb. L-T		0				0			
EB Thru	0	0	0.00		0	0	0.00		
Comb. T-R		0				0			
EB Right	0	0	0.00		0	0	0.00		
Comb. L-T-R		0				0			
WB Left	190	2	2.00	0.07	204	2	2.00	0.07	0.773
Comb. L-T		0				0			
WB Thru	0	0	0.00		0	0	0.00		
Comb. T-R		0				0			
WB Right	149	2	2.00	0.05	164	2	2.00	0.05	
Comb. L-T-R		0				0			
NB Left	0	0	0.00		0	0	0.00		0.911
Comb. L-T		0				0			
NB Thru	1798	2	2.00	0.56	1814	2	2.00	0.57	
Comb. T-R		0				0			
NB Right	188	1	1.00	0.12	203	1	1.00	0.13	
Comb. L-T-R		0				0			
SB Left	168	2	2.00	0.06	185	2	2.00	0.06	0.948
Comb. L-T		0				0			
SB Thru	1206	2	2.00	0.38	1226	2	2.00	0.38	
Comb. T-R		0				0			
SB Right	0	0	0.00		0	0	0.00		
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.07	E-W:	0.07
	N-S:	0.62	N-S:	0.63
	Total:	0.69	Total:	0.70
Lost Time		0.10		0.10
V/C		0.786		0.802
Level of Service		C		D

E-W Street: San Jose Hills Rd
N-S Street: Grand Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2021 without Project				AM 2021 + Project				2021 + Project with Mitigation				PHF
	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	
EB Left	247	1	1.00	0.15	247	1	1.00	0.15	247	1	1.00	0.15	0.780
Comb. L-T		0				0				0			
EB Thru	106	0	0.44	0.15	109	0	0.45	0.15	109	0	0.45	0.15	
Comb. T-R		1				1				1			
EB Right	135	0	0.56	0.15	135	0	0.55	0.15	135	0	0.55	0.15	
Comb. L-T-R		0				0				0			
WB Left	110	1	1.00	0.07	117	1	1.00	0.07	117	1	1.61	0.05	0.745
Comb. L-T		0				0				1			
WB Thru	28	1	1.00	0.02	28	1	1.00	0.02	28	0	0.39	0.05	
Comb. T-R		0				0				0			
WB Right	66	1	1.00	0.04	70	1	1.00	0.04	70	1	1.00	0.04	
Comb. L-T-R		0				0				0			
NB Left	118	1	1.00	0.07	118	1	1.00	0.07	118	1	1.00	0.07	0.862
Comb. L-T		0				0				0			
NB Thru	1446	2	2.00	0.45	1473	2	2.00	0.46	1473	2	2.28	0.40	
Comb. T-R		0				0				1			
NB Right	445	1	1.00	0.28	468	1	1.00	0.29	468	0	0.72	0.40	
Comb. L-T-R		0				0				0			
SB Left	321	1	1.00	0.20	335	1	1.00	0.21	335	1	1.00	0.21	0.895
Comb. L-T		0				0				0			
SB Thru	1618	2	2.00	0.51	1638	2	2.00	0.51	1638	2	2.00	0.51	
Comb. T-R		0				0				0			
SB Right	160	1	1.00	0.10	160	1	1.00	0.10	160	1	1.00	0.10	
Comb. L-T-R		0				0				0			

Critical Volumes			E-W:	0.22			E-W:	0.23			E-W:	0.20	
			N-S:	0.65			N-S:	0.67			N-S:	0.61	
			Total:	0.87			Total:	0.89			Total:	0.81	
Lost Time				0.10				0.10				0.10	
V/C				0.972				0.995				0.914	
Level of Service				E				E				E	

E-W Street: San Jose Hills Rd
N-S Street: Grand Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM 2021 without Project				PM 2021 + Project				2021 + Project with Mitigation				PHF
	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	
EB Left	113	1	1.00	0.07	113	1	1.00	0.07	113	1	1.00	0.07	0.890
Comb. L-T		0				0				0			
EB Thru	17	0	0.13	0.08	18	0	0.14	0.08	18	0	0.14	0.08	
Comb. T-R		1				1				1			
EB Right	109	0	0.87	0.08	109	0	0.86	0.08	109	0	0.86	0.08	
Comb. L-T-R		0				0				0			
WB Left	237	1	1.00	0.15	251	1	1.00	0.16	251	1	1.79	0.09	0.760
Comb. L-T		0				0				1			
WB Thru	29	1	1.00	0.02	30	1	1.00	0.02	30	0	0.21	0.09	
Comb. T-R		0				0				0			
WB Right	141	1	1.00	0.09	150	1	1.00	0.09	150	1	1.00	0.09	
Comb. L-T-R		0				0				0			
NB Left	99	1	1.00	0.06	99	1	1.00	0.06	99	1	1.00	0.06	0.896
Comb. L-T		0				0				0			
NB Thru	1792	2	2.00	0.56	1815	2	2.00	0.57	1815	2	2.70	0.42	
Comb. T-R		0				0				1			
NB Right	187	1	1.00	0.12	203	1	1.00	0.13	203	0	0.30	0.42	
Comb. L-T-R		0				0				0			
SB Left	77	1	1.00	0.05	86	1	1.00	0.05	86	1	1.00	0.05	0.940
Comb. L-T		0				0				0			
SB Thru	1204	2	2.00	0.38	1225	2	2.00	0.38	1225	2	2.00	0.38	
Comb. T-R		0				0				0			
SB Right	106	1	1.00	0.07	106	1	1.00	0.07	106	1	1.00	0.07	
Comb. L-T-R		0				0				0			

Critical Volumes			E-W:	0.23			E-W:	0.24			E-W:	0.17	
			N-S:	0.61			N-S:	0.62			N-S:	0.47	
			Total:	0.83			Total:	0.86			Total:	0.64	
Lost Time				0.10				0.10				0.10	
V/C				0.934				0.957				0.742	
Level of Service				E				E				C	

E-W Street: La Puente Rd
N-S Street: Grand Ave
Scenario: AM Peak — Overlap Reduce 20% — Overlap Reduce 10%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2021 without Project				AM 2021 + Project				2021 + Project with Mitigation				PHF
	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	
EB Left	603	1	1.71	0.22	606	1	1.71	0.22	606	1	1.71	0.22	0.751
Comb. L-T		1				1				1			
EB Thru	103	0	0.29	0.22	103	0	0.29	0.22	103	0	0.29	0.22	
Comb. T-R		0				0				0			
EB Right	554	1	1.00	0.35	554	1	1.00	0.35	499	1	1.00	0.31	
Comb. L-T-R		0				0				0			
WB Left	201	1	1.13	0.11	201	1	1.13	0.11	201	1	1.13	0.11	0.628
Comb. L-T		1				1				1			
WB Thru	156	0	1.77	0.05	156	0	1.77	0.05	156	0	1.77	0.05	
Comb. T-R		1				1				1			
WB Right	18	0	0.10	0.11	18	0	0.10	0.11	18	0	0.10	0.11	
Comb. L-T-R		0				0				0			
NB Left	180	1	1.00	0.11	180	1	1.00	0.11	180	1	1.00	0.11	0.972
Comb. L-T		0				0				0			
NB Thru	1611	2	2.00	0.50	1654	2	2.00	0.52	1654	2	2.00	0.52	
Comb. T-R		0				0				0			
NB Right	54	1	1.00	0.03	54	1	1.00	0.03	54	1	1.00	0.03	
Comb. L-T-R		0				0				0			
SB Left	2	1	1.00	0.00	2	1	1.00	0.00	2	1	1.00	0.00	0.953
Comb. L-T		0				0				0			
SB Thru	1111	2	2.00	0.35	1121	2	2.00	0.35	1121	2	2.00	0.35	
Comb. T-R		0				0				0			
SB Right	265	1	1.00	0.17	265	1	1.00	0.17	265	1	1.00	0.17	
Comb. L-T-R		0				0				0			

Critical Volumes			E-W:	0.46			E-W:	0.46			E-W:	0.42	
			N-S:	0.50			N-S:	0.52			N-S:	0.52	
			Total:	0.96			Total:	0.98			Total:	0.94	
Lost Time				0.10				0.10				0.10	
V/C				1.062				1.076				1.041	
Level of Service				F				F				F	

E-W Street: La Puente Rd
N-S Street: Grand Ave
Scenario: PM Peak — Overlap Reduce 15% — Overlap Reduce 10%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM 2021 without Project				PM 2021 + Project				2021 + Project with Mitigation				PHF
	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	
EB Left	341	1	1.67	0.13	343	1	1.67	0.13	343	1	1.67	0.13	0.946
Comb. L-T		1				1				1			
EB Thru	68	0	0.33	0.13	68	0	0.33	0.13	68	0	0.33	0.13	
Comb. T-R		0				0				0			
EB Right	345	1	1.00	0.22	345	1	1.00	0.22	310	1	1.00	0.19	
Comb. L-T-R		0				0				0			
WB Left	98	1	1.25	0.05	98	1	1.25	0.05	98	1	1.25	0.05	0.840
Comb. L-T		1				1				1			
WB Thru	58	0	1.59	0.02	58	0	1.59	0.02	58	0	1.59	0.02	
Comb. T-R		1				1				1			
WB Right	11	0	0.16	0.04	11	0	0.16	0.04	11	0	0.16	0.04	
Comb. L-T-R		0				0				0			
NB Left	312	1	1.00	0.20	312	1	1.00	0.20	312	1	1.00	0.20	0.961
Comb. L-T		0				0				0			
NB Thru	1635	2	2.00	0.51	1665	2	2.00	0.52	1665	2	2.00	0.52	
Comb. T-R		0				0				0			
NB Right	127	1	1.00	0.08	127	1	1.00	0.08	127	1	1.00	0.08	
Comb. L-T-R		0				0				0			
SB Left	13	1	1.00	0.01	13	1	1.00	0.01	13	1	1.00	0.01	0.918
Comb. L-T		0				0				0			
SB Thru	1147	2	2.00	0.36	1172	2	2.00	0.37	1172	2	2.00	0.37	
Comb. T-R		0				0				0			
SB Right	181	1	1.00	0.11	181	1	1.00	0.11	181	1	1.00	0.11	
Comb. L-T-R		0				0				0			

Critical Volumes			E-W:	0.26			E-W:	0.26			E-W:	0.24	
			N-S:	0.55			N-S:	0.56			N-S:	0.56	
			Total:	0.82			Total:	0.83			Total:	0.80	
Lost Time				0.10				0.10				0.10	
V/C				0.918				0.926				0.904	
Level of Service				E				E				E	

E-W Street: Valley Blvd
N-S Street: Grand Ave
Scenario: AM Peak
Free Right Turn 100%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2021 without Project				AM 2021 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	488	2	2.00	0.17	491	2	2.00	0.17	0.864
Comb. L-T		0				0			
EB Thru	750	3	3.00	0.16	750	3	3.00	0.16	
Comb. T-R		0				0			
EB Right	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. L-T-R		0				0			
WB Left	220	2	2.00	0.08	220	2	2.00	0.08	0.813
Comb. L-T		0				0			
WB Thru	1382	3	3.00	0.29	1382	3	3.00	0.29	
Comb. T-R		0				0			
WB Right	258	1	1.00	0.16	258	1	1.00	0.16	
Comb. L-T-R		0				0			
NB Left	345	2	2.00	0.12	345	2	2.00	0.12	0.896
Comb. L-T		0				0			
NB Thru	1277	3	3.00	0.27	1322	3	3.00	0.28	
Comb. T-R		0				0			
NB Right	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. L-T-R		0				0			
SB Left	310	2	2.00	0.11	310	2	2.00	0.11	0.855
Comb. L-T		0				0			
SB Thru	918	3	3.00	0.19	929	3	3.00	0.19	
Comb. T-R		0				0			
SB Right	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.46	E-W:	0.46
	N-S:	0.37	N-S:	0.38
	Total:	0.83	Total:	0.84
Lost Time		0.10		0.10
V/C		0.931		0.941
Level of Service		E		E

E-W Street: Valley Blvd
N-S Street: Grand Ave
Scenario: PM Peak
Free Right Turn 100%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM 2021 without Project				PM 2021 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	602	2	2.00	0.21	603	2	2.00	0.21	0.968
Comb. L-T		0				0			
EB Thru	1470	3	3.00	0.31	1470	3	3.00	0.31	
Comb. T-R		0				0			
EB Right	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. L-T-R		0				0			
WB Left	270	2	2.00	0.09	270	2	2.00	0.09	0.914
Comb. L-T		0				0			
WB Thru	800	3	3.00	0.17	800	3	3.00	0.17	
Comb. T-R		0				0			
WB Right	346	1	1.00	0.22	346	1	1.00	0.22	
Comb. L-T-R		0				0			
NB Left	307	2	2.00	0.11	307	2	2.00	0.11	0.965
Comb. L-T		0				0			
NB Thru	1068	3	3.00	0.22	1097	3	3.00	0.23	
Comb. T-R		0				0			
NB Right	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. L-T-R		0				0			
SB Left	403	2	2.00	0.14	403	2	2.00	0.14	0.943
Comb. L-T		0				0			
SB Thru	757	3	3.00	0.16	780	3	3.00	0.16	
Comb. T-R		0				0			
SB Right	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.43	E-W:	0.43
	N-S:	0.36	N-S:	0.37
	Total:	0.79	Total:	0.79
Lost Time		0.10		0.10
V/C		0.888		0.894
Level of Service		D		D

E-W Street: Baker Pkwy
N-S Street: Grand Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2021 without Project				AM 2021 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	19	2	2.00	0.01	19	2	2.00	0.01	0.775
Comb. L-T		0				0			
EB Thru	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. T-R		0				0			
EB Right	62	1	1.00	0.04	62	1	1.00	0.04	
Comb. L-T-R		0				0			
WB Left	0	2	2.00	0.00	0	2	2.00	0.00	1.000
Comb. L-T		0				0			
WB Thru	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. T-R		0				0			
WB Right	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. L-T-R									
NB Left	116	2	2.00	0.04	116	2	2.00	0.04	0.913
Comb. L-T		0				0			
NB Thru	2167	3	3.00	0.45	2210	3	3.00	0.46	
Comb. T-R		0				0			
NB Right	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. L-T-R		0				0			
SB Left	0	2	2.00	0.00	0	2	2.00	0.00	0.927
Comb. L-T		0				0			
SB Thru	851	3	3.00	0.18	861	3	3.00	0.18	
Comb. T-R		0				0			
SB Right	76	1	1.00	0.05	76	1	1.00	0.05	
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.04	E-W:	0.04
	N-S:	0.45	N-S:	0.46
	Total:	0.49	Total:	0.50

Lost Time	0.10	0.10

V/C	0.590	0.599
Level of Service	A	A

E-W Street: Baker Pkwy
N-S Street: Grand Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM 2021 without Project				PM 2021 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	116	2	2.00	0.04	116	2	2.00	0.04	0.783
Comb. L-T		0				0			
EB Thru	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. T-R		0				0			
EB Right	192	1	1.00	0.12	192	1	1.00	0.12	
Comb. L-T-R		0				0			
WB Left	0	2	2.00	0.00	0	2	2.00	0.00	1.000
Comb. L-T		0				0			
WB Thru	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. T-R		0				0			
WB Right	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. L-T-R		0				0			
NB Left	47	2	2.00	0.02	47	2	2.00	0.02	0.889
Comb. L-T		0				0			
NB Thru	1424	3	3.00	0.30	1455	3	3.00	0.30	
Comb. T-R		0				0			
NB Right	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. L-T-R		0				0			
SB Left	0	2	2.00	0.00	0	2	2.00	0.00	0.892
Comb. L-T		0				0			
SB Thru	1495	3	3.00	0.31	1520	3	3.00	0.32	
Comb. T-R		0				0			
SB Right	30	1	1.00	0.02	30	1	1.00	0.02	
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.12	E-W:	0.12
	N-S:	0.33	N-S:	0.33
	Total:	0.45	Total:	0.45

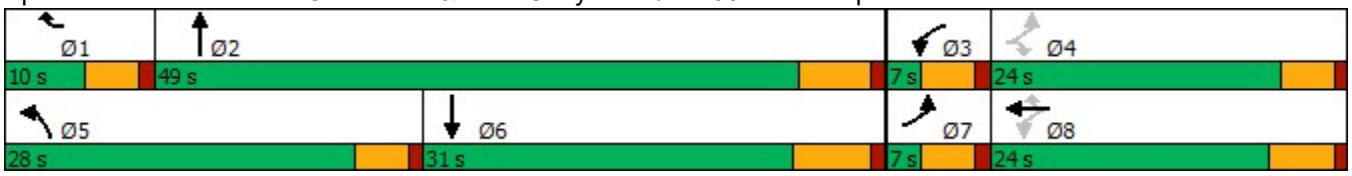
Lost Time	0.10	0.10

V/C	0.548	0.553
Level of Service	A	A

Lane Group	EBR	WBL	WBT	WBR	NBL	NBT	SBT	Ø7
Lane Configurations								
Traffic Volume (vph)	3	140	1	642	246	1473	782	
Future Volume (vph)	3	140	1	642	246	1473	782	
Turn Type	Perm	pm+pt	NA	custom	Prot	NA	NA	
Protected Phases		3	8	1	5	2	6	7
Permitted Phases	4	8		8				
Detector Phase	4	3	8	1	5	2	6	
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.6	9.6	23.4	9.6	9.6	23.8	24.2	9.6
Total Split (s)	24.0	7.0	24.0	10.0	28.0	49.0	31.0	7.0
Total Split (%)	26.7%	7.8%	26.7%	11.1%	31.1%	54.4%	34.4%	8%
Yellow Time (s)	3.6	3.6	4.4	3.6	3.6	4.8	5.2	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	4.6	5.4	4.6	4.6	5.8	6.2	
Lead/Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.0	16.2	15.4	26.3	17.0	41.0	29.1	
Actuated g/C Ratio	0.09	0.21	0.20	0.34	0.22	0.53	0.37	
v/c Ratio	0.02	0.39	0.89	0.59	0.69	0.86	0.37	
Control Delay	33.0	30.6	43.6	16.6	38.4	22.5	19.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	33.0	30.6	43.6	16.6	38.4	22.5	19.4	
LOS	C	C	D	B	D	C	B	
Approach Delay			30.2			24.8	19.4	
Approach LOS			C			C	B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 77.9	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 24.8	Intersection LOS: C
Intersection Capacity Utilization 74.6%	ICU Level of Service D
Analysis Period (min) 15	

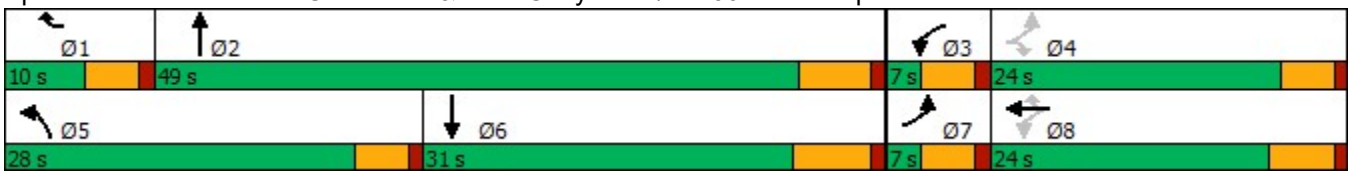
Splits and Phases: 27: Grand Ave & Brea Canyon Rd/SR-60 WB Ramps



Lane Group	EBR	WBL	WBT	WBR	NBL	NBT	SBT	Ø7
Lane Configurations								
Traffic Volume (vph)	3	140	1	672	246	1483	790	
Future Volume (vph)	3	140	1	672	246	1483	790	
Turn Type	Perm	pm+pt	NA	custom	Prot	NA	NA	
Protected Phases		3	8	1	5	2	6	7
Permitted Phases	4	8		8				
Detector Phase	4	3	8	1	5	2	6	
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.6	9.6	23.4	9.6	9.6	23.8	24.2	9.6
Total Split (s)	24.0	7.0	24.0	10.0	28.0	49.0	31.0	7.0
Total Split (%)	26.7%	7.8%	26.7%	11.1%	31.1%	54.4%	34.4%	8%
Yellow Time (s)	3.6	3.6	4.4	3.6	3.6	4.8	5.2	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	4.6	5.4	4.6	4.6	5.8	6.2	
Lead/Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.0	16.8	16.0	26.9	17.1	41.3	29.3	
Actuated g/C Ratio	0.09	0.21	0.20	0.34	0.22	0.52	0.37	
v/c Ratio	0.02	0.38	0.91	0.61	0.70	0.87	0.37	
Control Delay	33.0	30.3	48.1	17.5	38.8	23.2	19.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	33.0	30.3	48.1	17.5	38.8	23.2	19.6	
LOS	C	C	D	B	D	C	B	
Approach Delay			32.4			25.4	19.6	
Approach LOS			C			C	B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 78.7	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 25.7	Intersection LOS: C
Intersection Capacity Utilization 76.2%	ICU Level of Service D
Analysis Period (min) 15	

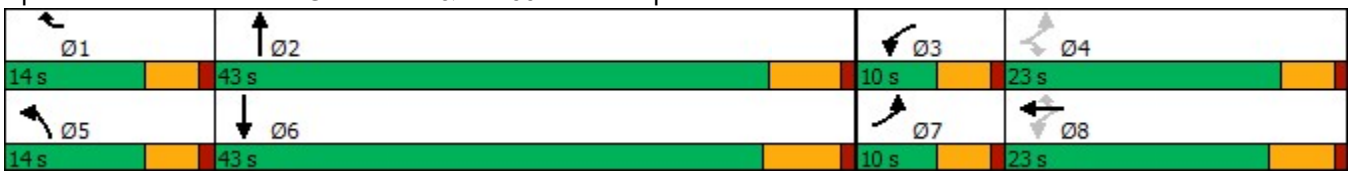
Splits and Phases: 27: Grand Ave & Brea Canyon Rd/SR-60 WB Ramps



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	Ø4	Ø7
Lane Configurations								
Traffic Volume (vph)	135	0	530	188	757	1473		
Future Volume (vph)	135	0	530	188	757	1473		
Turn Type	pm+pt	NA	custom	Prot	NA	NA		
Protected Phases	3	8	1	5	2	6	4	7
Permitted Phases	8		8					
Detector Phase	3	8	1	5	2	6		
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	23.4	9.6	9.6	23.8	24.2	22.6	9.6
Total Split (s)	10.0	23.0	14.0	14.0	43.0	43.0	23.0	10.0
Total Split (%)	11.1%	25.6%	15.6%	15.6%	47.8%	47.8%	26%	11%
Yellow Time (s)	3.6	4.4	3.6	3.6	4.8	5.2	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	5.4	4.6	4.6	5.8	6.2		
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.9	8.1	19.6	9.6	30.9	26.8		
Actuated g/C Ratio	0.15	0.13	0.32	0.16	0.50	0.44		
v/c Ratio	0.54	0.68	0.47	0.73	0.46	0.58		
Control Delay	34.2	13.4	8.8	46.5	10.9	13.8		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	34.2	13.4	8.8	46.5	10.9	13.8		
LOS	C	B	A	D	B	B		
Approach Delay		15.3			18.0	13.8		
Approach LOS		B			B	B		

