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FEHR  PEERS

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Appendix A: Traffic Counts

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EXECUTIVE SUMMARY

As part of the City of Pomona's environmental study, Fehr & Peers completed a Traffic Impact Study (TIS) for the proposed commercial project at 888 W. Mission Boulevard in the City of Pomona. This TIS was developed based on requirements established in the *City of Pomona Traffic Impact Study Guidelines* (City of Pomona, February 2012).

FINDINGS

The addition of estimated project traffic does not exceed the City of Pomona's thresholds of significance for signalized and unsignalized intersections. Net new project trips will add an overall 75 AM and 117 PM peak hour trips. The distribution of trips on the roadway network does not exceed the thresholds of significance in accordance with the City of Pomona Traffic Impact Study Guidelines; therefore, there are no changes to the existing baseline conditions that require mitigation.

**TABLE ES-1 -
INTERSECTION IMPACTS SUMMARY MATRIX**

Intersection	Scenario(s) Where Impact Occurs	Mitigation Required.
1. Hamilton Blvd & Mission Blvd	N/A	No
2. White Ave & Mission Blvd	N/A	No
3. Park Ave & Mission Blvd	N/A	No
4. Garey Ave & Mission Blvd	N/A	No
5. Driveway & Mission Blvd	N/A	No
6. Cypress St & Driveway	N/A	No
7. Driveway & 6 th St	N/A	No
8. White Ave & Driveway	N/A	No



INTRODUCTION

This report documents the assumptions, methodologies, and findings of a study conducted by Fehr & Peers to evaluate the potential traffic impacts of the proposed commercial project at 888 W. Mission Boulevard in Pomona, California. This study was conducted as a component of the environmental documentation for the project.

PROJECT DESCRIPTION

The proposed project is located at 888 W. Mission Boulevard in the City of Pomona, southeast of the intersection at W. Mission Boulevard and White Avenue. The adjacent land uses are predominantly commercial and single-family residential. **Figure 1** illustrates the location of the proposed project in relation to the surrounding street system. Interstate 10 (I-10) and State Route 71 (SR-71) provide regional access to the project site. Both freeways are approximately one mile away from the project site. The project will be accessible from one driveway on White Avenue, one driveway on W. Mission Boulevard, one driveway on Cypress Street, and one driveway on W. Sixth Street.

The analysis of this project in this study involves the construction of an 8,559-square-foot Family Dollar Store, a 2,324 square foot laundromat, and the redevelopment of a 5,550-square-foot sit-down restaurant. The project site currently has six driveways, the project will remove two and reconfigure four driveways around the perimeter of the site. **Figure 2** presents the proposed site plan with the proposed project driveways. The project is anticipated to open in 2018.

The City of Pomona General Plan identifies the project area as "Neighborhood Edge." The existing project site zoning is Corridors Specific Plan (CSP). The site is currently vacant with an existing and unoccupied restaurant building.

The City of Pomona was consulted regarding planned intersection improvements within the study area. There are currently no planned improvements at any of the study intersections.