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 61.2	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 15.4	Intersection LOS: B
Intersection Capacity Utilization 52.9%	ICU Level of Service A
Analysis Period (min) 15	

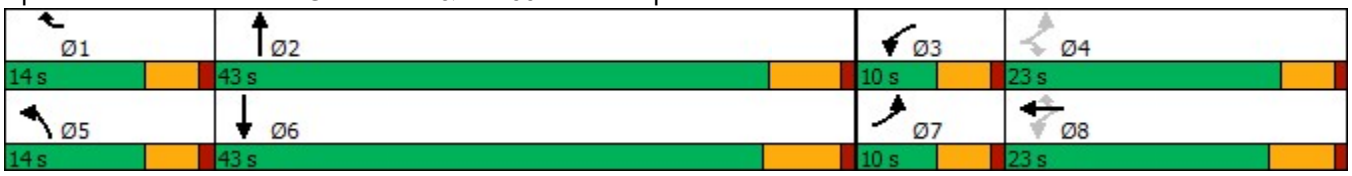
Splits and Phases: 27: Grand Ave & SR-60 WB Ramps



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	Ø4	Ø7
Lane Configurations								
Traffic Volume (vph)	135	0	551	188	764	1492		
Future Volume (vph)	135	0	551	188	764	1492		
Turn Type	pm+pt	NA	custom	Prot	NA	NA		
Protected Phases	3	8	1	5	2	6	4	7
Permitted Phases	8		8					
Detector Phase	3	8	1	5	2	6		
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	23.4	9.6	9.6	23.8	24.2	22.6	9.6
Total Split (s)	10.0	23.0	14.0	14.0	43.0	43.0	23.0	10.0
Total Split (%)	11.1%	25.6%	15.6%	15.6%	47.8%	47.8%	26%	11%
Yellow Time (s)	3.6	4.4	3.6	3.6	4.8	5.2	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	5.4	4.6	4.6	5.8	6.2		
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	9.4	8.6	20.1	9.6	31.2	27.2		
Actuated g/C Ratio	0.15	0.14	0.32	0.15	0.50	0.44		
v/c Ratio	0.52	0.70	0.49	0.74	0.47	0.59		
Control Delay	33.2	14.4	9.4	47.9	11.3	14.2		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	33.2	14.4	9.4	47.9	11.3	14.2		
LOS	C	B	A	D	B	B		
Approach Delay		15.6			18.5	14.2		
Approach LOS		B			B	B		

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 62	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 15.8	Intersection LOS: B
Intersection Capacity Utilization 53.4%	ICU Level of Service A
Analysis Period (min) 15	

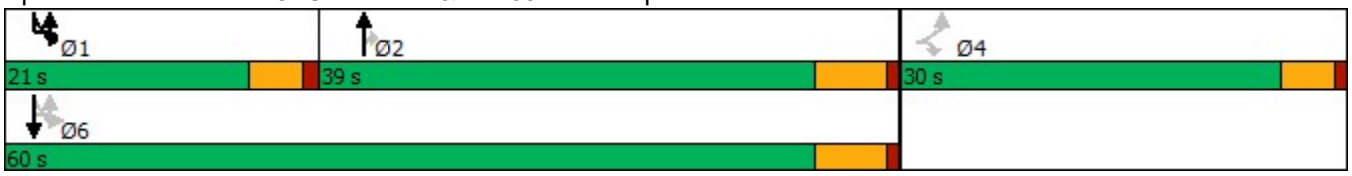
Splits and Phases: 27: Grand Ave & SR-60 WB Ramps



Lane Group	EBL	EBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	720	254	991	287	9	278	653
Future Volume (vph)	720	254	991	287	9	278	653
Turn Type	Perm	Perm	NA	Perm	pm+pt	pm+pt	NA
Protected Phases			2		1	1	6
Permitted Phases	4	4		2	6	6	
Detector Phase	4	4	2	2	1	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	24.0	24.0	11.0	11.0	24.0
Total Split (s)	30.0	30.0	39.0	39.0	21.0	21.0	60.0
Total Split (%)	33.3%	33.3%	43.3%	43.3%	23.3%	23.3%	66.7%
Yellow Time (s)	3.6	3.6	4.8	4.8	3.6	3.6	4.8
All-Red Time (s)	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
Total Lost Time (s)	4.6	4.6	5.8	5.8		4.6	5.8
Lead/Lag			Lag	Lag	Lead	Lead	
Lead-Lag Optimize?							
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	23.0	23.0	30.6	30.6		50.7	49.4
Actuated g/C Ratio	0.28	0.28	0.37	0.37		0.61	0.60
v/c Ratio	0.83	0.46	0.83	0.40		0.79	0.23
Control Delay	37.4	8.5	30.9	4.1		33.8	8.2
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	37.4	8.5	30.9	4.1		33.8	8.2
LOS	D	A	C	A		C	A
Approach Delay			24.9				16.0
Approach LOS			C				B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 83	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 23.8	Intersection LOS: C
Intersection Capacity Utilization 74.1%	ICU Level of Service D
Analysis Period (min) 15	

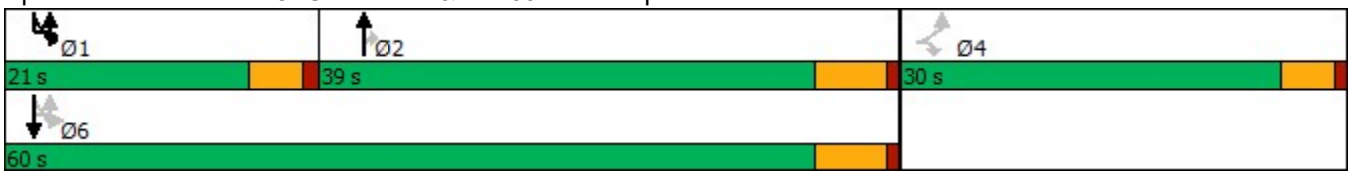
Splits and Phases: 28: Grand Ave & SR-60 EB Ramps



Lane Group	EBL	EBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	725	254	996	287	9	285	654
Future Volume (vph)	725	254	996	287	9	285	654
Turn Type	Perm	Perm	NA	Perm	pm+pt	pm+pt	NA
Protected Phases			2		1	1	6
Permitted Phases	4	4		2	6	6	
Detector Phase	4	4	2	2	1	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	24.0	24.0	11.0	11.0	24.0
Total Split (s)	30.0	30.0	39.0	39.0	21.0	21.0	60.0
Total Split (%)	33.3%	33.3%	43.3%	43.3%	23.3%	23.3%	66.7%
Yellow Time (s)	3.6	3.6	4.8	4.8	3.6	3.6	4.8
All-Red Time (s)	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
Total Lost Time (s)	4.6	4.6	5.8	5.8		4.6	5.8
Lead/Lag			Lag	Lag	Lead	Lead	
Lead-Lag Optimize?							
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	23.1	23.1	30.8	30.8		51.1	49.8
Actuated g/C Ratio	0.28	0.28	0.37	0.37		0.61	0.60
v/c Ratio	0.83	0.46	0.83	0.40		0.81	0.23
Control Delay	37.9	8.5	31.3	4.1		35.4	8.2
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	37.9	8.5	31.3	4.1		35.4	8.2
LOS	D	A	C	A		D	A
Approach Delay			25.2				16.7
Approach LOS			C				B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 83.5	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 24.2	Intersection LOS: C
Intersection Capacity Utilization 74.8%	ICU Level of Service D
Analysis Period (min) 15	

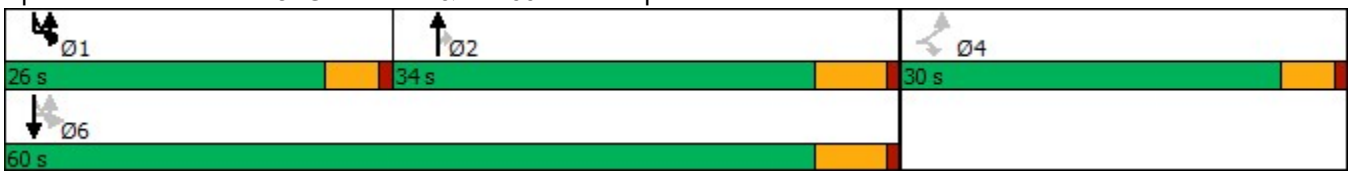
Splits and Phases: 28: Grand Ave & SR-60 EB Ramps



Lane Group	EBL	EBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	164	247	768	613	4	381	1253
Future Volume (vph)	164	247	768	613	4	381	1253
Turn Type	Perm	Perm	NA	Perm	pm+pt	pm+pt	NA
Protected Phases			2		1	1	6
Permitted Phases	4	4		2	6	6	
Detector Phase	4	4	2	2	1	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	24.0	24.0	11.0	11.0	24.0
Total Split (s)	30.0	30.0	34.0	34.0	26.0	26.0	60.0
Total Split (%)	33.3%	33.3%	37.8%	37.8%	28.9%	28.9%	66.7%
Yellow Time (s)	3.6	3.6	4.8	4.8	3.6	3.6	4.8
All-Red Time (s)	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
Total Lost Time (s)	4.6	4.6	5.8	5.8		4.6	5.8
Lead/Lag			Lag	Lag	Lead	Lead	
Lead-Lag Optimize?							
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	14.2	14.2	24.9	24.9		47.4	46.1
Actuated g/C Ratio	0.20	0.20	0.35	0.35		0.67	0.65
v/c Ratio	0.26	0.69	0.67	0.68		0.75	0.41
Control Delay	26.4	28.6	24.4	6.0		21.0	6.8
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	26.4	28.6	24.4	6.0		21.0	6.8
LOS	C	C	C	A		C	A
Approach Delay			16.2				10.2
Approach LOS			B				B

Intersection Summary			
Cycle Length: 90			
Actuated Cycle Length: 71.2			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay: 14.7		Intersection LOS: B	
Intersection Capacity Utilization 66.7%		ICU Level of Service C	
Analysis Period (min) 15			

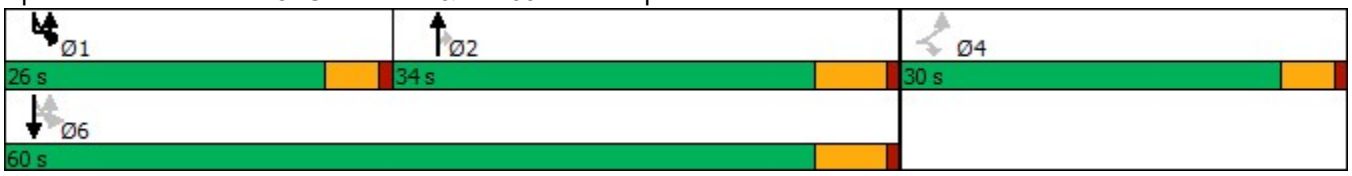
Splits and Phases: 28: Grand Ave & SR-60 EB Ramps



Lane Group	EBL	EBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	167	247	771	613	4	397	1256
Future Volume (vph)	167	247	771	613	4	397	1256
Turn Type	Perm	Perm	NA	Perm	pm+pt	pm+pt	NA
Protected Phases			2		1	1	6
Permitted Phases	4	4		2	6	6	
Detector Phase	4	4	2	2	1	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	24.0	24.0	11.0	11.0	24.0
Total Split (s)	30.0	30.0	34.0	34.0	26.0	26.0	60.0
Total Split (%)	33.3%	33.3%	37.8%	37.8%	28.9%	28.9%	66.7%
Yellow Time (s)	3.6	3.6	4.8	4.8	3.6	3.6	4.8
All-Red Time (s)	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
Total Lost Time (s)	4.6	4.6	5.8	5.8		4.6	5.8
Lead/Lag			Lag	Lag	Lead	Lead	
Lead-Lag Optimize?							
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	14.2	14.2	25.0	25.0		48.2	47.0
Actuated g/C Ratio	0.20	0.20	0.35	0.35		0.67	0.65
v/c Ratio	0.27	0.70	0.68	0.68		0.77	0.41
Control Delay	26.7	29.0	24.8	6.0		22.8	6.8
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	26.7	29.0	24.8	6.0		22.8	6.8
LOS	C	C	C	A		C	A
Approach Delay			16.5				10.7
Approach LOS			B				B

Intersection Summary			
Cycle Length: 90			
Actuated Cycle Length: 72.1			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 15.1		Intersection LOS: B	
Intersection Capacity Utilization 67.6%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 28: Grand Ave & SR-60 EB Ramps



Appendix D – ICU Spreadsheets and HCM Reports – 2027 Conditions

E-W Street: Amar Rd
N-S Street: Nogales St
Scenario: AM Peak
Overlap Reduce 35%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2027 without Project				AM 2027 + Project				2027 + Project with Mitigation				PHF
	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	
EB Left	23	1	1.00	0.01	23	1	1.00	0.01	23	1	1.00	0.01	
Comb. L-T		0				0				0			
EB Thru	1465	2	2.00	0.46	1499	2	2.00	0.47	1499	2	2.09	0.45	0.878
Comb. T-R		0				0				1			
EB Right	426	1	1.00	0.27	426	1	1.00	0.27	656	0	0.91	0.45	
Comb. L-T-R		0				0				0			
WB Left	143	1	1.00	0.09	144	1	1.00	0.09	144	1	1.00	0.09	
Comb. L-T		0				0				0			
WB Thru	1096	2	2.00	0.34	1103	2	2.00	0.34	1103	2	2.00	0.34	0.907
Comb. T-R		0				0				0			
WB Right	3	1	1.00	0.00	3	1	1.00	0.00	3	1	1.00	0.00	
Comb. L-T-R		0				0				0			
NB Left	746	1	1.97	0.24	746	1	1.97	0.24	746	1	1.97	0.24	
Comb. L-T		1				1				1			
NB Thru	12	0	0.03	0.24	12	0	0.03	0.24	12	0	0.03	0.24	0.956
Comb. T-R		0				0				0			
NB Right	236	1	1.00	0.15	241	1	1.00	0.15	241	1	1.00	0.15	
Comb. L-T-R		0				0				0			
SB Left	16	0	0.26	0.04	16	0	0.26	0.04	16	0	0.26	0.04	
Comb. L-T		0				0				0			
SB Thru	18	0	0.30	0.04	18	0	0.30	0.04	18	0	0.30	0.04	0.875
Comb. T-R		0				0				0			
SB Right	26	0	0.43	0.04	26	0	0.43	0.04	26	0	0.43	0.04	
Comb. L-T-R		1				1				1			

Critical Volumes			E-W:	0.55			E-W:	0.56			E-W:	0.54	
			N-S:	0.27			N-S:	0.27			N-S:	0.27	
			Total:	0.82			Total:	0.83			Total:	0.81	
Lost Time				0.10				0.10				0.10	
V/C				0.922				0.933				0.914	
Level of Service				E				E				E	

E-W Street: Amar Rd
N-S Street: Nogales St
Scenario: PM Peak
Overlap Reduce 40%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM 2027 without Project				PM 2027 + Project				2027 + Project with Mitigation				PHF
	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	
EB Left	28	1	1.00	0.02	28	1	1.00	0.02	28	1	1.00	0.02	0.956
Comb. L-T		0				0				0			
EB Thru	1207	2	2.00	0.38	1229	2	2.00	0.38	1229	2	2.02	0.38	
Comb. T-R		0				0				1			
EB Right	356	1	1.00	0.22	356	1	1.00	0.22	594	0	0.98	0.38	
Comb. L-T-R		0				0				0			
WB Left	233	1	1.00	0.15	236	1	1.00	0.15	236	1	1.00	0.15	0.895
Comb. L-T		0				0				0			
WB Thru	1086	2	2.00	0.34	1105	2	2.00	0.35	1105	2	2.00	0.35	
Comb. T-R		0				0				0			
WB Right	8	1	1.00	0.00	8	1	1.00	0.00	8	1	1.00	0.00	
Comb. L-T-R		0				0				0			
NB Left	780	1	1.97	0.25	780	1	1.97	0.25	780	1	1.97	0.25	0.971
Comb. L-T		1				1				1			
NB Thru	12	0	0.03	0.25	12	0	0.03	0.25	12	0	0.03	0.25	
Comb. T-R		0				0				0			
NB Right	225	1	1.00	0.14	228	1	1.00	0.14	228	1	1.00	0.14	
Comb. L-T-R		0				0				0			
SB Left	10	0	0.32	0.02	10	0	0.32	0.02	10	0	0.32	0.02	0.786
Comb. L-T		0				0				0			
SB Thru	11	0	0.36	0.02	11	0	0.36	0.02	11	0	0.36	0.02	
Comb. T-R		0				0				0			
SB Right	10	0	0.32	0.02	10	0	0.32	0.02	10	0	0.32	0.02	
Comb. L-T-R		1				1				1			

Critical Volumes			E-W:	0.52			E-W:	0.53			E-W:	0.53	
			N-S:	0.27			N-S:	0.27			N-S:	0.27	
			Total:	0.79			Total:	0.80			Total:	0.79	
Lost Time				0.10				0.10				0.10	
V/C				0.890				0.899				0.894	
Level of Service				D				D				D	

E-W Street: Amar Rd
N-S Street: Lemon Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2027 without Project				AM 2027 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	20	1	1.00	0.01	20	1	1.00	0.01	0.856
Comb. L-T		0				0			
EB Thru	1278	1	1.53	0.52	1319	1	1.54	0.54	
Comb. T-R		1				1			
EB Right	397	0	0.47	0.52	397	0	0.46	0.54	
Comb. L-T-R		0				0			
WB Left	78	1	1.00	0.05	79	1	1.00	0.05	0.974
Comb. L-T		0				0			
WB Thru	753	2	2.00	0.24	762	2	2.00	0.24	
Comb. T-R		0				0			
WB Right	13	1	1.00	0.01	13	1	1.00	0.01	
Comb. L-T-R		0				0			
NB Left	272	1	1.70	0.10	272	1	1.70	0.10	0.901
Comb. L-T		1				1			
NB Thru	48	0	0.30	0.10	48	0	0.30	0.10	
Comb. T-R		0				0			
NB Right	104	1	1.00	0.07	109	1	1.00	0.07	
Comb. L-T-R		0				0			
SB Left	45	0	0.40	0.07	45	0	0.40	0.07	0.818
Comb. L-T		1				1			
SB Thru	68	0	0.60	0.07	68	0	0.60	0.07	
Comb. T-R		0				0			
SB Right	31	1	1.00	0.02	31	1	1.00	0.02	
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.57	E-W:	0.59
	N-S:	0.17	N-S:	0.17
	Total:	0.74	Total:	0.76

Lost Time	0.10	0.10

V/C	0.843	0.857
Level of Service	D	D

E-W Street: Amar Rd
N-S Street: Lemon Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM 2027 without Project				PM 2027 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	25	1	1.00	0.02	25	1	1.00	0.02	0.968
Comb. L-T		0				0			
EB Thru	981	1	1.68	0.37	1005	1	1.68	0.37	
Comb. T-R		1				1			
EB Right	190	0	0.32	0.37	190	0	0.32	0.37	
Comb. L-T-R		0				0			
WB Left	104	1	1.00	0.06	106	1	1.00	0.07	0.944
Comb. L-T		0				0			
WB Thru	982	2	2.00	0.31	1002	2	2.00	0.31	
Comb. T-R		0				0			
WB Right	35	1	1.00	0.02	35	1	1.00	0.02	
Comb. L-T-R		0				0			
NB Left	345	1	1.75	0.12	345	1	1.75	0.12	0.933
Comb. L-T		1				1			
NB Thru	50	0	0.25	0.12	50	0	0.25	0.12	
Comb. T-R		0				0			
NB Right	121	1	1.00	0.08	124	1	1.00	0.08	
Comb. L-T-R		0				0			
SB Left	36	0	0.56	0.04	36	0	0.56	0.04	0.838
Comb. L-T		1				1			
SB Thru	29	0	0.44	0.04	29	0	0.44	0.04	
Comb. T-R		0				0			
SB Right	24	1	1.00	0.01	24	1	1.00	0.01	
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.43	E-W:	0.44
	N-S:	0.16	N-S:	0.16
	Total:	0.59	Total:	0.60

Lost Time	0.10	0.10

V/C	0.695	0.704
Level of Service	B	C

E-W Street: Amar Rd
N-S Street: Meadow Pass Rd
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2027 without Project				AM 2027 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	29	1	1.00	0.02	29	1	1.00	0.02	0.862
Comb. L-T		0				0			
EB Thru	1317	2	2.00	0.41	1362	2	2.00	0.43	
Comb. T-R		0				0			
EB Right	49	1	1.00	0.03	49	1	1.00	0.03	
Comb. L-T-R		0				0			
WB Left	168	1	1.00	0.11	170	1	1.00	0.11	0.890
Comb. L-T		0				0			
WB Thru	913	2	2.00	0.29	923	2	2.00	0.29	
Comb. T-R		0				0			
WB Right	13	1	1.00	0.01	13	1	1.00	0.01	
Comb. L-T-R		0				0			
NB Left	78	1	1.00	0.05	78	1	1.00	0.05	0.709
Comb. L-T		0				0			
NB Thru	229	1	1.00	0.14	229	1	1.00	0.14	
Comb. T-R		0				0			
NB Right	271	1	1.00	0.17	277	1	1.00	0.17	
Comb. L-T-R		0				0			
SB Left	51	1	1.00	0.03	51	1	1.00	0.03	0.727
Comb. L-T		0				0			
SB Thru	183	0	0.77	0.15	183	0	0.77	0.15	
Comb. T-R		1				1			
SB Right	54	0	0.23	0.15	54	0	0.23	0.15	
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.52	E-W:	0.53
	N-S:	0.20	N-S:	0.20
	Total:	0.72	Total:	0.74

Lost Time	0.10	0.10

V/C	0.818	0.836
Level of Service	D	D

E-W Street: Amar Rd
N-S Street: Meadow Pass Rd
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM 2027 without Project				PM 2027 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	34	1	1.00	0.02	34	1	1.00	0.02	0.827
Comb. L-T		0				0			
EB Thru	1263	2	2.00	0.39	1296	2	2.00	0.40	
Comb. T-R		0				0			
EB Right	27	1	1.00	0.02	27	1	1.00	0.02	
Comb. L-T-R		0				0			
WB Left	152	1	1.00	0.10	154	1	1.00	0.10	0.947
Comb. L-T		0				0			
WB Thru	1121	2	2.00	0.35	1143	2	2.00	0.36	
Comb. T-R		0				0			
WB Right	50	1	1.00	0.03	50	1	1.00	0.03	
Comb. L-T-R		0				0			
NB Left	23	1	1.00	0.01	23	1	1.00	0.01	0.878
Comb. L-T		0				0			
NB Thru	112	1	1.00	0.07	112	1	1.00	0.07	
Comb. T-R		0				0			
NB Right	204	1	1.00	0.13	207	1	1.00	0.13	
Comb. L-T-R		0				0			
SB Left	48	1	1.00	0.03	48	1	1.00	0.03	0.778
Comb. L-T		0				0			
SB Thru	63	0	0.58	0.07	63	0	0.58	0.07	
Comb. T-R		1				1			
SB Right	46	0	0.42	0.07	46	0	0.42	0.07	
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.49	E-W:	0.50
	N-S:	0.16	N-S:	0.16
	Total:	0.65	Total:	0.66

Lost Time	0.10	0.10

V/C	0.747	0.761
Level of Service	C	C

E-W Street: Temple Ave
N-S Street: Grand Ave
Scenario: AM Peak
Overlap Reduce 10%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2027 without Project				AM 2027 + Project				2027 + Project with Mitigation				PHF
	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	
EB Left	365	2	2.00	0.13	385	2	2.00	0.13	385	2	2.00	0.13	
Comb. L-T		0				0				0			
EB Thru	900	2	2.00	0.28	931	2	2.00	0.29	931	2	2.46	0.24	0.844
Comb. T-R		0				0				1			
EB Right	182	1	1.00	0.11	182	1	1.00	0.11	203	0	0.54	0.24	
Comb. L-T-R		0				0				0			
WB Left	91	2	2.00	0.03	102	2	2.00	0.04	102	2	2.00	0.04	
Comb. L-T		0				0				0			
WB Thru	521	2	2.00	0.16	527	2	2.00	0.16	527	2	2.07	0.16	0.912
Comb. T-R		0				0				1			
WB Right	189	1	1.00	0.12	212	1	1.00	0.13	236	0	0.93	0.16	
Comb. L-T-R		0				0				0			
NB Left	235	2	2.00	0.08	235	2	2.00	0.08	235	2	2.00	0.08	
Comb. L-T		0				0				0			
NB Thru	1399	3	3.00	0.29	1482	3	3.00	0.31	1482	3	3.00	0.31	0.848
Comb. T-R		0				0				0			
NB Right	666	1	1.00	0.42	711	1	1.00	0.44	711	1	1.00	0.44	
Comb. L-T-R		0				0				0			
SB Left	368	2	2.00	0.13	423	2	2.00	0.15	423	2	2.00	0.15	
Comb. L-T		0				0				0			
SB Thru	1306	2	2.48	0.33	1324	2	2.48	0.33	1324	2	2.48	0.33	0.853
Comb. T-R		1				1				1			
SB Right	272	0	0.52	0.33	277	0	0.52	0.33	277	0	0.52	0.33	
Comb. L-T-R		0				0				0			

Critical Volumes			E-W:	0.31			E-W:	0.33			E-W:	0.29	
			N-S:	0.54			N-S:	0.59			N-S:	0.59	
			Total:	0.86			Total:	0.92			Total:	0.88	
Lost Time				0.10				0.10				0.10	
V/C				0.957				1.018				0.984	
Level of Service				E				F				E	

E-W Street: Temple Ave
N-S Street: Grand Ave
Scenario: PM Peak
Overlap Reduce 15%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM 2027 without Project				PM 2027 + Project				2027 + Project with Mitigation				PHF
	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	
EB Left	405	2	2.00	0.14	418	2	2.00	0.15	418	2	2.00	0.15	0.933
Comb. L-T		0				0				0			
EB Thru	679	2	2.00	0.21	698	2	2.00	0.22	698	2	2.13	0.20	
Comb. T-R		0				0				1			
EB Right	241	1	1.00	0.15	241	1	1.00	0.15	284	0	0.87	0.20	
Comb. L-T-R		0				0				0			
WB Left	237	2	2.00	0.08	263	2	2.00	0.09	263	2	2.00	0.09	0.923
Comb. L-T		0				0				0			
WB Thru	706	2	2.00	0.22	722	2	2.00	0.23	722	2	2.11	0.21	
Comb. T-R		0				0				1			
WB Right	230	1	1.00	0.14	261	1	1.00	0.16	307	0	0.89	0.21	
Comb. L-T-R		0				0				0			
NB Left	399	2	2.00	0.14	399	2	2.00	0.14	399	2	2.00	0.14	0.880
Comb. L-T		0				0				0			
NB Thru	1397	3	3.00	0.29	1452	3	3.00	0.30	1452	3	3.00	0.30	
Comb. T-R		0				0				0			
NB Right	305	1	1.00	0.19	334	1	1.00	0.21	334	1	1.00	0.21	
Comb. L-T-R		0				0				0			
SB Left	280	2	2.00	0.10	320	2	2.00	0.11	320	2	2.00	0.11	0.934
Comb. L-T		0				0				0			
SB Thru	864	2	2.14	0.25	904	2	2.16	0.26	904	2	2.16	0.26	
Comb. T-R		1				1				1			
SB Right	345	0	0.86	0.25	354	0	0.84	0.26	354	0	0.84	0.26	
Comb. L-T-R		0				0				0			

Critical Volumes			E-W:	0.36			E-W:	0.37			E-W:	0.36	
			N-S:	0.39			N-S:	0.41			N-S:	0.41	
			Total:	0.75			Total:	0.78			Total:	0.77	
Lost Time				0.10				0.10				0.10	
V/C				0.852				0.884				0.873	
Level of Service				D				D				D	

E-W Street: Temple Ave
N-S Street: Mt SAC Way
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2027 without Project				AM 2027 + Project				2027 + Project with Mitigation				PHF
	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	
EB Left	331	1	1.00	0.21	373	1	1.00	0.23	373	1	1.00	0.23	0.932
Comb. L-T		0				0				0			
EB Thru	1286	2	2.00	0.40	1364	2	2.00	0.43	1364	2	2.00	0.43	
Comb. T-R		0				0				0			
EB Right	189	1	1.00	0.12	193	1	1.00	0.12	193	1	1.00	0.12	
Comb. L-T-R		0				0				0			
WB Left	64	1	1.00	0.04	69	1	1.00	0.04	69	1	1.00	0.04	0.904
Comb. L-T		0				0				0			
WB Thru	728	2	2.00	0.23	760	2	2.00	0.24	760	2	2.21	0.21	
Comb. T-R		0				0				1			
WB Right	242	1	1.00	0.15	271	1	1.00	0.17	271	0	0.79	0.21	
Comb. L-T-R		0				0				0			
NB Left	10	0	0.39	0.02	11	0	0.42	0.02	11	0	0.42	0.02	0.714
Comb. L-T		1				1				1			
NB Thru	15	0	0.61	0.02	15	0	0.58	0.02	15	0	0.58	0.02	
Comb. T-R		0				0				0			
NB Right	4	1	1.00	0.00	6	1	1.00	0.00	6	1	1.00	0.00	
Comb. L-T-R		0				0				0			
SB Left	68	0	0.73	0.06	75	0	0.75	0.06	75	0	0.75	0.06	0.795
Comb. L-T		1				1				1			
SB Thru	25	0	0.27	0.06	25	0	0.25	0.06	25	0	0.25	0.06	
Comb. T-R		0				0				0			
SB Right	131	1	1.00	0.08	142	1	1.00	0.09	142	1	1.00	0.09	
Comb. L-T-R		0				0				0			

Critical Volumes			E-W:	0.44			E-W:	0.47			E-W:	0.47	
			N-S:	0.10			N-S:	0.11			N-S:	0.11	
			Total:	0.54			Total:	0.58			Total:	0.57	
Lost Time				0.10				0.10				0.10	
V/C				0.639				0.676				0.675	
Level of Service				B				B				B	

E-W Street: Temple Ave
N-S Street: Mt SAC Way
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM 2027 without Project				PM 2027 + Project				2027 + Project with Mitigation				PHF
	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	
EB Left	189	1	1.00	0.12	219	1	1.00	0.14	219	1	1.00	0.14	0.915
Comb. L-T		0				0				0			
EB Thru	1079	2	2.00	0.34	1139	2	2.00	0.36	1139	2	2.00	0.36	
Comb. T-R		0				0				0			
EB Right	37	1	1.00	0.02	40	1	1.00	0.03	40	1	1.00	0.03	
Comb. L-T-R		0				0				0			
WB Left	14	1	1.00	0.01	18	1	1.00	0.01	18	1	1.00	0.01	0.967
Comb. L-T		0				0				0			
WB Thru	894	2	2.00	0.28	943	2	2.00	0.29	943	2	2.73	0.22	
Comb. T-R		0				0				1			
WB Right	76	1	1.00	0.05	95	1	1.00	0.06	95	0	0.27	0.22	
Comb. L-T-R		0				0				0			
NB Left	123	0	0.88	0.09	126	0	0.88	0.09	126	0	0.88	0.09	0.717
Comb. L-T		1				1				1			
NB Thru	17	0	0.12	0.09	17	0	0.12	0.09	17	0	0.12	0.09	
Comb. T-R		0				0				0			
NB Right	22	1	1.00	0.01	25	1	1.00	0.02	25	1	1.00	0.02	
Comb. L-T-R		0				0				0			
SB Left	149	0	0.96	0.10	166	0	0.97	0.11	166	0	0.97	0.11	0.852
Comb. L-T		1				1				1			
SB Thru	6	0	0.04	0.10	6	0	0.03	0.11	6	0	0.03	0.11	
Comb. T-R		0				0				0			
SB Right	189	1	1.00	0.12	214	1	1.00	0.13	214	1	1.00	0.13	
Comb. L-T-R		0				0				0			

Critical Volumes			E-W:	0.40			E-W:	0.43			E-W:	0.37	
			N-S:	0.21			N-S:	0.22			N-S:	0.22	
			Total:	0.60			Total:	0.65			Total:	0.59	
Lost Time				0.10				0.10				0.10	
V/C				0.703				0.754				0.689	
Level of Service				C				C				B	

E-W Street: Temple Ave
N-S Street: Transit Center Access
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2027 without Project				AM 2027 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	28	1	1.00	0.02	28	1	1.00	0.02	0.859
Comb. L-T		0				0			
EB Thru	1565	2	2.00	0.49	1643	2	2.00	0.51	
Comb. T-R		0				0			
EB Right	0	1	1.00	0.00	15	1	1.00	0.01	
Comb. L-T-R		0				0			
WB Left (U)	0	1	1.00	0.00	15	1	1.00	0.01	0.853
Comb. L-T		0				0			
WB Thru	970	2	2.00	0.30	1037	2	2.00	0.32	
Comb. T-R		0				0			
WB Right	136	1	1.00	0.09	136	1	1.00	0.09	
Comb. L-T-R		0				0			
NB Left	0	1	1.00	0.00	3	1	1.00	0.00	0.920
Comb. L-T		0				0			
NB Thru	0	0	0.00		0	0	0.00		
Comb. T-R		0				0			
NB Right	0	1	1.00	0.00	3	1	1.00	0.00	
Comb. L-T-R		0				0			
SB Left	17	0	0.50	0.02	17	0	0.50	0.02	0.750
Comb. L-T		0				0			
SB Thru	0	0	0.00		0	0	0.00		
Comb. T-R		0				0			
SB Right	17	0	0.50	0.02	17	0	0.50	0.02	
Comb. L-T-R		1				1			

Critical Volumes	E-W:	0.49	E-W:	0.52
	N-S:	0.02	N-S:	0.02
	Total:	0.51	Total:	0.55

Lost Time	0.10	0.10

V/C	0.611	0.647
Level of Service	B	B

E-W Street: Temple Ave
N-S Street: Transit Center Access
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM 2027 without Project				PM 2027 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	41	1	1.00	0.03	41	1	1.00	0.03	0.912
Comb. L-T		0				0			
EB Thru	1107	2	2.00	0.35	1176	2	2.00	0.37	
Comb. T-R		0				0			
EB Right	0	1	1.00	0.00	10	1	1.00	0.01	
Comb. L-T-R		0				0			
WB Left (U)	0	1	1.00	0.00	10	1	1.00	0.01	0.944
Comb. L-T		0				0			
WB Thru	1020	2	2.00	0.32	1085	2	2.00	0.34	
Comb. T-R		0				0			
WB Right	88	1	1.00	0.05	88	1	1.00	0.05	
Comb. L-T-R		0				0			
NB Left	0	1	1.00	0.00	8	1	1.00	0.00	0.920
Comb. L-T		0				0			
NB Thru	0	0	0.00		0	0	0.00		
Comb. T-R		0				0			
NB Right	0	1	1.00	0.00	8	1	1.00	0.00	
Comb. L-T-R		0				0			
SB Left	47	0	0.63	0.05	47	0	0.63	0.05	0.794
Comb. L-T		0				0			
SB Thru	0	0	0.00		0	0	0.00		
Comb. T-R		0				0			
SB Right	28	0	0.37	0.05	28	0	0.37	0.05	
Comb. L-T-R		1				1			

Critical Volumes	E-W:	0.35	E-W:	0.37
	N-S:	0.05	N-S:	0.05
	Total:	0.39	Total:	0.42

Lost Time	0.10	0.10

V/C	0.492	0.525
Level of Service	A	A

E-W Street: Temple Ave
N-S Street: Bonita Dr
Scenario: AM Peak
Overlap Reduce 10%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2027 without Project				AM 2027 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	328	2	2.00	0.11	387	2	2.00	0.13	0.883
Comb. L-T		0				0			
EB Thru	834	2	2.00	0.26	849	2	2.00	0.27	
Comb. T-R		0				0			
EB Right	139	1	1.00	0.09	144	1	1.00	0.09	
Comb. L-T-R		0				0			
WB Left	132	1	1.00	0.08	142	1	1.00	0.09	0.929
Comb. L-T		0				0			
WB Thru	1070	2	2.00	0.33	1132	2	2.00	0.35	
Comb. T-R		0				0			
WB Right	543	1	1.00	0.34	613	1	1.00	0.38	
Comb. L-T-R		0				0			
NB Left	28	1	1.00	0.02	29	1	1.00	0.02	0.579
Comb. L-T		0				0			
NB Thru	22	1	1.00	0.01	22	1	1.00	0.01	
Comb. T-R		0				0			
NB Right	28	1	1.00	0.02	31	1	1.00	0.02	
Comb. L-T-R		0				0			
SB Left	91	2	2.00	0.03	116	2	2.00	0.04	0.733
Comb. L-T		0				0			
SB Thru	33	1	1.00	0.02	33	1	1.00	0.02	
Comb. T-R		0				0			
SB Right	45	1	1.00	0.03	60	1	1.00	0.04	
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.45	E-W:	0.52
	N-S:	0.05	N-S:	0.06
	Total:	0.50	Total:	0.58

Lost Time	0.10	0.10

V/C	0.602	0.677
Level of Service	B	B

E-W Street: Temple Ave
N-S Street: Bonita Dr
Scenario: PM Peak
Overlap Reduce 15%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM 2027 without Project				PM 2027 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	187	2	2.00	0.07	228	2	2.00	0.08	0.875
Comb. L-T		0				0			
EB Thru	1022	2	2.00	0.32	1058	2	2.00	0.33	
Comb. T-R		0				0			
EB Right	25	1	1.00	0.02	29	1	1.00	0.02	
Comb. L-T-R		0				0			
WB Left	26	1	1.00	0.02	32	1	1.00	0.02	0.900
Comb. L-T		0				0			
WB Thru	1012	2	2.00	0.32	1056	2	2.00	0.33	
Comb. T-R		0				0			
WB Right	157	1	1.00	0.10	207	1	1.00	0.13	
Comb. L-T-R		0				0			
NB Left	15	1	1.00	0.01	17	1	1.00	0.01	0.886
Comb. L-T		0				0			
NB Thru	14	1	1.00	0.01	14	1	1.00	0.01	
Comb. T-R		0				0			
NB Right	61	1	1.00	0.04	67	1	1.00	0.04	
Comb. L-T-R		0				0			
SB Left	191	2	2.00	0.07	245	2	2.00	0.09	0.787
Comb. L-T		0				0			
SB Thru	6	1	1.00	0.00	6	1	1.00	0.00	
Comb. T-R		0				0			
SB Right	88	1	1.00	0.05	118	1	1.00	0.07	
Comb. L-T-R		0				0			

Critical Volumes				
	E-W:	0.38	E-W:	0.41
	N-S:	0.10	N-S:	0.13
	Total:	0.49	Total:	0.54

Lost Time	0.10	0.10

V/C	0.586	0.636
Level of Service	A	B

Intersection	
Int Delay, s/veh	0

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations								
Traffic Vol, veh/h	1	1	804	0	1613	137	0	0
Future Vol, veh/h	1	1	804	0	1613	137	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	None
Storage Length	-	350	-	137	-	120	-	0
Veh in Median Storage, #	-	-	0	-	0	-	0	-
Grade, %	-	-	0	-	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2
Mvmt Flow	1	1	874	0	1753	149	0	0

Major/Minor	Major1			Major2			Minor2	
Conflicting Flow All	1753	1902	0	874	-	0	-	877
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-
Critical Hdwy	6.44	4.14	-	6.44	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.52	2.22	-	2.52	-	-	-	3.32
Pot Cap-1 Maneuver	108	309	-	400	-	-	0	292
Stage 1	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	0	-
Platoon blocked, %			-		-	-		
Mov Cap-1 Maneuver	160	160	-	400	-	-	-	292
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBU	WBT	WBR	SBLn1
Capacity (veh/h)	160	-	400	-	-	-
HCM Lane V/C Ratio	0.014	-	-	-	-	-
HCM Control Delay (s)	27.8	-	0	-	-	0
HCM Lane LOS	D	-	A	-	-	A
HCM 95th %tile Q(veh)	0	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations								
Traffic Vol, veh/h	1	1	838	0	1743	150	0	0
Future Vol, veh/h	1	1	838	0	1743	150	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	None
Storage Length	-	350	-	137	-	120	-	0
Veh in Median Storage, #	-	-	0	-	0	-	0	-
Grade, %	-	-	0	-	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2
Mvmt Flow	1	1	911	0	1895	163	0	0

Major/Minor	Major1			Major2			Minor2	
Conflicting Flow All	1895	2058	0	911	-	0	-	948
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-
Critical Hdwy	6.44	4.14	-	6.44	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.52	2.22	-	2.52	-	-	-	3.32
Pot Cap-1 Maneuver	87	268	-	379	-	-	0	262
Stage 1	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	0	-
Platoon blocked, %			-		-	-		
Mov Cap-1 Maneuver	131	131	-	379	-	-	-	262
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBU	WBT	WBR	SBLn1
Capacity (veh/h)	131	-	379	-	-	-
HCM Lane V/C Ratio	0.017	-	-	-	-	-
HCM Control Delay (s)	32.9	-	0	-	-	0
HCM Lane LOS	D	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations								
Traffic Vol, veh/h	1	1	1079	3	1033	19	0	0
Future Vol, veh/h	1	1	1079	3	1033	19	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	None
Storage Length	-	350	-	137	-	120	-	0
Veh in Median Storage, #	-	-	0	-	0	-	0	-
Grade, %	-	-	0	-	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2
Mvmt Flow	1	1	1173	3	1123	21	0	0

Major/Minor	Major1			Major2			Minor2	
Conflicting Flow All	1123	1144	0	1173	-	0	-	562
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-
Critical Hdwy	6.44	4.14	-	6.44	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.52	2.22	-	2.52	-	-	-	3.32
Pot Cap-1 Maneuver	277	606	-	257	-	-	0	470
Stage 1	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	0	-
Platoon blocked, %			-		-	-		
Mov Cap-1 Maneuver	380	380	-	257	-	-	-	470
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0.1	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBU	WBT	WBR	SBLn1
Capacity (veh/h)	380	-	257	-	-	-
HCM Lane V/C Ratio	0.006	-	0.013	-	-	-
HCM Control Delay (s)	14.5	-	19.2	-	-	0
HCM Lane LOS	B	-	C	-	-	A
HCM 95th %tile Q(veh)	0	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations								
Traffic Vol, veh/h	1	1	1157	3	1123	28	0	0
Future Vol, veh/h	1	1	1157	3	1123	28	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	None
Storage Length	-	350	-	137	-	120	-	0
Veh in Median Storage, #	-	-	0	-	0	-	0	-
Grade, %	-	-	0	-	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2
Mvmt Flow	1	1	1258	3	1221	30	0	0

Major/Minor	Major1			Major2			Minor2	
Conflicting Flow All	1221	1251	0	1258	-	0	-	611
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-
Critical Hdwy	6.44	4.14	-	6.44	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.52	2.22	-	2.52	-	-	-	3.32
Pot Cap-1 Maneuver	239	552	-	226	-	-	0	437
Stage 1	-	-	-	-	-	-	0	-
Stage 2	-	-	-	-	-	-	0	-
Platoon blocked, %			-		-	-		
Mov Cap-1 Maneuver	334	334	-	226	-	-	-	437
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0.1	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBU	WBT	WBR	SBLn1
Capacity (veh/h)	334	-	226	-	-	-
HCM Lane V/C Ratio	0.007	-	0.014	-	-	-
HCM Control Delay (s)	15.9	-	21.2	-	-	0
HCM Lane LOS	C	-	C	-	-	A
HCM 95th %tile Q(veh)	0	-	0	-	-	-

E-W Street: Temple Ave
N-S Street: University Dr
Scenario: AM Peak
Overlap Reduce 15%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2027 without Project				AM 2027 + Project				2027 + Project with Mitigation				PHF
	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	
EB Left	362	2	2.00	0.13	362	2	2.00	0.13	362	2	2.00	0.13	
Comb. L-T		0				0							
EB Thru	621	2	2.00	0.19	662	2	2.00	0.21	662	2	2.00	0.21	0.814
Comb. T-R		0				0							
EB Right	2	1	1.00	0.00	2	1	1.00	0.00	2	1	1.00	0.00	
Comb. L-T-R		0				0							
WB Left	16	1	1.00	0.01	16	1	1.00	0.01	16	1	1.00	0.01	
Comb. L-T		0				0							
WB Thru	1627	2	2.00	0.51	1774	2	2.00	0.55	1774	2	2.28	0.49	0.983
Comb. T-R		0				0				1			
WB Right	475	1	1.00	0.30	475	1	1.00	0.30	558	0	0.72	0.49	
Comb. L-T-R		0				0							
NB Left	0	1	1.00	0.00	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. L-T		0				0							
NB Thru	4	0	0.50	0.01	4	0	0.50	0.01	4		0.50	0.01	0.500
Comb. T-R		1				1				1			
NB Right	4	0	0.50	0.01	4	0	0.50	0.01	4		0.50	0.01	
Comb. L-T-R		0				0							
SB Left	283	1	1.99	0.09	283	1	1.99	0.09	283	1	1.99	0.09	
Comb. L-T		1				1				1			
SB Thru	1	0	0.01	0.09	1	0	0.01	0.09	1		0.01	0.09	0.759
Comb. T-R		0				0							
SB Right	204	1	1.00	0.13	204	1	1.00	0.13	204	1	1.00	0.13	
Comb. L-T-R		0				0							

Critical Volumes			E-W:	0.63			E-W:	0.68			E-W:	0.61	
			N-S:	0.13			N-S:	0.13			N-S:	0.13	
			Total:	0.76			Total:	0.81			Total:	0.74	
Lost Time				0.10				0.10				0.10	
V/C				0.862				0.908				0.839	
Level of Service				D				E				D	

E-W Street: Temple Ave
N-S Street: University Dr
Scenario: PM Peak
Overlap Reduce 40%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM 2027 without Project				PM 2027 + Project				2027 + Project with Mitigation				PHF
	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	
EB Left	158	2	2.00	0.05	158	2	2.00	0.05	158	2	2.00	0.05	0.886
Comb. L-T		0				0							
EB Thru	1051	2	2.00	0.33	1139	2	2.00	0.36	1139	2	2.00	0.36	
Comb. T-R		0				0							
EB Right	1	1	1.00	0.00	1	1	1.00	0.00	1	1	1.00	0.00	
Comb. L-T-R		0				0							
WB Left	42	1	1.00	0.03	42	1	1.00	0.03	42	1	1.00	0.03	0.897
Comb. L-T		0				0							
WB Thru	980	2	2.00	0.31	1091	2	2.00	0.34	1091	2	2.35	0.29	
Comb. T-R		0				0				1			
WB Right	181	1	1.00	0.11	181	1	1.00	0.11	302	0	0.65	0.29	
Comb. L-T-R		0				0							
NB Left	4	1	1.00	0.00	4	1	1.00	0.00	4	1	1.00	0.00	0.563
Comb. L-T		0				0							
NB Thru	7	0	0.57	0.01	7	0	0.57	0.01	7		0.57	0.01	
Comb. T-R		1				1				1			
NB Right	5	0	0.43	0.01	5	0	0.43	0.01	5		0.43	0.01	
Comb. L-T-R		0				0							
SB Left	765	1	1.95	0.24	765	1	1.95	0.24	765	1	1.95	0.24	0.790
Comb. L-T		1				1				1			
SB Thru	18	0	0.05	0.24	18	0	0.05	0.24	18		0.05	0.24	
Comb. T-R		0				0							
SB Right	233	1	1.00	0.15	233	1	1.00	0.15	233	1	1.00	0.15	
Comb. L-T-R		0				0							

Critical Volumes			E-W:	0.36			E-W:	0.40			E-W:	0.38	
			N-S:	0.25			N-S:	0.25			N-S:	0.25	
			Total:	0.61			Total:	0.65			Total:	0.63	
Lost Time				0.10				0.10				0.10	
V/C				0.714				0.748				0.735	
Level of Service				C				C				C	

E-W Street: Temple Ave
N-S Street: Campus Dr
Scenario: AM Peak
Overlap Reduce 10%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2027 without Project				AM 2027 + Project				2027 + Project with Mitigation				PHF
	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	
EB Left	364	2	2.00	0.13	384	2	2.00	0.13	384	2	2.00	0.13	
Comb. L-T		0				0				0			
EB Thru	457	2	2.89	0.10	474	2	2.90	0.10	474	2	2.90	0.10	0.883
Comb. T-R		1				1				1			
EB Right	17	0	0.11	0.10	17	0	0.10	0.10	17	0	0.10	0.10	
Comb. L-T-R		0				0				0			
WB Left	24	1	1.00	0.02	24	1	1.00	0.02	24	1	1.00	0.02	
Comb. L-T		0				0				0			
WB Thru	1415	2	2.00	0.44	1481	2	2.00	0.46	1481	2	2.44	0.38	0.993
Comb. T-R		0				0				1			
WB Right	341	1	1.00	0.21	341	1	1.00	0.21	341	0	0.56	0.38	
Comb. L-T-R		0				0				0			
NB Left	63	1	1.00	0.04	63	1	1.00	0.04	63	1	1.00	0.04	
Comb. L-T		0				0				0			
NB Thru	49	1	1.26	0.02	49	1	1.26	0.02	49	1	1.26	0.02	0.688
Comb. T-R		1				1				1			
NB Right	29	0	0.74	0.02	29	0	0.74	0.02	29	0	0.74	0.02	
Comb. L-T-R		0				0				0			
SB Left	158	1	1.69	0.06	158	1	1.69	0.06	158	1	1.69	0.06	
Comb. L-T		1				1				1			
SB Thru	29	0	0.31	0.06	29	0	0.31	0.06	29	0	0.31	0.06	0.837
Comb. T-R		0				0				0			
SB Right	1044	2	2.00	0.33	1127	2	2.00	0.35	1127	2	2.00	0.35	
Comb. L-T-R		0				0				0			

Critical Volumes			E-W:	0.57			E-W:	0.60			E-W:	0.51	
			N-S:	0.37			N-S:	0.39			N-S:	0.39	
			Total:	0.93			Total:	0.99			Total:	0.90	
Lost Time				0.10				0.10				0.10	
V/C				1.034				1.087				1.004	
Level of Service				F				F				F	

E-W Street: Temple Ave
N-S Street: Campus Dr
Scenario: PM Peak
Overlap Reduce 25%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM 2027 without Project				PM 2027 + Project				2027 + Project with Mitigation				PHF
	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	
EB Left	672	2	2.00	0.23	720	2	2.00	0.25	720	2	2.00	0.25	0.904
Comb. L-T		0				0				0			
EB Thru	1031	2	2.89	0.22	1069	2	2.89	0.23	1069	2	2.89	0.23	
Comb. T-R		1				1				1			
EB Right	40	0	0.11	0.22	40	0	0.11	0.23	40	0	0.11	0.23	
Comb. L-T-R		0				0				0			
WB Left	62	1	1.00	0.04	62	1	1.00	0.04	62	1	1.00	0.04	0.892
Comb. L-T		0				0				0			
WB Thru	862	2	2.00	0.27	912	2	2.00	0.29	912	2	1.98	0.29	
Comb. T-R		0				0				1			
WB Right	471	1	1.00	0.29	471	1	1.00	0.29	471	0	1.02	0.29	
Comb. L-T-R		0				0				0			
NB Left	51	1	1.00	0.03	51	1	1.00	0.03	51	1	1.00	0.03	0.825
Comb. L-T		0				0				0			
NB Thru	59	1	0.95	0.04	59	1	0.95	0.04	59	1	0.95	0.04	
Comb. T-R		1				1				1			
NB Right	65	0	1.05	0.04	65	0	1.05	0.04	65	0	1.05	0.04	
Comb. L-T-R		0				0				0			
SB Left	394	1	1.79	0.14	394	1	1.79	0.14	394	1	1.79	0.14	0.863
Comb. L-T		1				1				1			
SB Thru	46	0	0.21	0.14	46	0	0.21	0.14	46	0	0.21	0.14	
Comb. T-R		0				0				0			
SB Right	363	2	2.00	0.11	410	2	2.00	0.13	410	2	2.00	0.13	
Comb. L-T-R		0				0				0			

Critical Volumes			E-W:	0.53			E-W:	0.54			E-W:	0.54	
			N-S:	0.18			N-S:	0.18			N-S:	0.18	
			Total:	0.70			Total:	0.72			Total:	0.71	
Lost Time				0.10				0.10				0.10	
V/C				0.804				0.821				0.815	
Level of Service				D				D				D	

E-W Street: Kellogg Dr
N-S Street: Campus Dr
Scenario: AM Peak
Overlap Reduce 20%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2027 without Project				AM 2027 + Project				2027 + Project with Mitigation				PHF
	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	
EB Left	53	1	1.00	0.03	53	1	1.00	0.03	53	1	1.00	0.03	
Comb. L-T		0				0							
EB Thru	179	1	1.56	0.07	179	1	1.52	0.07	179	1	1.00	0.11	0.917
Comb. T-R		1				1				0			
EB Right	457	1	1.44	0.20	507	1	1.48	0.21	507	2	2.00	0.16	
Comb. L-T-R		0				0							
WB Left	237	1	1.00	0.15	237	1	1.00	0.15	237	1	1.00	0.15	
Comb. L-T		0				0							
WB Thru	515	2	2.00	0.16	515	2	2.00	0.16	515	2	2.00	0.16	0.717
Comb. T-R		0				0							
WB Right	77	1	1.00	0.05	77	1	1.00	0.05	77	1	1.00	0.05	
Comb. L-T-R		0				0							
NB Left	435	2	2.00	0.15	438	2	2.00	0.15	438	2	2.00	0.15	
Comb. L-T		0				0							
NB Thru	317	1	1.82	0.11	334	1	1.83	0.11	334	1	1.83	0.11	0.876
Comb. T-R		1				1				1			
NB Right	32	0	0.18	0.11	32	0	0.17	0.11	32		0.17	0.11	
Comb. L-T-R		0				0							
SB Left	80	1	1.00	0.05	80	1	1.00	0.05	80	1	1.00	0.05	
Comb. L-T		0				0							
SB Thru	739	1	1.68	0.28	766	1	1.69	0.28	766	1	1.69	0.28	0.814
Comb. T-R		1				1				1			
SB Right	142	0	0.32	0.28	142	0	0.31	0.28	142		0.31	0.28	
Comb. L-T-R		0				0							

Critical Volumes			E-W:	0.35			E-W:	0.36			E-W:	0.31	
			N-S:	0.43			N-S:	0.44			N-S:	0.44	
			Total:	0.77			Total:	0.80			Total:	0.74	
Lost Time				0.10				0.10				0.10	
V/C				0.873				0.899				0.843	
Level of Service				D				D				D	

E-W Street: Kellogg Dr
N-S Street: Campus Dr
Scenario: PM Peak
Overlap Reduce 25%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM 2027 without Project				PM 2027 + Project				2027 + Project with Mitigation				PHF
	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	
EB Left	98	1	1.00	0.06	98	1	1.00	0.06	98	1	1.00	0.06	0.891
Comb. L-T		0				0							
EB Thru	248	1	1.71	0.09	248	1	1.68	0.09	248	1	1.00	0.16	
Comb. T-R		1				1				0			
EB Right	452	1	1.29	0.22	485	1	1.32	0.23	485	2	2.00	0.15	
Comb. L-T-R		0				0							
WB Left	38	1	1.00	0.02	38	1	1.00	0.02	38	1	1.00	0.02	0.925
Comb. L-T		0				0							
WB Thru	256	2	2.00	0.08	256	2	2.00	0.08	256	2	2.00	0.08	
Comb. T-R		0				0							
WB Right	156	1	1.00	0.10	156	1	1.00	0.10	156	1	1.00	0.10	
Comb. L-T-R		0				0							
NB Left	397	2	2.00	0.14	405	2	2.00	0.14	405	2	2.00	0.14	0.914
Comb. L-T		0				0							
NB Thru	743	1	1.92	0.24	781	1	1.93	0.25	781	1	1.93	0.25	
Comb. T-R		1				1				1			
NB Right	30	0	0.08	0.24	30	0	0.07	0.25	30		0.07	0.25	
Comb. L-T-R		0				0							
SB Left	27	1	1.00	0.02	27	1	1.00	0.02	27	1	1.00	0.02	0.887
Comb. L-T		0				0							
SB Thru	206	1	1.45	0.09	223	1	1.48	0.09	223	1	1.48	0.09	
Comb. T-R		1				1				1			
SB Right	78	0	0.55	0.09	78	0	0.52	0.09	78		0.52	0.09	
Comb. L-T-R		0				0							

Critical Volumes	E-W:	0.24	E-W:	0.25	E-W:	0.18	
	N-S:	0.26	N-S:	0.27	N-S:	0.27	
	Total:	0.50	Total:	0.52	Total:	0.45	
Lost Time		0.10		0.10		0.10	
V/C		0.601		0.623		0.549	
Level of Service		B		B		A	

E-W Street: Temple Ave
N-S Street: Valley Blvd
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2027 without Project				AM 2027 + Project				2027 + Project with Mitigation				PHF
	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	
EB Left	117	1	1.00	0.07	120	1	1.00	0.08	120	1	1.00	0.08	0.924
Comb. L-T		0				0							
EB Thru	343	2	2.17	0.10	356	2	2.19	0.10	356	2	2.19	0.10	
Comb. T-R		1				1				1			
EB Right	132	0	0.83	0.10	132	0	0.81	0.10	132		0.81	0.10	
Comb. L-T-R		0				0							
WB Left	56	1	1.00	0.03	56	1	1.00	0.03	56	1	1.00	0.03	0.863
Comb. L-T		0				0							
WB Thru	1375	2	2.77	0.31	1436	2	2.78	0.32	1436	2	2.78	0.32	
Comb. T-R		1				1				1			
WB Right	114	0	0.23	0.31	114	0	0.22	0.32	114		0.22	0.32	
Comb. L-T-R		0				0							
NB Left	413	1	1.00	0.26	413	1	1.00	0.26	413	2	2.00	0.14	0.812
Comb. L-T		0				0							
NB Thru	594	2	2.00	0.19	594	2	2.00	0.19	594	2	2.00	0.19	
Comb. T-R		0				0							
NB Right	70	1	1.00	0.04	70	1	1.00	0.04	70	1	1.00	0.04	
Comb. L-T-R		0				0							
SB Left	84	1	1.00	0.05	84	1	1.00	0.05	84	1	1.00	0.05	0.924
Comb. L-T		0				0							
SB Thru	690	1	1.82	0.24	690	1	1.79	0.24	690	1	1.79	0.24	
Comb. T-R		1				1				1			
SB Right	450	1	1.18	0.24	464	1	1.21	0.24	464	1	1.21	0.24	
Comb. L-T-R		0				0							

Critical Volumes			E-W:	0.38			E-W:	0.40			E-W:	0.40	
			N-S:	0.50			N-S:	0.50			N-S:	0.38	
			Total:	0.88			Total:	0.90			Total:	0.78	
Lost Time				0.10				0.10				0.10	
V/C				0.979				0.996				0.882	
Level of Service				E				E				D	

E-W Street: Temple Ave
N-S Street: Valley Blvd
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM 2027 without Project				PM 2027 + Project				2027 + Project with Mitigation				PHF
	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	
EB Left	178	1	1.00	0.11	186	1	1.00	0.12	186	1	1.00	0.12	0.904
Comb. L-T		0				0							
EB Thru	1062	2	2.51	0.26	1093	2	2.52	0.27	1093	2	2.52	0.27	
Comb. T-R		1				1				1			
EB Right	208	0	0.49	0.26	208	0	0.48	0.27	208		0.48	0.27	
Comb. L-T-R		0				0							
WB Left	96	1	1.00	0.06	96	1	1.00	0.06	96	1	1.00	0.06	0.865
Comb. L-T		0				0							
WB Thru	892	2	2.61	0.21	933	2	2.62	0.22	933	2	2.62	0.22	
Comb. T-R		1				1				1			
WB Right	134	0	0.39	0.21	134	0	0.38	0.22	134		0.38	0.22	
Comb. L-T-R		0				0							
NB Left	355	1	1.00	0.22	355	1	1.00	0.22	355	2	2.00	0.12	0.874
Comb. L-T		0				0							
NB Thru	756	2	2.00	0.24	756	2	2.00	0.24	756	2	2.00	0.24	
Comb. T-R		0				0							
NB 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							
SB Left	240	1	1.00	0.15	240	1	1.00	0.15	240	1	1.00	0.15	0.923
Comb. L-T		0				0							
SB Thru	409	1	2.00	0.13	409	1	2.00	0.13	409	1	2.00	0.13	
Comb. T-R		1				1				1			
SB Right	191	1	1.00	0.12	201	1	1.00	0.13	201	1	1.00	0.13	
Comb. L-T-R		0				0							

Critical Volumes			E-W:	0.33			E-W:	0.34			E-W:	0.34	
			N-S:	0.39			N-S:	0.39			N-S:	0.39	
			Total:	0.71			Total:	0.72			Total:	0.72	
Lost Time				0.10				0.10				0.10	
V/C				0.811				0.825				0.825	
Level of Service				D				D				D	

E-W Street: Temple Ave
N-S Street: Pomona Blvd
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2027 without Project				AM 2027 + Project				2027 + Project with Mitigation				PHF
	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	
EB Left	120	1	1.00	0.07	120	1	1.00	0.07	120	1	1.00	0.07	
Comb. L-T		0				0				0			
EB Thru	429	2	2.90	0.09	444	2	2.91	0.10	444	2	2.91	0.10	0.784
Comb. T-R		1				1				1			
EB Right	14	0	0.10	0.09	14	0	0.09	0.10	14	0	0.09	0.10	
Comb. L-T-R		0				0				0			
WB Left	772	1	1.00	0.48	772	1	1.00	0.48	772	1	1.00	0.48	
Comb. L-T		0				0				0			
WB Thru	1359	2	2.70	0.31	1421	2	2.71	0.33	1421	2	2.71	0.33	0.837
Comb. T-R		1				1				1			
WB Right	152	0	0.30	0.31	152	0	0.29	0.33	152	0	0.29	0.33	
Comb. L-T-R		0				0				0			
NB Left	61	1	1.00	0.04	61	1	1.00	0.04	61	1	1.00	0.04	
Comb. L-T		0				0				0			
NB Thru	144	1	1.00	0.09	144	1	1.00	0.09	144	1	1.00	0.09	0.757
Comb. T-R		0				0				0			
NB Right	417	1	1.00	0.26	417	1	1.00	0.26	417	1	1.00	0.26	
Comb. L-T-R		0				0				0			
SB Left	70	1	0.37	0.12	70	1	0.37	0.12	70	2	2.00	0.02	
Comb. L-T		1				1				0			
SB Thru	313	0	1.63	0.12	313	0	1.63	0.12	313	0	0.66	0.30	0.782
Comb. T-R		0				0				1			
SB Right	160	1	1.00	0.10	160	1	1.00	0.10	160	0	0.34	0.30	
Comb. L-T-R		0				0				0			

Critical Volumes			E-W:	0.57			E-W:	0.58			E-W:	0.58	
			N-S:	0.38			N-S:	0.38			N-S:	0.33	
			Total:	0.96			Total:	0.96			Total:	0.91	
Lost Time				0.10				0.10				0.10	
V/C				1.055				1.059				1.011	
Level of Service				F				F				F	

E-W Street: Temple Ave
N-S Street: Pomona Blvd
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

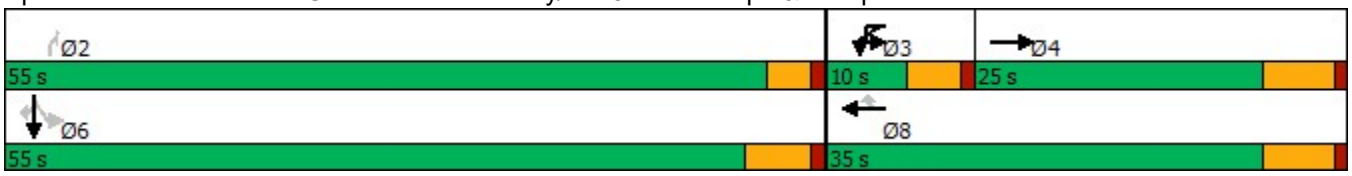
Movement	PM 2027 without Project				PM 2027 + Project				2027 + Project with Mitigation				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	148	1	1.00	0.09	148	1	1.00	0.09	148	1	1.00	0.09	0.887
Comb. L-T		0				0				0			
EB Thru	1231	2	2.96	0.26	1262	2	2.96	0.27	1262	2	2.96	0.27	
Comb. T-R		1				1				1			
EB Right	16	0	0.04	0.26	16	0	0.04	0.27	16	0	0.04	0.27	
Comb. L-T-R		0				0				0			
WB Left	427	1	1.00	0.27	427	1	1.00	0.27	427	1	1.00	0.27	0.887
Comb. L-T		0				0				0			
WB Thru	827	2	2.77	0.19	868	2	2.78	0.19	868	2	2.78	0.19	
Comb. T-R		1				1				1			
WB Right	68	0	0.23	0.19	68	0	0.22	0.19	68	0	0.22	0.19	
Comb. L-T-R		0				0				0			
NB Left	76	1	1.00	0.05	76	1	1.00	0.05	76	1	1.00	0.05	0.960
Comb. L-T		0				0				0			
NB Thru	290	1	1.00	0.18	290	1	1.00	0.18	290	1	1.00	0.18	
Comb. T-R		0				0				0			
NB Right	657	1	1.00	0.41	657	1	1.00	0.41	657	1	1.00	0.41	
Comb. L-T-R		0				0				0			
SB Left	263	1	1.19	0.14	263	1	1.19	0.14	263	2	2.00	0.09	0.757
Comb. L-T		1				1				0			
SB Thru	180	0	0.81	0.14	180	0	0.81	0.14	180	0	0.49	0.23	
Comb. T-R		0				0				1			
SB Right	184	1	1.00	0.11	184	1	1.00	0.11	184	0	0.51	0.23	
Comb. L-T-R		0				0				0			

Critical Volumes			E-W:	0.53			E-W:	0.53			E-W:	0.53	
			N-S:	0.55			N-S:	0.55			N-S:	0.50	
			Total:	1.08			Total:	1.08			Total:	1.04	
Lost Time				0.10				0.10				0.10	
V/C				1.176				1.182				1.135	
Level of Service				F				F				F	

Lane Group	EBT	WBL	WBT	WBR	NBR	SBL	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	690	4	1203	37	4	728	10	989
Future Volume (vph)	690	4	1203	37	4	728	10	989
Turn Type	NA	Prot	NA	Perm	Perm	Perm	NA	Perm
Protected Phases	4	3	8				6	
Permitted Phases				8	2	6		6
Detector Phase	4	3	8	8	2	6	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	10.0	24.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	25.0	10.0	35.0	35.0	55.0	55.0	55.0	55.0
Total Split (%)	27.8%	11.1%	38.9%	38.9%	61.1%	61.1%	61.1%	61.1%
Yellow Time (s)	4.8	3.6	4.8	4.8	3.0	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	4.6	5.8	5.8	4.0	5.4	5.4	5.4
Lead/Lag	Lag	Lead						
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	21.4	5.6	26.8	26.8	44.1	42.7	42.7	42.7
Actuated g/C Ratio	0.26	0.07	0.33	0.33	0.54	0.53	0.53	0.53
v/c Ratio	0.57	0.35	0.78	0.04	0.00	0.74	0.79	0.72
Control Delay	30.3	48.7	29.2	7.2	0.0	21.1	24.2	18.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.3	48.7	29.2	7.2	0.0	21.1	24.2	18.1
LOS	C	D	C	A	A	C	C	B
Approach Delay	30.3		29.2				21.2	
Approach LOS	C		C				C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 81	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 25.6	Intersection LOS: C
Intersection Capacity Utilization 72.1%	ICU Level of Service C
Analysis Period (min) 15	

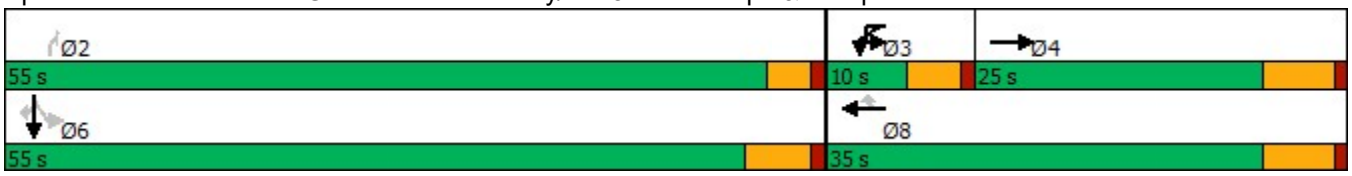
Splits and Phases: 14: Gas Station Driveway/SR-57 SB Ramps & Temple Ave



Lane Group	EBT	WBL	WBT	WBR	NBR	SBL	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	700	4	1216	37	4	728	10	1028
Future Volume (vph)	700	4	1216	37	4	728	10	1028
Turn Type	NA	Prot	NA	Perm	Perm	Perm	NA	Perm
Protected Phases	4	3	8				6	
Permitted Phases				8	2	6		6
Detector Phase	4	3	8	8	2	6	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	10.0	24.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	25.0	10.0	35.0	35.0	55.0	55.0	55.0	55.0
Total Split (%)	27.8%	11.1%	38.9%	38.9%	61.1%	61.1%	61.1%	61.1%
Yellow Time (s)	4.8	3.6	4.8	4.8	3.0	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	4.6	5.8	5.8	4.0	5.4	5.4	5.4
Lead/Lag	Lag	Lead						
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	21.5	5.6	27.0	27.0	44.7	43.2	43.2	43.2
Actuated g/C Ratio	0.26	0.07	0.33	0.33	0.55	0.53	0.53	0.53
v/c Ratio	0.58	0.36	0.79	0.04	0.00	0.76	0.81	0.73
Control Delay	30.6	49.1	29.7	7.2	0.0	21.7	25.5	18.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.6	49.1	29.7	7.2	0.0	21.7	25.5	18.7
LOS	C	D	C	A	A	C	C	B
Approach Delay	30.6		29.7				22.0	
Approach LOS	C		C				C	

Intersection Summary			
Cycle Length: 90			
Actuated Cycle Length: 81.7			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 26.2		Intersection LOS: C	
Intersection Capacity Utilization 73.9%		ICU Level of Service D	
Analysis Period (min) 15			

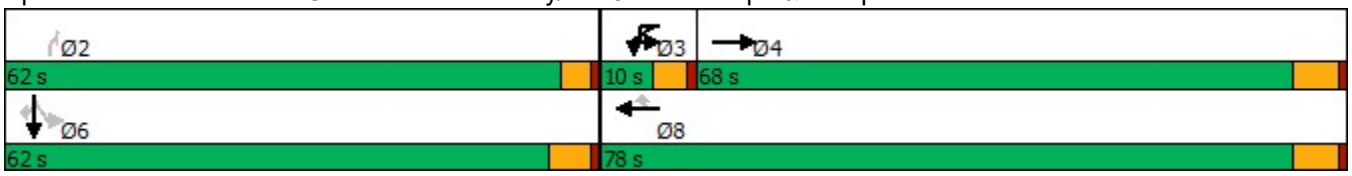
Splits and Phases: 14: Gas Station Driveway/SR-57 SB Ramps & Temple Ave



Lane Group	EBT	WBL	WBT	WBR	NBR	SBL	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	2014	8	539	48	8	1231	5	534
Future Volume (vph)	2014	8	539	48	8	1231	5	534
Turn Type	NA	Prot	NA	Perm	Perm	Perm	NA	Perm
Protected Phases	4	3	8				6	
Permitted Phases				8	2	6		6
Detector Phase	4	3	8	8	2	6	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	10.0	24.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	68.0	10.0	78.0	78.0	62.0	62.0	62.0	62.0
Total Split (%)	48.6%	7.1%	55.7%	55.7%	44.3%	44.3%	44.3%	44.3%
Yellow Time (s)	4.8	3.6	4.8	4.8	3.0	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	4.6	5.8	5.8	4.0	5.4	5.4	5.4
Lead/Lag	Lag	Lead						
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	62.3	5.4	70.1	70.1	58.1	56.6	56.6	56.6
Actuated g/C Ratio	0.45	0.04	0.51	0.51	0.42	0.41	0.41	0.41
v/c Ratio	0.97	0.74	0.23	0.04	0.01	1.03	1.05	0.68
Control Delay	49.7	117.4	19.0	4.3	0.0	82.0	88.5	22.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.7	117.4	19.0	4.3	0.0	82.0	88.5	22.2
LOS	D	F	B	A	A	F	F	C
Approach Delay	49.7		25.2				68.1	
Approach LOS	D		C				E	

Intersection Summary	
Cycle Length: 140	
Actuated Cycle Length: 138	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.05	
Intersection Signal Delay: 53.4	Intersection LOS: D
Intersection Capacity Utilization 99.6%	ICU Level of Service F
Analysis Period (min) 15	

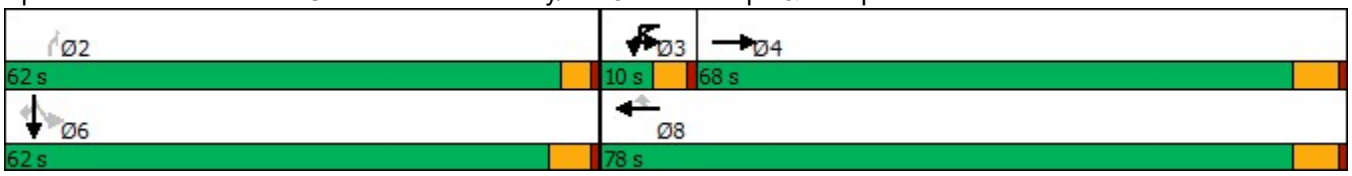
Splits and Phases: 14: Gas Station Driveway/SR-57 SB Ramps & Temple Ave



Lane Group	EBT	WBL	WBT	WBR	NBR	SBL	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	2038	8	548	48	8	1231	5	561
Future Volume (vph)	2038	8	548	48	8	1231	5	561
Turn Type	NA	Prot	NA	Perm	Perm	Perm	NA	Perm
Protected Phases	4	3	8				6	
Permitted Phases				8	2	6		6
Detector Phase	4	3	8	8	2	6	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	10.0	24.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	68.0	10.0	78.0	78.0	62.0	62.0	62.0	62.0
Total Split (%)	48.6%	7.1%	55.7%	55.7%	44.3%	44.3%	44.3%	44.3%
Yellow Time (s)	4.8	3.6	4.8	4.8	3.0	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.8	4.6	5.8	5.8	4.0	5.4	5.4	5.4
Lead/Lag	Lag	Lead						
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	62.3	5.4	70.1	70.1	58.1	56.6	56.6	56.6
Actuated g/C Ratio	0.45	0.04	0.51	0.51	0.42	0.41	0.41	0.41
v/c Ratio	0.98	0.74	0.23	0.04	0.01	1.03	1.05	0.72
Control Delay	51.8	117.4	19.1	4.3	0.0	82.0	89.8	24.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.8	117.4	19.1	4.3	0.0	82.0	89.8	24.9
LOS	D	F	B	A	A	F	F	C
Approach Delay	51.8		25.2				68.7	
Approach LOS	D		C				E	

Intersection Summary	
Cycle Length: 140	
Actuated Cycle Length: 138	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.05	
Intersection Signal Delay: 54.6	Intersection LOS: D
Intersection Capacity Utilization 99.9%	ICU Level of Service F
Analysis Period (min) 15	

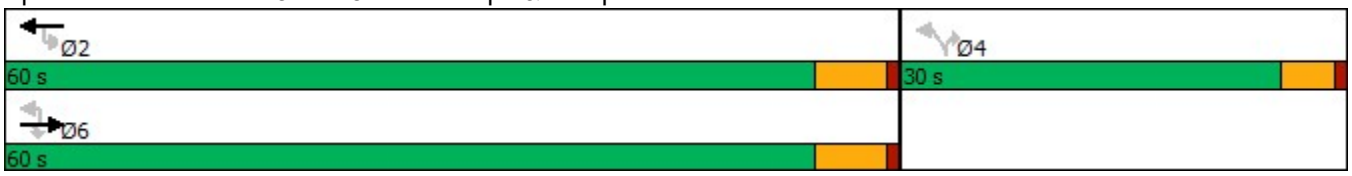
Splits and Phases: 14: Gas Station Driveway/SR-57 SB Ramps & Temple Ave



Lane Group	EBT	EBR	WBU	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1058	283	1	1696	374	270
Future Volume (vph)	1058	283	1	1696	374	270
Turn Type	NA	Perm	Perm	NA	Perm	Perm
Protected Phases	6			2		
Permitted Phases		6	2		4	4
Detector Phase	6	6	2	2	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	26.0	26.0	26.0	26.0	26.0	26.0
Total Split (s)	60.0	60.0	60.0	60.0	30.0	30.0
Total Split (%)	66.7%	66.7%	66.7%	66.7%	33.3%	33.3%
Yellow Time (s)	4.8	4.8	4.8	4.8	3.6	3.6
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
Total Lost Time (s)	5.8	5.8		5.8	4.6	4.6
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	37.8	37.8		37.8	14.9	14.9
Actuated g/C Ratio	0.59	0.59		0.59	0.23	0.23
v/c Ratio	0.38	0.17		0.65	0.59	0.55
Control Delay	7.2	1.1		9.9	25.3	20.6
Queue Delay	0.0	0.0		0.0	0.0	0.0
Total Delay	7.2	1.1		9.9	25.3	20.6
LOS	A	A		A	C	C
Approach Delay	5.9			9.9	23.8	
Approach LOS	A			A	C	

Intersection Summary			
Cycle Length: 90			
Actuated Cycle Length: 63.7			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 10.9		Intersection LOS: B	
Intersection Capacity Utilization 54.5%		ICU Level of Service A	
Analysis Period (min) 15			

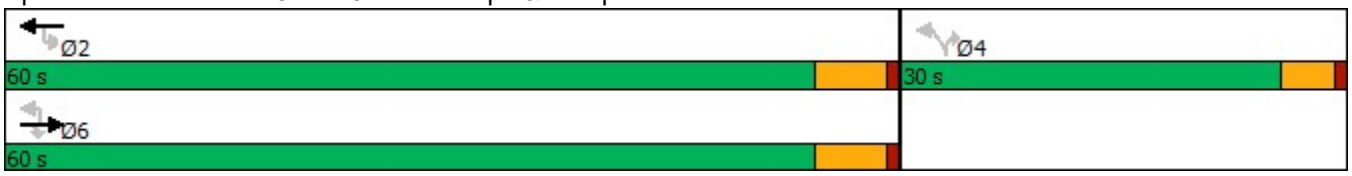
Splits and Phases: 15: SR-57 NB Ramps & Temple Ave



Lane Group	EBT	EBR	WBU	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1059	292	1	1700	383	270
Future Volume (vph)	1059	292	1	1700	383	270
Turn Type	NA	Perm	Perm	NA	Perm	Perm
Protected Phases	6			2		
Permitted Phases		6	2		4	4
Detector Phase	6	6	2	2	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	26.0	26.0	26.0	26.0	26.0	26.0
Total Split (s)	60.0	60.0	60.0	60.0	30.0	30.0
Total Split (%)	66.7%	66.7%	66.7%	66.7%	33.3%	33.3%
Yellow Time (s)	4.8	4.8	4.8	4.8	3.6	3.6
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
Total Lost Time (s)	5.8	5.8		5.8	4.6	4.6
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	38.0	38.0		38.0	15.0	15.0
Actuated g/C Ratio	0.59	0.59		0.59	0.23	0.23
v/c Ratio	0.38	0.18		0.65	0.60	0.55
Control Delay	7.3	1.1		10.0	25.5	20.8
Queue Delay	0.0	0.0		0.0	0.0	0.0
Total Delay	7.3	1.1		10.0	25.5	20.8
LOS	A	A		A	C	C
Approach Delay	6.0			10.0	24.0	
Approach LOS	A			A	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 64	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 11.0	Intersection LOS: B
Intersection Capacity Utilization 54.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 15: SR-57 NB Ramps & Temple Ave



Lane Group	EBT	EBR	WBU	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2218	691	1	878	103	304
Future Volume (vph)	2218	691	1	878	103	304
Turn Type	NA	Perm	Perm	NA	Perm	Perm
Protected Phases	6			2		
Permitted Phases		6	2		4	4
Detector Phase	6	6	2	2	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	26.0	26.0	26.0	26.0	26.0	26.0
Total Split (s)	44.0	44.0	44.0	44.0	26.0	26.0
Total Split (%)	62.9%	62.9%	62.9%	62.9%	37.1%	37.1%
Yellow Time (s)	4.8	4.8	4.8	4.8	3.6	3.6
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
Total Lost Time (s)	5.8	5.8		5.8	4.6	4.6
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	38.3	38.3		38.3	12.1	12.1
Actuated g/C Ratio	0.63	0.63		0.63	0.20	0.20
v/c Ratio	0.75	0.37		0.32	0.43	0.57
Control Delay	10.6	1.1		6.1	23.0	29.8
Queue Delay	0.0	0.0		0.0	0.0	0.0
Total Delay	10.6	1.1		6.1	23.0	29.8
LOS	B	A		A	C	C
Approach Delay	8.3			6.1	25.5	
Approach LOS	A			A	C	

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 60.9	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 9.5	Intersection LOS: A
Intersection Capacity Utilization 62.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 15: SR-57 NB Ramps & Temple Ave



Lane Group	EBT	EBR	WBU	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	2220	712	1	881	109	304
Future Volume (vph)	2220	712	1	881	109	304
Turn Type	NA	Perm	Perm	NA	Perm	Perm
Protected Phases	6			2		
Permitted Phases		6	2		4	4
Detector Phase	6	6	2	2	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	26.0	26.0	26.0	26.0	26.0	26.0
Total Split (s)	44.0	44.0	44.0	44.0	26.0	26.0
Total Split (%)	62.9%	62.9%	62.9%	62.9%	37.1%	37.1%
Yellow Time (s)	4.8	4.8	4.8	4.8	3.6	3.6
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
Total Lost Time (s)	5.8	5.8		5.8	4.6	4.6
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	38.3	38.3		38.3	12.1	12.1
Actuated g/C Ratio	0.63	0.63		0.63	0.20	0.20
v/c Ratio	0.75	0.38		0.32	0.44	0.57
Control Delay	10.6	1.2		6.1	23.1	29.8
Queue Delay	0.0	0.0		0.0	0.0	0.0
Total Delay	10.6	1.2		6.1	23.1	29.8
LOS	B	A		A	C	C
Approach Delay	8.3			6.1	25.6	
Approach LOS	A			A	C	

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 60.9	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 9.5	Intersection LOS: A
Intersection Capacity Utilization 62.9%	ICU Level of Service B
Analysis Period (min) 15	

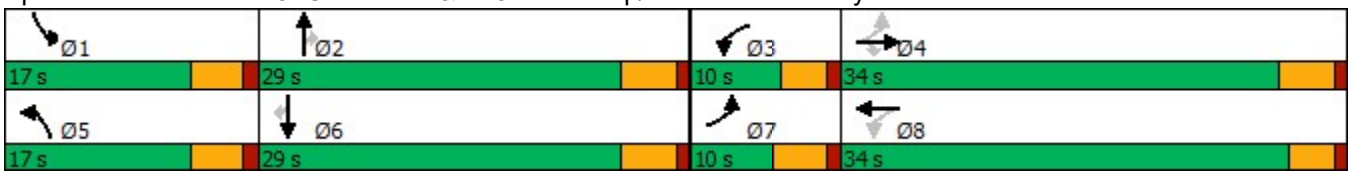
Splits and Phases: 15: SR-57 NB Ramps & Temple Ave



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBT	SBR	Ø1
Lane Configurations											
Traffic Volume (vph)	355	15	122	25	11	152	887	28	950	200	
Future Volume (vph)	355	15	122	25	11	152	887	28	950	200	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Prot	NA	Perm	NA	Perm	
Protected Phases	7	4		3	8	5	2		6		1
Permitted Phases	4		4	8				2		6	
Detector Phase	7	4	4	3	8	5	2	2	6	6	
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.7	22.7	22.7	9.5	22.5	9.7	22.7	22.7	22.7	22.7	9.7
Total Split (s)	10.0	34.0	34.0	10.0	34.0	17.0	29.0	29.0	29.0	29.0	17.0
Total Split (%)	11.1%	37.8%	37.8%	11.1%	37.8%	18.9%	32.2%	32.2%	32.2%	32.2%	19%
Yellow Time (s)	3.6	3.7	3.7	3.0	3.0	3.6	3.7	3.7	3.7	3.7	3.6
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	
Total Lost Time (s)		4.7	4.7		4.0	4.6	4.7	4.7	4.7	4.7	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)		25.8	25.8		26.5	11.1	40.3	40.3	24.5	24.5	
Actuated g/C Ratio		0.34	0.34		0.35	0.15	0.53	0.53	0.32	0.32	
v/c Ratio		0.91	0.21		0.11	0.63	0.51	0.03	0.90	0.33	
Control Delay		50.8	4.4		13.6	42.9	13.1	0.1	38.3	4.9	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay		50.8	4.4		13.6	42.9	13.1	0.1	38.3	4.9	
LOS		D	A		B	D	B	A	D	A	
Approach Delay		39.3			13.6		17.0		32.5		
Approach LOS		D			B		B		C		

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 75.5	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 27.4	Intersection LOS: C
Intersection Capacity Utilization 70.9%	ICU Level of Service C
Analysis Period (min) 15	

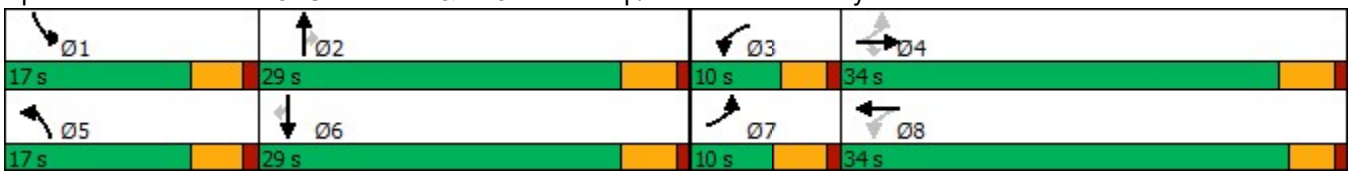
Splits and Phases: 16: Grand Ave & I-10 WB Ramp/7-Eleven Driveway



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBT	SBR	Ø1
Lane Configurations											
Traffic Volume (vph)	355	15	122	25	11	172	891	28	967	200	
Future Volume (vph)	355	15	122	25	11	172	891	28	967	200	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Prot	NA	Perm	NA	Perm	
Protected Phases	7	4		3	8	5	2		6		1
Permitted Phases	4		4	8				2		6	
Detector Phase	7	4	4	3	8	5	2	2	6	6	
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.7	22.7	22.7	9.5	22.5	9.7	22.7	22.7	22.7	22.7	9.7
Total Split (s)	10.0	34.0	34.0	10.0	34.0	17.0	29.0	29.0	29.0	29.0	17.0
Total Split (%)	11.1%	37.8%	37.8%	11.1%	37.8%	18.9%	32.2%	32.2%	32.2%	32.2%	19%
Yellow Time (s)	3.6	3.7	3.7	3.0	3.0	3.6	3.7	3.7	3.7	3.7	3.6
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	
Total Lost Time (s)		4.7	4.7		4.0	4.6	4.7	4.7	4.7	4.7	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)		25.9	25.9		26.6	11.7	40.8	40.8	24.5	24.5	
Actuated g/C Ratio		0.34	0.34		0.35	0.15	0.54	0.54	0.32	0.32	
v/c Ratio		0.91	0.21		0.11	0.69	0.51	0.03	0.92	0.33	
Control Delay		51.6	4.4		13.6	46.2	13.1	0.1	41.3	4.9	
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay		51.6	4.4		13.6	46.2	13.1	0.1	41.3	4.9	
LOS		D	A		B	D	B	A	D	A	
Approach Delay		39.9			13.6		18.0		35.0		
Approach LOS		D			B		B		D		

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 76.1	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 28.9	Intersection LOS: C
Intersection Capacity Utilization 72.4%	ICU Level of Service C
Analysis Period (min) 15	

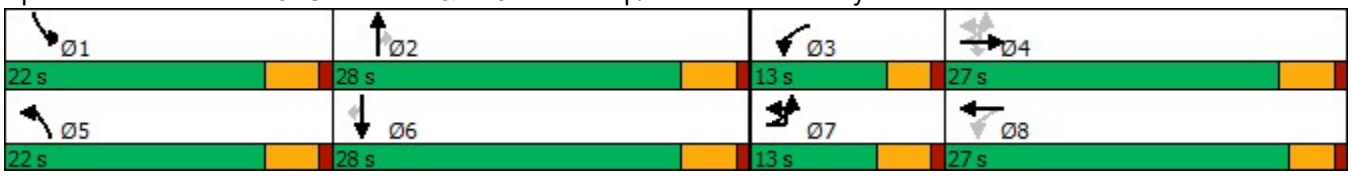
Splits and Phases: 16: Grand Ave & I-10 WB Ramp/7-Eleven Driveway



Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	238	14	69	40	21	292	913	49	5	885	372
Future Volume (vph)	1	238	14	69	40	21	292	913	49	5	885	372
Turn Type	pm+pt	pm+pt	NA	Perm	pm+pt	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	7	4		3	8	5	2		1	6	
Permitted Phases	4	4		4	8				2			6
Detector Phase	7	7	4	4	3	8	5	2	2	1	6	6
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	5.0
Minimum Split (s)	9.6	9.6	22.7	22.7	9.5	22.5	9.6	22.7	22.7	9.6	22.7	22.7
Total Split (s)	13.0	13.0	27.0	27.0	13.0	27.0	22.0	28.0	28.0	22.0	28.0	28.0
Total Split (%)	14.4%	14.4%	30.0%	30.0%	14.4%	30.0%	24.4%	31.1%	31.1%	24.4%	31.1%	31.1%
Yellow Time (s)	3.6	3.6	3.7	3.7	3.0	3.0	3.6	3.7	3.7	3.6	3.7	3.7
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	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)			4.7	4.7		4.0	4.6	4.7	4.7	4.6	4.7	4.7
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)			19.1	19.1		19.8	16.9	42.8	42.8	5.8	23.4	23.4
Actuated g/C Ratio			0.26	0.26		0.27	0.23	0.58	0.58	0.08	0.32	0.32
v/c Ratio			0.80	0.15		0.24	0.78	0.48	0.05	0.04	0.85	0.52
Control Delay			44.4	1.6		18.0	42.7	11.3	0.1	33.4	33.6	5.1
Queue Delay			0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay			44.4	1.6		18.0	42.7	11.3	0.1	33.4	33.6	5.1
LOS			D	A		B	D	B	A	C	C	A
Approach Delay			35.3			18.0		18.1			25.2	
Approach LOS			D			B		B			C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 73.5	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 23.1	Intersection LOS: C
Intersection Capacity Utilization 70.3%	ICU Level of Service C
Analysis Period (min) 15	

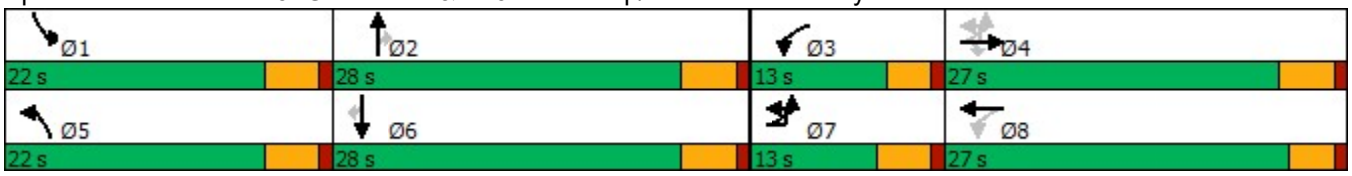
Splits and Phases: 16: Grand Ave & I-10 WB Ramp/7-Eleven Driveway



Lane Group	EBU	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	238	14	69	40	21	339	922	49	5	897	372
Future Volume (vph)	1	238	14	69	40	21	339	922	49	5	897	372
Turn Type	pm+pt	pm+pt	NA	Perm	pm+pt	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	7	4		3	8	5	2		1	6	
Permitted Phases	4	4		4	8				2			6
Detector Phase	7	7	4	4	3	8	5	2	2	1	6	6
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	5.0
Minimum Split (s)	9.6	9.6	22.7	22.7	9.5	22.5	9.6	22.7	22.7	9.6	22.7	22.7
Total Split (s)	13.0	13.0	27.0	27.0	13.0	27.0	22.0	28.0	28.0	22.0	28.0	28.0
Total Split (%)	14.4%	14.4%	30.0%	30.0%	14.4%	30.0%	24.4%	31.1%	31.1%	24.4%	31.1%	31.1%
Yellow Time (s)	3.6	3.6	3.7	3.7	3.0	3.0	3.6	3.7	3.7	3.6	3.7	3.7
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	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)			4.7	4.7		4.0	4.6	4.7	4.7	4.6	4.7	4.7
Lead/Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)			19.1	19.1		19.8	17.5	43.3	43.3	5.8	23.4	23.4
Actuated g/C Ratio			0.26	0.26		0.27	0.24	0.59	0.59	0.08	0.32	0.32
v/c Ratio			0.81	0.15		0.24	0.88	0.48	0.05	0.04	0.87	0.52
Control Delay			45.2	1.6		18.0	53.5	11.3	0.1	33.4	35.2	5.1
Queue Delay			0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay			45.2	1.6		18.0	53.5	11.3	0.1	33.4	35.2	5.1
LOS			D	A		B	D	B	A	C	D	A
Approach Delay			35.8			18.0		21.8			26.4	
Approach LOS			D			B		C			C	

Intersection Summary			
Cycle Length: 90			
Actuated Cycle Length: 74			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 25.2		Intersection LOS: C	
Intersection Capacity Utilization 73.3%		ICU Level of Service D	
Analysis Period (min) 15			

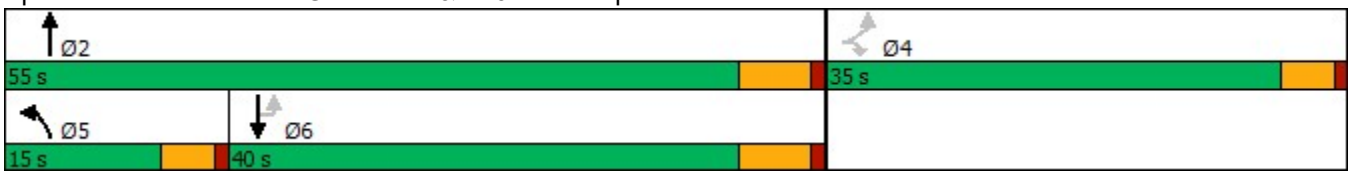
Splits and Phases: 16: Grand Ave & I-10 WB Ramp/7-Eleven Driveway



Lane Group	EBL	EBR	NBL	NBT	SBU	SBT
Lane Configurations						
Traffic Volume (vph)	304	594	44	722	2	854
Future Volume (vph)	304	594	44	722	2	854
Turn Type	Perm	Perm	Prot	NA	Perm	NA
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)	23.0	23.0	11.0	24.0	24.0	24.0
Total Split (s)	35.0	35.0	15.0	55.0	40.0	40.0
Total Split (%)	38.9%	38.9%	16.7%	61.1%	44.4%	44.4%
Yellow Time (s)	3.6	3.6	3.6	4.8	4.8	4.8
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
Total Lost Time (s)	4.6	4.6	4.6	5.8		5.8
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	25.8	25.8	7.8	39.0		32.0
Actuated g/C Ratio	0.34	0.34	0.10	0.51		0.42
v/c Ratio	0.55	0.89	0.26	0.43		0.85
Control Delay	26.1	30.6	39.9	12.4		28.8
Queue Delay	0.0	0.0	0.0	0.0		0.0
Total Delay	26.1	30.6	39.9	12.4		28.8
LOS	C	C	D	B		C
Approach Delay	29.1			14.0		28.8
Approach LOS	C			B		C

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 75.8	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 24.8	Intersection LOS: C
Intersection Capacity Utilization 75.7%	ICU Level of Service D
Analysis Period (min) 15	

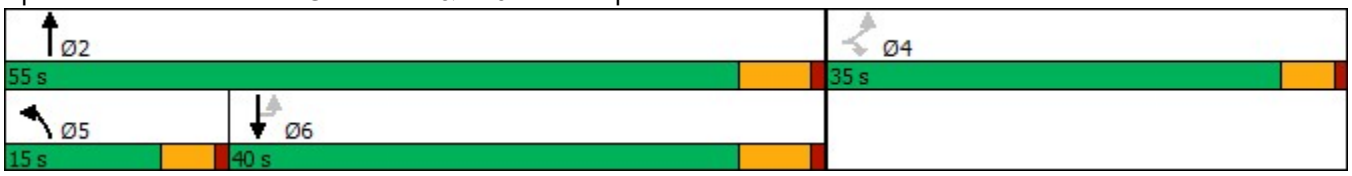
Splits and Phases: 17: Grand Ave & I-10 EB Ramps



Lane Group	EBL	EBR	NBL	NBT	SBU	SBT
Lane Configurations						
Traffic Volume (vph)	304	681	44	746	2	871
Future Volume (vph)	304	681	44	746	2	871
Turn Type	Perm	Perm	Prot	NA	Perm	NA
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)	23.0	23.0	11.0	24.0	24.0	24.0
Total Split (s)	35.0	35.0	15.0	55.0	40.0	40.0
Total Split (%)	38.9%	38.9%	16.7%	61.1%	44.4%	44.4%
Yellow Time (s)	3.6	3.6	3.6	4.8	4.8	4.8
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
Total Lost Time (s)	4.6	4.6	4.6	5.8		5.8
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Recall Mode	None	None	None	None	None	None
Act Effct Green (s)	30.7	30.7	7.7	41.0		33.4
Actuated g/C Ratio	0.37	0.37	0.09	0.50		0.41
v/c Ratio	0.50	0.96	0.29	0.46		0.90
Control Delay	24.9	43.5	41.2	14.0		33.5
Queue Delay	0.0	0.0	0.0	0.0		0.0
Total Delay	24.9	43.5	41.2	14.0		33.5
LOS	C	D	D	B		C
Approach Delay	37.8			15.5		33.5
Approach LOS	D			B		C

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 82.2	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay: 30.1	Intersection LOS: C
Intersection Capacity Utilization 81.6%	ICU Level of Service D
Analysis Period (min) 15	

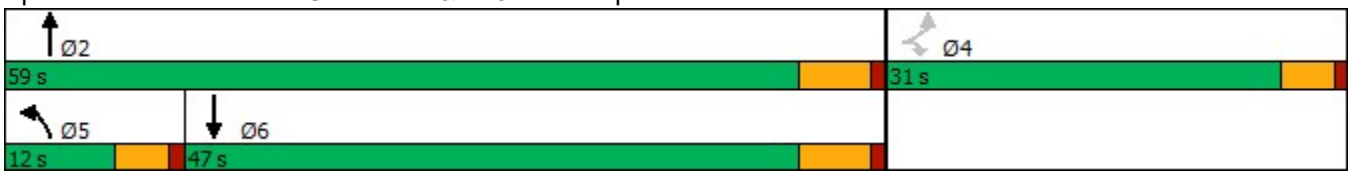
Splits and Phases: 17: Grand Ave & I-10 EB Ramps



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	287	225	52	915	616
Future Volume (vph)	287	225	52	915	616
Turn Type	Perm	Perm	Prot	NA	NA
Protected Phases			5	2	6
Permitted Phases	4	4			
Detector Phase	4	4	5	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	11.0	24.0	24.0
Total Split (s)	31.0	31.0	12.0	59.0	47.0
Total Split (%)	34.4%	34.4%	13.3%	65.6%	52.2%
Yellow Time (s)	3.6	3.6	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	5.8	5.8
Lead/Lag			Lead		Lag
Lead-Lag Optimize?					
Recall Mode	None	None	None	None	None
Act Effct Green (s)	17.4	17.4	7.4	32.9	27.0
Actuated g/C Ratio	0.28	0.28	0.12	0.53	0.43
v/c Ratio	0.63	0.40	0.27	0.53	0.69
Control Delay	29.1	5.7	36.6	10.3	15.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	29.1	5.7	36.6	10.3	15.3
LOS	C	A	D	B	B
Approach Delay	18.8			11.7	15.3
Approach LOS	B			B	B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 62.1	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 14.6	Intersection LOS: B
Intersection Capacity Utilization 59.2%	ICU Level of Service B
Analysis Period (min) 15	

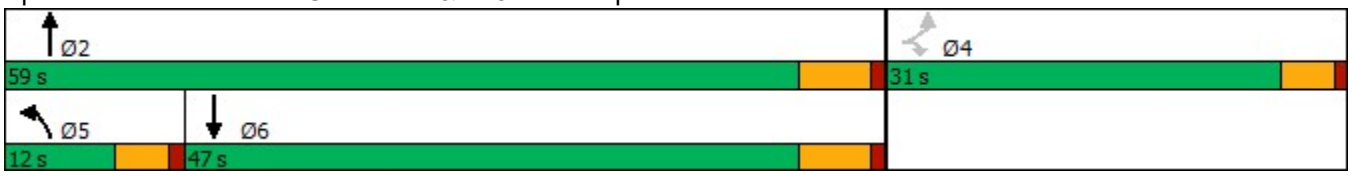
Splits and Phases: 17: Grand Ave & I-10 EB Ramps



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	287	285	52	972	628
Future Volume (vph)	287	285	52	972	628
Turn Type	Perm	Perm	Prot	NA	NA
Protected Phases			5	2	6
Permitted Phases	4	4			
Detector Phase	4	4	5	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	11.0	24.0	24.0
Total Split (s)	31.0	31.0	12.0	59.0	47.0
Total Split (%)	34.4%	34.4%	13.3%	65.6%	52.2%
Yellow Time (s)	3.6	3.6	3.6	4.8	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	5.8	5.8
Lead/Lag			Lead		Lag
Lead-Lag Optimize?					
Recall Mode	None	None	None	None	None
Act Effct Green (s)	17.6	17.6	7.5	33.8	27.9
Actuated g/C Ratio	0.28	0.28	0.12	0.53	0.44
v/c Ratio	0.63	0.47	0.27	0.56	0.69
Control Delay	29.4	6.5	37.3	10.7	15.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	29.4	6.5	37.3	10.7	15.5
LOS	C	A	D	B	B
Approach Delay	18.0			12.0	15.5
Approach LOS	B			B	B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 63.2	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 14.7	Intersection LOS: B
Intersection Capacity Utilization 59.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 17: Grand Ave & I-10 EB Ramps



E-W Street: Holt Ave
N-S Street: Grand Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2027 without Project				AM 2027 + Project				2027 + Project with Mitigation				PHF
	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	
EB Left	51	0	0.22	0.14	51	0	0.22	0.14	51	0	0.22	0.14	
Comb. L-T		0				0				0			
EB Thru	21	0	0.09	0.14	21	0	0.09	0.14	21	0	0.09	0.14	0.722
Comb. T-R		0				0				0			
EB Right	159	0	0.69	0.14	159	0	0.69	0.14	159	0	0.69	0.14	
Comb. L-T-R		1				1				1			
WB Left	580	1	1.00	0.36	586	1	1.00	0.37	586	1	1.00	0.37	
Comb. L-T		0				0				0			
WB Thru	133	1	1.00	0.08	133	1	1.00	0.08	133	1	1.00	0.08	0.751
Comb. T-R		0				0				0			
WB Right	61	1	1.00	0.04	61	1	1.00	0.04	61	1	1.00	0.04	
Comb. L-T-R		0				0				0			
NB Left	29	1	1.00	0.02	29	1	1.00	0.02	29	1	1.00	0.02	
Comb. L-T		0				0				0			
NB Thru	791	2	2.00	0.25	819	2	2.00	0.26	819	2	2.00	0.26	0.863
Comb. T-R		0				0				0			
NB Right	214	1	1.00	0.13	215	1	1.00	0.13	215	1	1.00	0.13	
Comb. L-T-R		0				0				0			
SB Left	28	1	1.00	0.02	28	1	1.00	0.02	28	1	1.00	0.02	
Comb. L-T		0				0				0			
SB Thru	1411	2	2.00	0.44	1523	2	2.00	0.48	1523	2	2.89	0.33	0.934
Comb. T-R		0				0				1			
SB Right	56	1	1.00	0.03	56	1	1.00	0.03	56	0	0.11	0.33	
Comb. L-T-R		0				0				0			

Critical Volumes			E-W:	0.51			E-W:	0.51			E-W:	0.51	
			N-S:	0.46			N-S:	0.49			N-S:	0.35	
			Total:	0.97			Total:	1.00			Total:	0.86	
Lost Time				0.10				0.10				0.10	
V/C				1.066				1.105				0.958	
Level of Service				F				F				E	

E-W Street: Holt Ave
N-S Street: Grand Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM 2027 without Project				PM 2027 + Project				2027 + Project with Mitigation				PHF
	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	
EB Left	24	0	0.24	0.06	24	0	0.24	0.06	24	0	0.24	0.06	0.913
Comb. L-T		0				0				0			
EB Thru	37	0	0.37	0.06	37	0	0.37	0.06	37	0	0.37	0.06	
Comb. T-R		0				0				0			
EB Right	39	0	0.39	0.06	39	0	0.39	0.06	39	0	0.39	0.06	
Comb. L-T-R		1				1				1			
WB Left	254	1	1.00	0.16	257	1	1.00	0.16	257	1	1.00	0.16	0.945
Comb. L-T		0				0				0			
WB Thru	53	1	1.00	0.03	53	1	1.00	0.03	53	1	1.00	0.03	
Comb. T-R		0				0				0			
WB 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			
NB Left	56	1	1.00	0.04	56	1	1.00	0.04	56	1	1.00	0.04	0.927
Comb. L-T		0				0				0			
NB Thru	953	2	2.00	0.30	1015	2	2.00	0.32	1015	2	2.00	0.32	
Comb. T-R		0				0				0			
NB Right	209	1	1.00	0.13	211	1	1.00	0.13	211	1	1.00	0.13	
Comb. L-T-R		0				0				0			
SB Left	39	1	1.00	0.02	39	1	1.00	0.02	39	1	1.00	0.02	0.940
Comb. L-T		0				0				0			
SB Thru	735	2	2.00	0.23	812	2	2.00	0.25	812	2	2.84	0.18	
Comb. T-R		0				0				1			
SB Right	45	1	1.00	0.03	45	1	1.00	0.03	45	0	0.16	0.18	
Comb. L-T-R		0				0				0			

Critical Volumes			E-W:	0.22			E-W:	0.22			E-W:	0.22	
			N-S:	0.32			N-S:	0.34			N-S:	0.34	
			Total:	0.54			Total:	0.57			Total:	0.57	
Lost Time				0.10				0.10				0.10	
V/C				0.644				0.665				0.665	
Level of Service				B				B				B	

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	15	27	30	872	1663	132
Future Vol, veh/h	15	27	30	872	1663	132
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Free
Storage Length	52	0	50	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	29	33	948	1808	143

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2348	-	1808	0	-	0
Stage 1	1808	-	-	-	-	-
Stage 2	540	-	-	-	-	-
Critical Hdwy	6.84	-	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	-	2.22	-	-	-
Pot Cap-1 Maneuver	30	0	336	-	-	0
Stage 1	116	0	-	-	-	0
Stage 2	548	0	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	27	-	336	-	-	-
Mov Cap-2 Maneuver	27	-	-	-	-	-
Stage 1	105	-	-	-	-	-
Stage 2	548	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	259.4	0.6	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	336	-	27	-	-
HCM Lane V/C Ratio	0.097	-	0.604	-	-
HCM Control Delay (s)	16.9	-	259.4	0	-
HCM Lane LOS	C	-	F	A	-
HCM 95th %tile Q(veh)	0.3	-	1.9	-	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	15	27	30	898	1772	132
Future Vol, veh/h	15	27	30	898	1772	132
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Free
Storage Length	52	0	50	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	29	33	976	1926	143

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2480	-	1926	0	-	0
Stage 1	1926	-	-	-	-	-
Stage 2	554	-	-	-	-	-
Critical Hdwy	6.84	-	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	-	2.22	-	-	-
Pot Cap-1 Maneuver	24	0	302	-	-	0
Stage 1	100	0	-	-	-	0
Stage 2	539	0	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	21	-	302	-	-	-
Mov Cap-2 Maneuver	21	-	-	-	-	-
Stage 1	89	-	-	-	-	-
Stage 2	539	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 376	0.6	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	302	-	21	-	-
HCM Lane V/C Ratio	0.108	-	0.776	-	-
HCM Control Delay (s)	18.4	-	$ 376	0	-
HCM Lane LOS	C	-	F	A	-
HCM 95th %tile Q(veh)	0.4	-	2.2	-	-

Notes

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

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	12	33	1175	908	34
Future Vol, veh/h	5	12	33	1175	908	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Free
Storage Length	52	0	50	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	13	36	1277	987	37

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1698	-	987	0	-	0
Stage 1	987	-	-	-	-	-
Stage 2	711	-	-	-	-	-
Critical Hdwy	6.84	-	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	-	2.22	-	-	-
Pot Cap-1 Maneuver	83	0	696	-	-	0
Stage 1	322	0	-	-	-	0
Stage 2	448	0	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	79	-	696	-	-	-
Mov Cap-2 Maneuver	79	-	-	-	-	-
Stage 1	305	-	-	-	-	-
Stage 2	448	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	53.9	0.3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	696	-	79	-	-
HCM Lane V/C Ratio	0.052	-	0.069	-	-
HCM Control Delay (s)	10.5	-	53.9	0	-
HCM Lane LOS	B	-	F	A	-
HCM 95th %tile Q(veh)	0.2	-	0.2	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	12	33	1234	983	34
Future Vol, veh/h	5	12	33	1234	983	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	Free
Storage Length	52	0	50	-	-	100
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	13	36	1341	1068	37

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1811	-	1068	0	-	0
Stage 1	1068	-	-	-	-	-
Stage 2	743	-	-	-	-	-
Critical Hdwy	6.84	-	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	-	2.22	-	-	-
Pot Cap-1 Maneuver	70	0	648	-	-	0
Stage 1	291	0	-	-	-	0
Stage 2	431	0	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	66	-	648	-	-	-
Mov Cap-2 Maneuver	66	-	-	-	-	-
Stage 1	275	-	-	-	-	-
Stage 2	431	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	64.4	0.3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT
Capacity (veh/h)	648	-	66	-	-
HCM Lane V/C Ratio	0.055	-	0.082	-	-
HCM Control Delay (s)	10.9	-	64.4	0	-
HCM Lane LOS	B	-	F	A	-
HCM 95th %tile Q(veh)	0.2	-	0.3	-	-

Intersection	
Intersection Delay, s/veh	67.9
Intersection LOS	F

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	284	582	491	118	193	334
Future Vol, veh/h	284	582	491	118	193	334
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	309	633	534	128	210	363
Number of Lanes	0	2	2	0	2	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	3	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	3	2
HCM Control Delay	119.1	38.8	17.4
HCM LOS	F	E	C

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	59%	0%	0%	0%	100%	100%	0%
Vol Thru, %	41%	100%	100%	58%	0%	0%	0%
Vol Right, %	0%	0%	0%	42%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	478	388	327	282	97	97	334
LT Vol	284	0	0	0	97	97	0
Through Vol	194	388	327	164	0	0	0
RT Vol	0	0	0	118	0	0	334
Lane Flow Rate	520	422	356	306	105	105	363
Geometry Grp	8	8	8	8	7	7	7
Degree of Util (X)	1.256	0.984	0.854	0.71	0.261	0.261	0.609
Departure Headway (Hd)	8.702	8.397	9.031	8.73	9.382	9.382	6.36
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	421	434	406	416	385	385	570
Service Time	6.453	6.148	6.731	6.43	7.082	7.082	4.06
HCM Lane V/C Ratio	1.235	0.972	0.877	0.736	0.273	0.273	0.637
HCM Control Delay	160	68.8	46.3	30.1	15.4	15.4	18.5
HCM Lane LOS	F	F	E	D	C	C	C
HCM 95th-tile Q	22	12.1	8.2	5.4	1	1	4.1

Intersection	
Intersection Delay, s/veh	72.4
Intersection LOS	F

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	284	599	495	119	197	334
Future Vol, veh/h	284	599	495	119	197	334
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	309	651	538	129	214	363
Number of Lanes	0	2	2	0	2	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	3	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	3	2
HCM Control Delay	127.4	40.6	17.7
HCM LOS	F	E	C

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	59%	0%	0%	0%	100%	100%	0%
Vol Thru, %	41%	100%	100%	58%	0%	0%	0%
Vol Right, %	0%	0%	0%	42%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	484	399	330	284	99	99	334
LT Vol	284	0	0	0	99	99	0
Through Vol	200	399	330	165	0	0	0
RT Vol	0	0	0	119	0	0	334
Lane Flow Rate	526	434	359	309	107	107	363
Geometry Grp	8	8	8	8	7	7	7
Degree of Util (X)	1.277	1.018	0.867	0.721	0.268	0.268	0.615
Departure Headway (Hd)	8.743	8.442	9.101	8.8	9.457	9.457	6.436
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	415	430	402	414	382	382	566
Service Time	6.502	6.2	6.801	6.5	7.157	7.157	4.136
HCM Lane V/C Ratio	1.267	1.009	0.893	0.746	0.28	0.28	0.641
HCM Control Delay	168.4	77.8	48.6	31.2	15.6	15.6	18.9
HCM Lane LOS	F	F	E	D	C	C	C
HCM 95th-tile Q	22.8	13.2	8.5	5.6	1.1	1.1	4.2

Intersection	
Intersection Delay, s/veh	39.8
Intersection LOS	E

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	327	338	483	120	141	233
Future Vol, veh/h	327	338	483	120	141	233
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	355	367	525	130	153	253
Number of Lanes	0	2	2	0	2	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	3	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	3	2
HCM Control Delay	66.5	27.2	12.5
HCM LOS	F	D	B

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	74%	0%	0%	0%	100%	100%	0%
Vol Thru, %	26%	100%	100%	57%	0%	0%	0%
Vol Right, %	0%	0%	0%	43%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	440	225	322	281	71	71	233
LT Vol	327	0	0	0	71	71	0
Through Vol	113	225	322	161	0	0	0
RT Vol	0	0	0	120	0	0	233
Lane Flow Rate	478	245	350	305	77	77	253
Geometry Grp	8	8	8	8	7	7	7
Degree of Util (X)	1.071	0.523	0.754	0.632	0.182	0.182	0.389
Departure Headway (Hd)	8.066	7.686	7.945	7.639	8.706	8.706	5.686
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	454	473	459	476	415	415	636
Service Time	5.766	5.386	5.645	5.339	6.406	6.406	3.386
HCM Lane V/C Ratio	1.053	0.518	0.763	0.641	0.186	0.186	0.398
HCM Control Delay	91.1	18.5	31.2	22.6	13.3	13.3	12
HCM Lane LOS	F	C	D	C	B	B	B
HCM 95th-tile Q	15.5	3	6.3	4.3	0.7	0.7	1.8

Intersection	
Intersection Delay, s/veh	40.9
Intersection LOS	E

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	327	350	492	122	144	233
Future Vol, veh/h	327	350	492	122	144	233
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	355	380	535	133	157	253
Number of Lanes	0	2	2	0	2	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	3	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	3	2
HCM Control Delay	68.6	27.8	12.5
HCM LOS	F	D	B

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	74%	0%	0%	0%	100%	100%	0%
Vol Thru, %	26%	100%	100%	57%	0%	0%	0%
Vol Right, %	0%	0%	0%	43%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	444	233	328	286	72	72	233
LT Vol	327	0	0	0	72	72	0
Through Vol	117	233	328	164	0	0	0
RT Vol	0	0	0	122	0	0	233
Lane Flow Rate	482	254	357	311	78	78	253
Geometry Grp	8	8	8	8	7	7	7
Degree of Util (X)	1.082	0.543	0.762	0.639	0.183	0.183	0.387
Departure Headway (Hd)	8.077	7.701	7.971	7.665	8.742	8.742	5.722
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	453	472	456	476	413	413	633
Service Time	5.777	5.401	5.671	5.365	6.442	6.442	3.422
HCM Lane V/C Ratio	1.064	0.538	0.783	0.653	0.189	0.189	0.4
HCM Control Delay	94.6	19.2	32	23	13.4	13.4	12
HCM Lane LOS	F	C	D	C	B	B	B
HCM 95th-tile Q	15.9	3.2	6.5	4.4	0.7	0.7	1.8

E-W Street: Cameron Ave
N-S Street: Grand Ave
Scenario: AM Peak
Overlap Reduce 15%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2027 without Project				AM 2027 + Project				2027 + Project with Mitigation				PHF
	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	
EB Left	135	1	1.00	0.08	135	1	1.00	0.08	135	1	1.00	0.08	0.889
Comb. L-T		0				0				0			
EB Thru	0	0	0.00		0	0	0.00		0	0	0.00		
Comb. T-R		0				0				0			
EB Right	652	1	1.00	0.41	673	1	1.00	0.42	673	2	2.00	0.21	
Comb. L-T-R		0				0				0			
WB Left	0	0	0.00		0	0	0.00		0	0	0.00		1.000
Comb. L-T		0				0				0			
WB Thru	0	0	0.00		0	0	0.00		0	0	0.00		
Comb. T-R		0				0				0			
WB Right	0	0	0.00		0	0	0.00		0	0	0.00		
Comb. L-T-R		0				0				0			
NB Left	404	2	2.00	0.14	410	2	2.00	0.14	410	2	2.00	0.14	0.893
Comb. L-T		0				0				0			
NB Thru	838	2	2.00	0.26	867	2	2.00	0.27	867	2	2.00	0.27	
Comb. T-R		0				0				0			
NB Right	0	0	0.00		0	0	0.00		0	0	0.00		
Comb. L-T-R		0				0				0			
SB Left	0	0	0.00		0	0	0.00		0	0	0.00		0.893
Comb. L-T		0				0				0			
SB Thru	1683	2	2.00	0.53	1805	2	2.00	0.56	1805	2	2.00	0.56	
Comb. T-R		0				0				0			
SB Right	207	1	1.00	0.13	207	1	1.00	0.13	207	1	1.00	0.13	
Comb. L-T-R		0				0				0			

Critical Volumes			E-W:	0.41			E-W:	0.42			E-W:	0.21	
			N-S:	0.67			N-S:	0.71			N-S:	0.71	
			Total:	1.07			Total:	1.13			Total:	0.92	
Lost Time				0.10				0.10				0.10	
V/C				1.174				1.227				1.017	
Level of Service				F				F				F	

E-W Street: Cameron Ave
N-S Street: Grand Ave
Scenario: PM Peak
Overlap Reduce 25%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM 2027 without Project				PM 2027 + Project				2027 + Project with Mitigation				PHF
	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	
EB Left	78	1	1.00	0.05	78	1	1.00	0.05	78	1	1.00	0.05	0.918
Comb. L-T		0				0				0			
EB Thru	0	0	0.00		0	0	0.00		0	0	0.00		
Comb. T-R		0				0				0			
EB Right	349	1	1.00	0.22	361	1	1.00	0.23	361	2	2.00	0.11	
Comb. L-T-R		0				0				0			
WB Left	0	0	0.00		0	0	0.00		0	0	0.00		1.000
Comb. L-T		0				0				0			
WB Thru	0	0	0.00		0	0	0.00		0	0	0.00		
Comb. T-R		0				0				0			
WB Right	0	0	0.00		0	0	0.00		0	0	0.00		
Comb. L-T-R		0				0				0			
NB Left	562	2	2.00	0.20	575	2	2.00	0.20	575	2	2.00	0.20	0.916
Comb. L-T		0				0				0			
NB Thru	1233	2	2.00	0.39	1297	2	2.00	0.41	1297	2	2.00	0.41	
Comb. T-R		0				0				0			
NB Right	0	0	0.00		0	0	0.00		0	0	0.00		
Comb. L-T-R		0				0				0			
SB Left	0	0	0.00		0	0	0.00		0	0	0.00		0.911
Comb. L-T		0				0				0			
SB Thru	906	2	2.00	0.28	988	2	2.00	0.31	988	2	2.00	0.31	
Comb. T-R		0				0				0			
SB Right	119	1	1.00	0.07	119	1	1.00	0.07	119	1	1.00	0.07	
Comb. L-T-R		0				0				0			

Critical Volumes			E-W:	0.22			E-W:	0.23			E-W:	0.11	
			N-S:	0.48			N-S:	0.51			N-S:	0.51	
			Total:	0.70			Total:	0.73			Total:	0.62	
Lost Time				0.10				0.10				0.10	
V/C				0.796				0.834				0.721	
Level of Service				C				D				C	

E-W Street: Mountaineer Rd
N-S Street: Grand Ave
Scenario: AM Peak
Overlap Reduce 25%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2027 without Project				AM 2027 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	0	0	0.00		0	0	0.00		1.000
Comb. L-T		0				0			
EB Thru	0	0	0.00		0	0	0.00		
Comb. T-R		0				0			
EB Right	0	0	0.00		0	0	0.00		
Comb. L-T-R		0				0			
WB Left	171	2	2.00	0.06	181	2	2.00	0.06	0.895
Comb. L-T		0				0			
WB Thru	0	0	0.00		0	0	0.00		
Comb. T-R		0				0			
WB Right	68	2	2.00	0.02	78	2	2.00	0.02	
Comb. L-T-R		0				0			
NB Left	0	0	0.00		0	0	0.00		0.903
Comb. L-T		0				0			
NB Thru	1217	2	2.00	0.38	1236	2	2.00	0.39	
Comb. T-R		0				0			
NB Right	430	1	1.00	0.27	473	1	1.00	0.30	
Comb. L-T-R		0				0			
SB Left	602	2	2.00	0.21	657	2	2.00	0.23	0.941
Comb. L-T		0				0			
SB Thru	1867	2	2.00	0.58	1950	2	2.00	0.61	
Comb. T-R		0				0			
SB Right	0	0	0.00		0	0	0.00		
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.06	E-W:	0.06
	N-S:	0.59	N-S:	0.61
	Total:	0.65	Total:	0.68
Lost Time		0.10		0.10
V/C		0.748		0.777
Level of Service		C		C

E-W Street: Mountaineer Rd
N-S Street: Grand Ave
Scenario: PM Peak
Overlap Reduce 11%
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM 2027 without Project				PM 2027 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	0	0	0.00		0	0	0.00		1.000
Comb. L-T		0				0			
EB Thru	0	0	0.00		0	0	0.00		
Comb. T-R		0				0			
EB Right	0	0	0.00		0	0	0.00		
Comb. L-T-R		0				0			
WB Left	188	2	2.00	0.07	215	2	2.00	0.07	0.773
Comb. L-T		0				0			
WB Thru	0	0	0.00		0	0	0.00		
Comb. T-R		0				0			
WB Right	146	2	2.00	0.05	179	2	2.00	0.06	
Comb. L-T-R		0				0			
NB Left	0	0	0.00		0	0	0.00		0.911
Comb. L-T		0				0			
NB Thru	1808	2	2.00	0.56	1855	2	2.00	0.58	
Comb. T-R		0				0			
NB Right	184	1	1.00	0.12	214	1	1.00	0.13	
Comb. L-T-R		0				0			
SB Left	166	2	2.00	0.06	204	2	2.00	0.07	0.948
Comb. L-T		0				0			
SB Thru	1162	2	2.00	0.36	1219	2	2.00	0.38	
Comb. T-R		0				0			
SB Right	0	0	0.00		0	0	0.00		
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.07	E-W:	0.07
	N-S:	0.62	N-S:	0.65
	Total:	0.69	Total:	0.72
Lost Time		0.10		0.10
V/C		0.788		0.825
Level of Service		C		D

E-W Street: San Jose Hills Rd
N-S Street: Grand Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2027 without Project				AM 2027 + Project				2027 + Project with Mitigation				PHF
	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	
EB Left	258	1	1.00	0.16	258	1	1.00	0.16	258	1	1.00	0.16	
Comb. L-T		0				0				0			
EB Thru	110	0	0.44	0.16	115	0	0.45	0.16	115	0	0.45	0.16	0.780
Comb. T-R		1				1				1			
EB Right	138	0	0.56	0.16	138	0	0.55	0.16	138	0	0.55	0.16	
Comb. L-T-R		0				0				0			
WB Left	107	1	1.00	0.07	126	1	1.00	0.08	126	1	1.61	0.05	
Comb. L-T		0				0				1			
WB Thru	30	1	1.00	0.02	31	1	1.00	0.02	31	0	0.39	0.05	0.745
Comb. T-R		0				0				0			
WB Right	64	1	1.00	0.04	75	1	1.00	0.05	75	1	1.00	0.05	
Comb. L-T-R		0				0				0			
NB Left	125	1	1.00	0.08	125	1	1.00	0.08	125	1	1.00	0.08	
Comb. L-T		0				0				0			
NB Thru	1430	2	2.00	0.45	1486	2	2.00	0.46	1486	2	2.23	0.42	0.862
Comb. T-R		0				0				1			
NB Right	438	1	1.00	0.27	509	1	1.00	0.32	509	0	0.77	0.42	
Comb. L-T-R		0				0				0			
SB Left	316	1	1.00	0.20	355	1	1.00	0.22	355	1	1.00	0.22	
Comb. L-T		0				0				0			
SB Thru	1652	2	2.00	0.52	1711	2	2.00	0.53	1711	2	2.00	0.53	0.895
Comb. T-R		0				0				0			
SB Right	170	1	1.00	0.11	170	1	1.00	0.11	170	1	1.00	0.11	
Comb. L-T-R		0				0				0			

Critical Volumes			E-W:	0.22			E-W:	0.24			E-W:	0.21	
			N-S:	0.64			N-S:	0.69			N-S:	0.64	
			Total:	0.87			Total:	0.92			Total:	0.85	
Lost Time				0.10				0.10				0.10	
V/C				0.967				1.024				0.948	
Level of Service				E				F				E	

E-W Street: San Jose Hills Rd
N-S Street: Grand Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM 2027 without Project				PM 2027 + Project				2027 + Project with Mitigation				PHF
	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	
EB Left	118	1	1.00	0.07	118	1	1.00	0.07	118	1	1.00	0.07	
Comb. L-T		0				0				0			
EB Thru	17	0	0.13	0.08	20	0	0.15	0.08	20	0	0.15	0.08	0.890
Comb. T-R		1				1				1			
EB Right	113	0	0.87	0.08	113	0	0.85	0.08	113	0	0.85	0.08	
Comb. L-T-R		0				0				0			
WB Left	233	1	1.00	0.15	276	1	1.00	0.17	276	1	1.79	0.10	
Comb. L-T		0				0				1			
WB Thru	29	1	1.00	0.02	32	1	1.00	0.02	32	0	0.21	0.10	0.760
Comb. T-R		0				0				0			
WB Right	138	1	1.00	0.09	163	1	1.00	0.10	163	1	1.00	0.10	
Comb. L-T-R		0				0				0			
NB Left	99	1	1.00	0.06	99	1	1.00	0.06	99	1	1.00	0.06	
Comb. L-T		0				0				0			
NB Thru	1794	2	2.00	0.56	1851	2	2.00	0.58	1851	2	2.67	0.43	0.896
Comb. T-R		0				0				1			
NB Right	184	1	1.00	0.12	231	1	1.00	0.14	231	0	0.33	0.43	
Comb. L-T-R		0				0				0			
SB Left	75	1	1.00	0.05	101	1	1.00	0.06	101	1	1.00	0.06	
Comb. L-T		0				0				0			
SB Thru	1170	2	2.00	0.37	1224	2	2.00	0.38	1224	2	2.00	0.38	0.940
Comb. T-R		0				0				0			
SB Right	107	1	1.00	0.07	107	1	1.00	0.07	107	1	1.00	0.07	
Comb. L-T-R		0				0				0			

Critical Volumes			E-W:	0.23			E-W:	0.26			E-W:	0.18	
			N-S:	0.61			N-S:	0.64			N-S:	0.50	
			Total:	0.83			Total:	0.90			Total:	0.68	
Lost Time				0.10				0.10				0.10	
V/C				0.935				0.998				0.777	
Level of Service				E				E				C	

E-W Street: La Puente Rd
N-S Street: Grand Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Overlap Reduce 20%

Overlap Reduce 10%

Movement	AM 2027 without Project				AM 2027 + Project				2027 + Project with Mitigation				PHF
	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	
EB Left	645	1	1.71	0.24	650	1	1.71	0.24	650	1	1.71	0.24	
Comb. L-T		1				1				1			
EB Thru	111	0	0.29	0.24	111	0	0.29	0.24	111	0	0.29	0.24	0.751
Comb. T-R		0				0				0			
EB Right	591	1	1.00	0.37	591	1	1.00	0.37	532	1	1.00	0.33	
Comb. L-T-R		0				0				0			
WB Left	217	1	1.15	0.12	217	1	1.15	0.12	217	1	1.15	0.12	
Comb. L-T		1				1				1			
WB Thru	159	0	1.74	0.06	159	0	1.74	0.06	159	0	1.74	0.06	0.628
Comb. T-R		1				1				1			
WB Right	19	0	0.11	0.11	19	0	0.11	0.11	19	0	0.11	0.11	
Comb. L-T-R		0				0				0			
NB Left	189	1	1.00	0.12	189	1	1.00	0.12	189	1	1.00	0.12	
Comb. L-T		0				0				0			
NB Thru	1575	2	2.00	0.49	1687	2	2.00	0.53	1687	2	2.00	0.53	0.972
Comb. T-R		0				0				0			
NB Right	58	1	1.00	0.04	58	1	1.00	0.04	58	1	1.00	0.04	
Comb. L-T-R		0				0				0			
SB Left	2	1	1.00	0.00	2	1	1.00	0.00	2	1	1.00	0.00	
Comb. L-T		0				0				0			
SB Thru	1140	2	2.00	0.36	1167	2	2.00	0.36	1167	2	2.00	0.36	0.953
Comb. T-R		0				0				0			
SB Right	285	1	1.00	0.18	285	1	1.00	0.18	285	1	1.00	0.18	
Comb. L-T-R		0				0				0			

Critical Volumes			E-W:	0.49			E-W:	0.49			E-W:	0.45	
			N-S:	0.49			N-S:	0.53			N-S:	0.53	
			Total:	0.98			Total:	1.02			Total:	0.98	
Lost Time				0.10				0.10				0.10	
V/C				1.080				1.115				1.079	
Level of Service				F				F				F	

E-W Street: La Puente Rd
N-S Street: Grand Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Overlap Reduce 15%

Overlap Reduce 10%

Movement	PM 2027 without Project				PM 2027 + Project				2027 + Project with Mitigation				PHF
	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	
EB Left	365	1	1.67	0.14	368	1	1.67	0.14	368	1	1.67	0.14	0.946
Comb. L-T		1				1				1			
EB Thru	73	0	0.33	0.14	73	0	0.33	0.14	73	0	0.33	0.14	
Comb. T-R		0				0				0			
EB Right	369	1	1.00	0.23	369	1	1.00	0.23	332	1	1.00	0.21	
Comb. L-T-R		0				0				0			
WB Left	106	1	1.30	0.05	106	1	1.30	0.05	106	1	1.30	0.05	0.840
Comb. L-T		1				1				1			
WB Thru	57	0	1.53	0.02	57	0	1.53	0.02	57	0	1.53	0.02	
Comb. T-R		1				1				1			
WB Right	12	0	0.17	0.04	12	0	0.17	0.04	12	0	0.17	0.04	
Comb. L-T-R		0				0				0			
NB Left	321	1	1.00	0.20	321	1	1.00	0.20	321	1	1.00	0.20	0.961
Comb. L-T		0				0				0			
NB Thru	1625	2	2.00	0.51	1703	2	2.00	0.53	1703	2	2.00	0.53	
Comb. T-R		0				0				0			
NB Right	136	1	1.00	0.09	136	1	1.00	0.09	136	1	1.00	0.09	
Comb. L-T-R		0				0				0			
SB Left	14	1	1.00	0.01	14	1	1.00	0.01	14	1	1.00	0.01	0.918
Comb. L-T		0				0				0			
SB Thru	1110	2	2.00	0.35	1174	2	2.00	0.37	1174	2	2.00	0.37	
Comb. T-R		0				0				0			
SB Right	193	1	1.00	0.12	194	1	1.00	0.12	194	1	1.00	0.12	
Comb. L-T-R		0				0				0			

Critical Volumes			E-W:	0.28			E-W:	0.28			E-W:	0.26	
			N-S:	0.55			N-S:	0.57			N-S:	0.57	
			Total:	0.83			Total:	0.85			Total:	0.83	
Lost Time				0.10				0.10				0.10	
V/C				0.929				0.949				0.926	
Level of Service				E				E				E	

E-W Street: Valley Blvd
N-S Street: Grand Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Free Right Turn 100%

Movement	AM 2027 without Project				AM 2027 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	522	2	2.00	0.18	526	2	2.00	0.18	0.864
Comb. L-T		0				0			
EB Thru	796	3	3.00	0.17	796	3	3.00	0.17	
Comb. T-R		0				0			
EB Right	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. L-T-R		0				0			
WB Left	219	2	2.00	0.08	219	2	2.00	0.08	0.813
Comb. L-T		0				0			
WB Thru	1463	3	3.00	0.30	1463	3	3.00	0.30	
Comb. T-R		0				0			
WB Right	254	1	1.00	0.16	254	1	1.00	0.16	
Comb. L-T-R		0				0			
NB Left	371	2	2.00	0.13	371	2	2.00	0.13	0.896
Comb. L-T		0				0			
NB Thru	1253	3	3.00	0.26	1370	3	3.00	0.29	
Comb. T-R		0				0			
NB Right	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. L-T-R		0				0			
SB Left	316	2	2.00	0.11	316	2	2.00	0.11	0.855
Comb. L-T		0				0			
SB Thru	943	3	3.00	0.20	971	3	3.00	0.20	
Comb. T-R		0				0			
SB Right	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.49	E-W:	0.49
	N-S:	0.37	N-S:	0.39
	Total:	0.86	Total:	0.88

Lost Time	0.10	0.10

V/C	0.957	0.983
Level of Service	E	E

E-W Street: Valley Blvd
N-S Street: Grand Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Free Right Turn 100%

Movement	PM 2027 without Project				PM 2027 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	644	2	2.00	0.22	647	2	2.00	0.22	0.968
Comb. L-T		0				0			
EB Thru	1546	3	3.00	0.32	1546	3	3.00	0.32	
Comb. T-R		0				0			
EB Right	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. L-T-R		0				0			
WB Left	268	2	2.00	0.09	268	2	2.00	0.09	0.914
Comb. L-T		0				0			
WB Thru	843	3	3.00	0.18	843	3	3.00	0.18	
Comb. T-R		0				0			
WB Right	341	1	1.00	0.21	341	1	1.00	0.21	
Comb. L-T-R		0				0			
NB Left	329	2	2.00	0.11	329	2	2.00	0.11	0.965
Comb. L-T		0				0			
NB Thru	1058	3	3.00	0.22	1132	3	3.00	0.24	
Comb. T-R		0				0			
NB Right	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. L-T-R		0				0			
SB Left	398	2	2.00	0.14	398	2	2.00	0.14	0.943
Comb. L-T		0				0			
SB Thru	745	3	3.00	0.16	806	3	3.00	0.17	
Comb. T-R		0				0			
SB Right	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.44	E-W:	0.44
	N-S:	0.36	N-S:	0.37
	Total:	0.80	Total:	0.81

Lost Time	0.10	0.10

V/C	0.895	0.912
Level of Service	D	E

E-W Street: Baker Pkwy
N-S Street: Grand Ave
Scenario: AM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	AM 2027 without Project				AM 2027 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	21	2	2.00	0.01	21	2	2.00	0.01	0.775
Comb. L-T		0				0			
EB Thru	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. T-R		0				0			
EB Right	66	1	1.00	0.04	66	1	1.00	0.04	
Comb. L-T-R		0				0			
WB Left	0	2	2.00	0.00	0	2	2.00	0.00	1.000
Comb. L-T		0				0			
WB Thru	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. T-R		0				0			
WB Right	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. L-T-R									
NB Left	125	2	2.00	0.04	125	2	2.00	0.04	0.913
Comb. L-T		0				0			
NB Thru	2210	3	3.00	0.46	2324	3	3.00	0.48	
Comb. T-R		0				0			
NB Right	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. L-T-R		0				0			
SB Left	0	2	2.00	0.00	0	2	2.00	0.00	0.927
Comb. L-T		0				0			
SB Thru	851	3	3.00	0.18	877	3	3.00	0.18	
Comb. T-R		0				0			
SB Right	81	1	1.00	0.05	81	1	1.00	0.05	
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.04	E-W:	0.04
	N-S:	0.46	N-S:	0.48
	Total:	0.50	Total:	0.53

Lost Time	0.10	0.10

V/C	0.602	0.625
Level of Service	B	B

E-W Street: Baker Pkwy
N-S Street: Grand Ave
Scenario: PM Peak
Lane Capacity: 1600
Dual Lefts Capacity (per lane): 1440

Movement	PM 2027 without Project				PM 2027 + Project				PHF
	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	Total Volume	No. of Lanes	Equivalent Lanes	Movement V/C	
EB Left	125	2	2.00	0.04	125	2	2.00	0.04	0.783
Comb. L-T		0				0			
EB Thru	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. T-R		0				0			
EB Right	207	1	1.00	0.13	207	1	1.00	0.13	
Comb. L-T-R		0				0			
WB Left	0	2	2.00	0.00	0	2	2.00	0.00	1.000
Comb. L-T		0				0			
WB Thru	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. T-R		0				0			
WB Right	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. L-T-R		0				0			
NB Left	51	2	2.00	0.02	51	2	2.00	0.02	0.889
Comb. L-T		0				0			
NB Thru	1417	3	3.00	0.30	1498	3	3.00	0.31	
Comb. T-R		0				0			
NB Right	0	1	1.00	0.00	0	1	1.00	0.00	
Comb. L-T-R		0				0			
SB Left	0	2	2.00	0.00	0	2	2.00	0.00	0.892
Comb. L-T		0				0			
SB Thru	1508	3	3.00	0.31	1572	3	3.00	0.33	
Comb. T-R		0				0			
SB Right	34	1	1.00	0.02	34	1	1.00	0.02	
Comb. L-T-R		0				0			

Critical Volumes	E-W:	0.13	E-W:	0.13
	N-S:	0.33	N-S:	0.35
	Total:	0.46	Total:	0.47

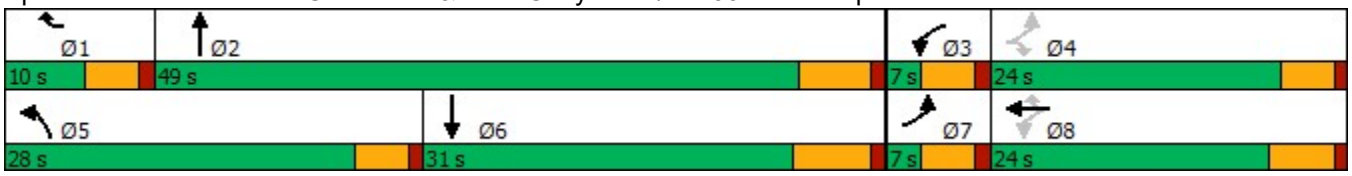
Lost Time	0.10	0.10

V/C	0.561	0.574
Level of Service	A	A

Lane Group	EBR	WBL	WBT	WBR	NBL	NBT	SBT	Ø7
Lane Configurations								
Traffic Volume (vph)	3	151	1	631	265	1555	809	
Future Volume (vph)	3	151	1	631	265	1555	809	
Turn Type	Perm	pm+pt	NA	custom	Prot	NA	NA	
Protected Phases		3	8	1	5	2	6	7
Permitted Phases	4	8		8				
Detector Phase	4	3	8	1	5	2	6	
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.6	9.6	23.4	9.6	9.6	23.8	24.2	9.6
Total Split (s)	24.0	7.0	24.0	10.0	28.0	49.0	31.0	7.0
Total Split (%)	26.7%	7.8%	26.7%	11.1%	31.1%	54.4%	34.4%	8%
Yellow Time (s)	3.6	3.6	4.4	3.6	3.6	4.8	5.2	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	4.6	5.4	4.6	4.6	5.8	6.2	
Lead/Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	6.9	16.3	15.5	26.3	17.7	43.3	30.6	
Actuated g/C Ratio	0.09	0.20	0.19	0.33	0.22	0.54	0.38	
v/c Ratio	0.02	0.43	0.89	0.59	0.74	0.88	0.37	
Control Delay	33.0	31.8	44.8	16.6	40.6	24.1	19.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	33.0	31.8	44.8	16.6	40.6	24.1	19.7	
LOS	C	C	D	B	D	C	B	
Approach Delay			31.0			26.5	19.7	
Approach LOS			C			C	B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 80	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 25.8	Intersection LOS: C
Intersection Capacity Utilization 76.5%	ICU Level of Service D
Analysis Period (min) 15	

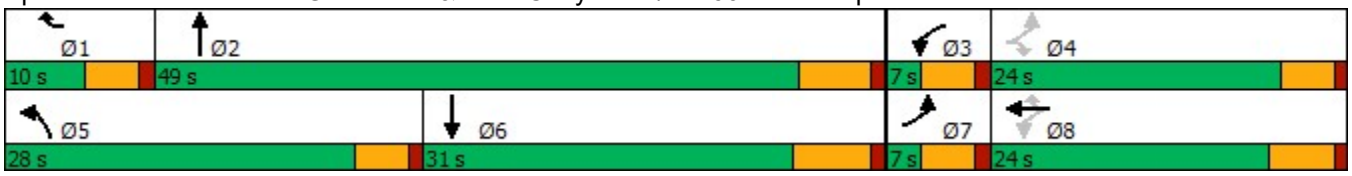
Splits and Phases: 27: Grand Ave & Brea Canyon Rd/SR-60 WB Ramps



Lane Group	EBR	WBL	WBT	WBR	NBL	NBT	SBT	Ø7
Lane Configurations								
Traffic Volume (vph)	3	151	1	709	265	1581	830	
Future Volume (vph)	3	151	1	709	265	1581	830	
Turn Type	Perm	pm+pt	NA	custom	Prot	NA	NA	
Protected Phases		3	8	1	5	2	6	7
Permitted Phases	4	8		8				
Detector Phase	4	3	8	1	5	2	6	
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.6	9.6	23.4	9.6	9.6	23.8	24.2	9.6
Total Split (s)	24.0	7.0	24.0	10.0	28.0	49.0	31.0	7.0
Total Split (%)	26.7%	7.8%	26.7%	11.1%	31.1%	54.4%	34.4%	8%
Yellow Time (s)	3.6	3.6	4.4	3.6	3.6	4.8	5.2	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	4.6	5.4	4.6	4.6	5.8	6.2	
Lead/Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.0	17.6	16.8	27.6	17.9	43.2	30.4	
Actuated g/C Ratio	0.09	0.22	0.21	0.34	0.22	0.53	0.37	
v/c Ratio	0.02	0.41	0.96	0.64	0.74	0.91	0.39	
Control Delay	33.0	30.9	57.5	19.1	41.2	27.1	20.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	33.0	30.9	57.5	19.1	41.2	27.1	20.4	
LOS	C	C	E	B	D	C	C	
Approach Delay			37.1			29.1	20.4	
Approach LOS			D			C	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 81.3	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay: 28.9	Intersection LOS: C
Intersection Capacity Utilization 80.4%	ICU Level of Service D
Analysis Period (min) 15	

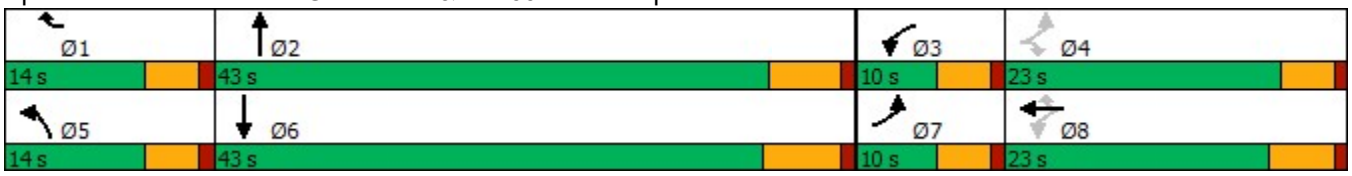
Splits and Phases: 27: Grand Ave & Brea Canyon Rd/SR-60 WB Ramps



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	Ø4	Ø7
Lane Configurations								
Traffic Volume (vph)	145	0	520	202	781	1522		
Future Volume (vph)	145	0	520	202	781	1522		
Turn Type	pm+pt	NA	custom	Prot	NA	NA		
Protected Phases	3	8	1	5	2	6	4	7
Permitted Phases	8		8					
Detector Phase	3	8	1	5	2	6		
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	23.4	9.6	9.6	23.8	24.2	22.6	9.6
Total Split (s)	10.0	23.0	14.0	14.0	43.0	43.0	23.0	10.0
Total Split (%)	11.1%	25.6%	15.6%	15.6%	47.8%	47.8%	26%	11%
Yellow Time (s)	3.6	4.4	3.6	3.6	4.8	5.2	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	5.4	4.6	4.6	5.8	6.2		
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	9.0	8.1	19.6	9.6	32.2	28.1		
Actuated g/C Ratio	0.14	0.13	0.31	0.15	0.52	0.45		
v/c Ratio	0.59	0.68	0.47	0.81	0.47	0.58		
Control Delay	36.7	13.7	9.1	54.3	10.9	13.7		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	36.7	13.7	9.1	54.3	10.9	13.7		
LOS	D	B	A	D	B	B		
Approach Delay		16.4			19.8	13.7		
Approach LOS		B			B	B		

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 62.4	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 16.1	Intersection LOS: B
Intersection Capacity Utilization 54.5%	ICU Level of Service A
Analysis Period (min) 15	

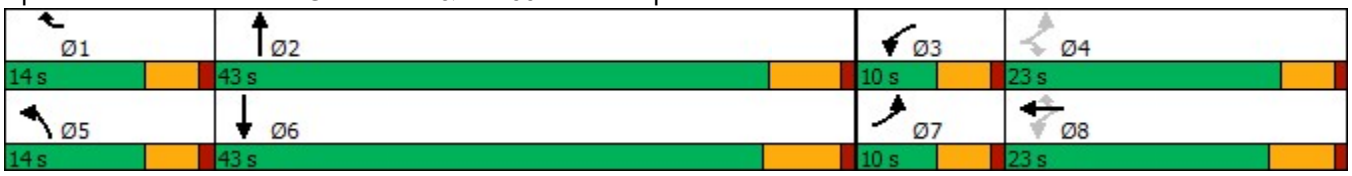
Splits and Phases: 27: Grand Ave & SR-60 WB Ramps



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	Ø4	Ø7
Lane Configurations								
Traffic Volume (vph)	145	0	574	202	799	1572		
Future Volume (vph)	145	0	574	202	799	1572		
Turn Type	pm+pt	NA	custom	Prot	NA	NA		
Protected Phases	3	8	1	5	2	6	4	7
Permitted Phases	8		8					
Detector Phase	3	8	1	5	2	6		
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.6	23.4	9.6	9.6	23.8	24.2	22.6	9.6
Total Split (s)	10.0	23.0	14.0	14.0	43.0	43.0	23.0	10.0
Total Split (%)	11.1%	25.6%	15.6%	15.6%	47.8%	47.8%	26%	11%
Yellow Time (s)	3.6	4.4	3.6	3.6	4.8	5.2	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.6	5.4	4.6	4.6	5.8	6.2		
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lag	Lead
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.1	9.3	20.9	9.6	33.6	29.6		
Actuated g/C Ratio	0.15	0.14	0.32	0.15	0.52	0.45		
v/c Ratio	0.54	0.73	0.52	0.84	0.48	0.60		
Control Delay	34.6	16.6	10.8	61.0	11.6	14.4		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	34.6	16.6	10.8	61.0	11.6	14.4		
LOS	C	B	B	E	B	B		
Approach Delay		17.5			21.6	14.4		
Approach LOS		B			C	B		

Intersection Summary			
Cycle Length: 90			
Actuated Cycle Length: 65.2			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 17.3		Intersection LOS: B	
Intersection Capacity Utilization 55.9%		ICU Level of Service B	
Analysis Period (min) 15			

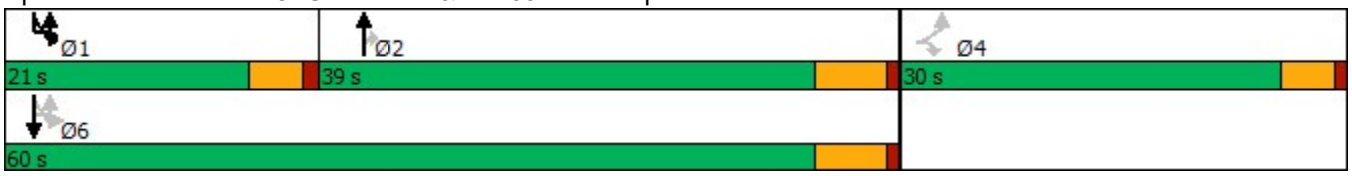
Splits and Phases: 27: Grand Ave & SR-60 WB Ramps



Lane Group	EBL	EBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	754	273	1054	310	10	269	700
Future Volume (vph)	754	273	1054	310	10	269	700
Turn Type	Perm	Perm	NA	Perm	pm+pt	pm+pt	NA
Protected Phases			2		1	1	6
Permitted Phases	4	4		2	6	6	
Detector Phase	4	4	2	2	1	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	24.0	24.0	11.0	11.0	24.0
Total Split (s)	30.0	30.0	39.0	39.0	21.0	21.0	60.0
Total Split (%)	33.3%	33.3%	43.3%	43.3%	23.3%	23.3%	66.7%
Yellow Time (s)	3.6	3.6	4.8	4.8	3.6	3.6	4.8
All-Red Time (s)	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
Total Lost Time (s)	4.6	4.6	5.8	5.8		4.6	5.8
Lead/Lag			Lag	Lag	Lead	Lead	
Lead-Lag Optimize?							
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	23.5	23.5	31.5	31.5		51.4	50.2
Actuated g/C Ratio	0.28	0.28	0.37	0.37		0.61	0.60
v/c Ratio	0.86	0.50	0.87	0.42		0.79	0.25
Control Delay	39.7	11.9	33.5	4.1		33.7	8.4
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	39.7	11.9	33.5	4.1		33.7	8.4
LOS	D	B	C	A		C	A
Approach Delay			26.8				15.6
Approach LOS			C				B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 84.3	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 25.2	Intersection LOS: C
Intersection Capacity Utilization 76.4%	ICU Level of Service D
Analysis Period (min) 15	

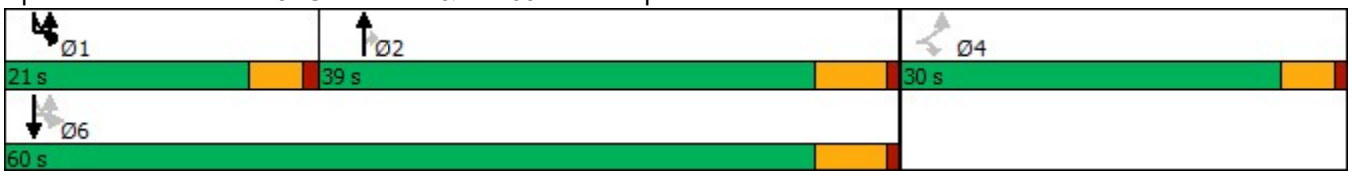
Splits and Phases: 28: Grand Ave & SR-60 EB Ramps



Lane Group	EBL	EBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	767	273	1067	310	10	287	703
Future Volume (vph)	767	273	1067	310	10	287	703
Turn Type	Perm	Perm	NA	Perm	pm+pt	pm+pt	NA
Protected Phases			2		1	1	6
Permitted Phases	4	4		2	6	6	
Detector Phase	4	4	2	2	1	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	24.0	24.0	11.0	11.0	24.0
Total Split (s)	30.0	30.0	39.0	39.0	21.0	21.0	60.0
Total Split (%)	33.3%	33.3%	43.3%	43.3%	23.3%	23.3%	66.7%
Yellow Time (s)	3.6	3.6	4.8	4.8	3.6	3.6	4.8
All-Red Time (s)	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
Total Lost Time (s)	4.6	4.6	5.8	5.8		4.6	5.8
Lead/Lag			Lag	Lag	Lead	Lead	
Lead-Lag Optimize?							
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	24.1	24.1	32.0	32.0		52.3	51.1
Actuated g/C Ratio	0.28	0.28	0.37	0.37		0.61	0.60
v/c Ratio	0.86	0.50	0.88	0.42		0.83	0.25
Control Delay	40.6	11.9	34.9	4.1		38.6	8.5
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	40.6	11.9	34.9	4.1		38.6	8.5
LOS	D	B	C	A		D	A
Approach Delay			28.0				17.5
Approach LOS			C				B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 85.7	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 26.4	Intersection LOS: C
Intersection Capacity Utilization 78.1%	ICU Level of Service D
Analysis Period (min) 15	

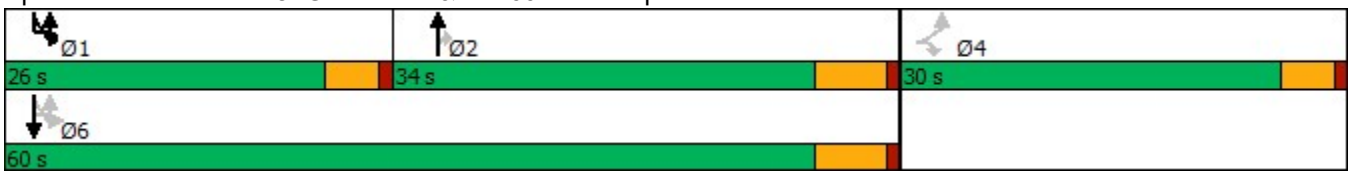
Splits and Phases: 28: Grand Ave & SR-60 EB Ramps



Lane Group	EBL	EBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	153	266	819	661	4	362	1343
Future Volume (vph)	153	266	819	661	4	362	1343
Turn Type	Perm	Perm	NA	Perm	pm+pt	pm+pt	NA
Protected Phases			2		1	1	6
Permitted Phases	4	4		2	6	6	
Detector Phase	4	4	2	2	1	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	24.0	24.0	11.0	11.0	24.0
Total Split (s)	30.0	30.0	34.0	34.0	26.0	26.0	60.0
Total Split (%)	33.3%	33.3%	37.8%	37.8%	28.9%	28.9%	66.7%
Yellow Time (s)	3.6	3.6	4.8	4.8	3.6	3.6	4.8
All-Red Time (s)	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
Total Lost Time (s)	4.6	4.6	5.8	5.8		4.6	5.8
Lead/Lag			Lag	Lag	Lead	Lead	
Lead-Lag Optimize?							
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	15.4	15.4	26.0	26.0		48.5	47.2
Actuated g/C Ratio	0.21	0.21	0.35	0.35		0.66	0.64
v/c Ratio	0.23	0.72	0.71	0.72		0.75	0.45
Control Delay	25.9	30.0	26.0	7.5		23.2	7.6
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	25.9	30.0	26.0	7.5		23.2	7.6
LOS	C	C	C	A		C	A
Approach Delay			17.7				10.9
Approach LOS			B				B

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 73.5	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 15.8	Intersection LOS: B
Intersection Capacity Utilization 68.6%	ICU Level of Service C
Analysis Period (min) 15	

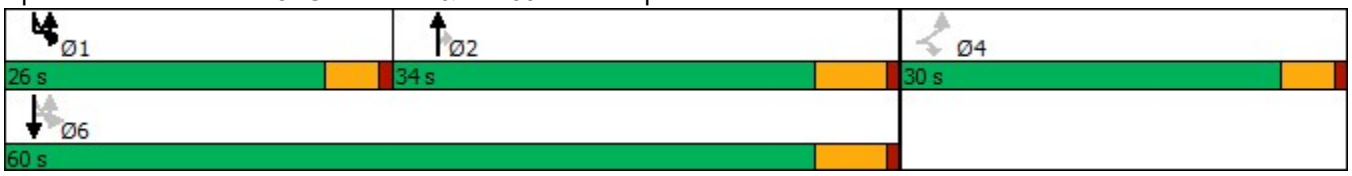
Splits and Phases: 28: Grand Ave & SR-60 EB Ramps



Lane Group	EBL	EBR	NBT	NBR	SBU	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	162	266	828	661	4	405	1350
Future Volume (vph)	162	266	828	661	4	405	1350
Turn Type	Perm	Perm	NA	Perm	pm+pt	pm+pt	NA
Protected Phases			2		1	1	6
Permitted Phases	4	4		2	6	6	
Detector Phase	4	4	2	2	1	1	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	24.0	24.0	11.0	11.0	24.0
Total Split (s)	30.0	30.0	34.0	34.0	26.0	26.0	60.0
Total Split (%)	33.3%	33.3%	37.8%	37.8%	28.9%	28.9%	66.7%
Yellow Time (s)	3.6	3.6	4.8	4.8	3.6	3.6	4.8
All-Red Time (s)	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
Total Lost Time (s)	4.6	4.6	5.8	5.8		4.6	5.8
Lead/Lag			Lag	Lag	Lead	Lead	
Lead-Lag Optimize?							
Recall Mode	None	None	None	None	None	None	None
Act Effct Green (s)	15.6	15.6	26.4	26.4		51.0	49.8
Actuated g/C Ratio	0.20	0.20	0.35	0.35		0.67	0.65
v/c Ratio	0.25	0.73	0.73	0.73		0.80	0.44
Control Delay	26.8	31.3	27.5	8.3		28.5	7.4
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	26.8	31.3	27.5	8.3		28.5	7.4
LOS	C	C	C	A		C	A
Approach Delay			19.0				12.3
Approach LOS			B				B

Intersection Summary			
Cycle Length: 90			
Actuated Cycle Length: 76.1			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 17.0		Intersection LOS: B	
Intersection Capacity Utilization 71.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 28: Grand Ave & SR-60 EB Ramps



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