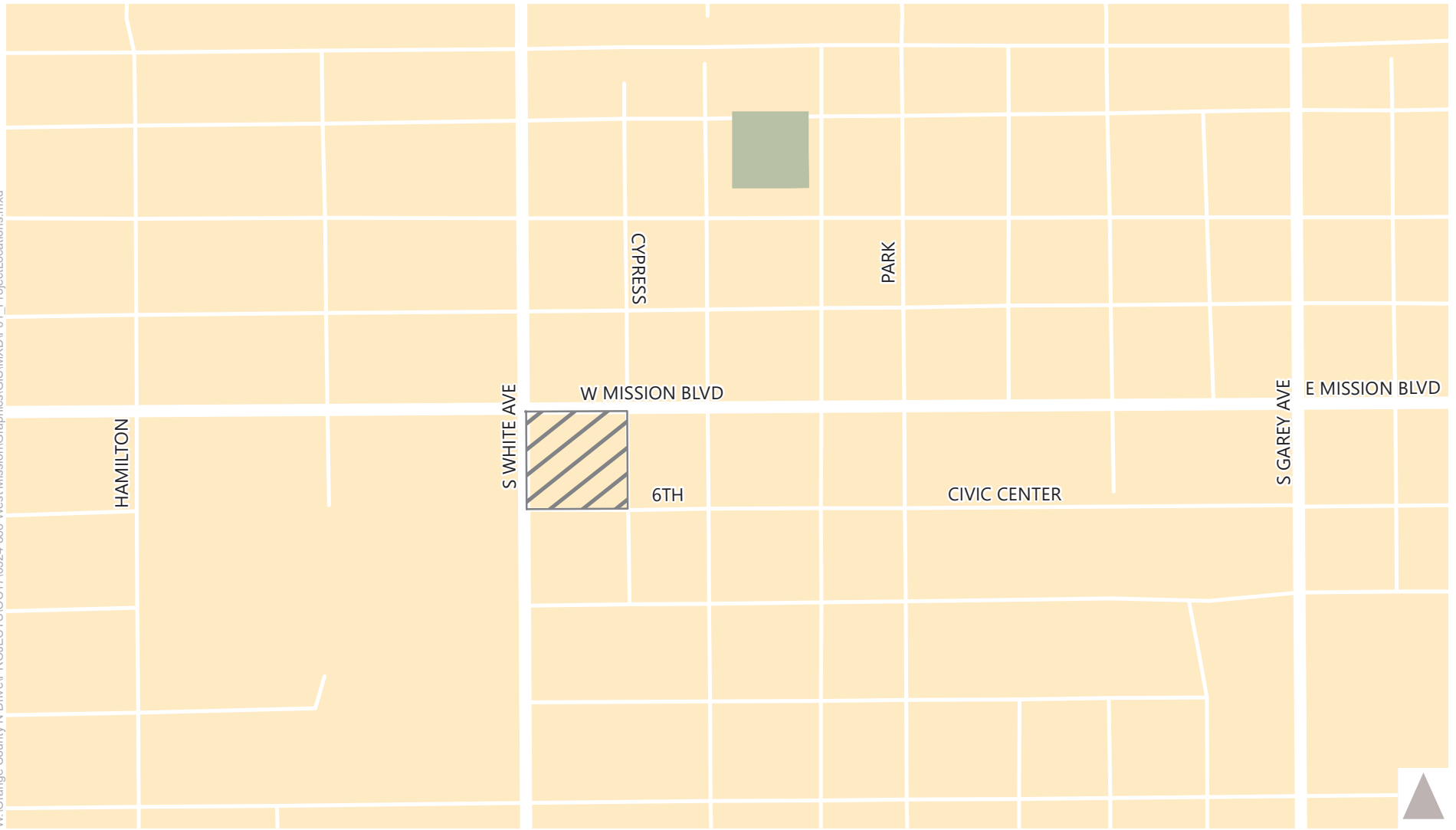


ANALYSIS SCENARIOS

The study assumes that the project will be completed by year 2018 and is directed at analyzing the potential project generated traffic impact on the local street system under both existing and opening year traffic conditions. The following traffic scenarios have been developed and analyzed as part of this study per the *City of Pomona Traffic Impact Study Guidelines* (February 2012):

- Existing (2017) Conditions – The analysis of existing traffic conditions provides a basis for the remainder of the study. The existing conditions analysis includes a description of the transportation system serving the project site, existing traffic volumes, and an assessment of the operating conditions at the study analysis locations.
- Existing (2017) Plus Project Traffic – This traffic scenario provides projected traffic volumes and an assessment of operating conditions under existing conditions with the addition of Project-generated traffic. This scenario identifies the impacts of the proposed project on existing traffic operating conditions.
- Opening (2018) No Project – Opening year projections without the proposed project are for year 2018. The objective of this analysis is to project future traffic growth and operating conditions that are expected to result from local and regional background growth near the project site by year 2018. No related projects were identified by the City. Therefore, a growth rate of two percent per year was used to account for ambient growth.
- Opening (2018) Plus Project – This traffic scenario applies projected project traffic volumes to the Opening Year No Project scenario. This scenario identifies the Impacts of the proposed project on future traffic operating conditions.





Project Location



Figure 1
Project Location



01 SITE PLAN

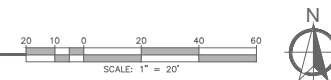


Figure 2
Site Plan

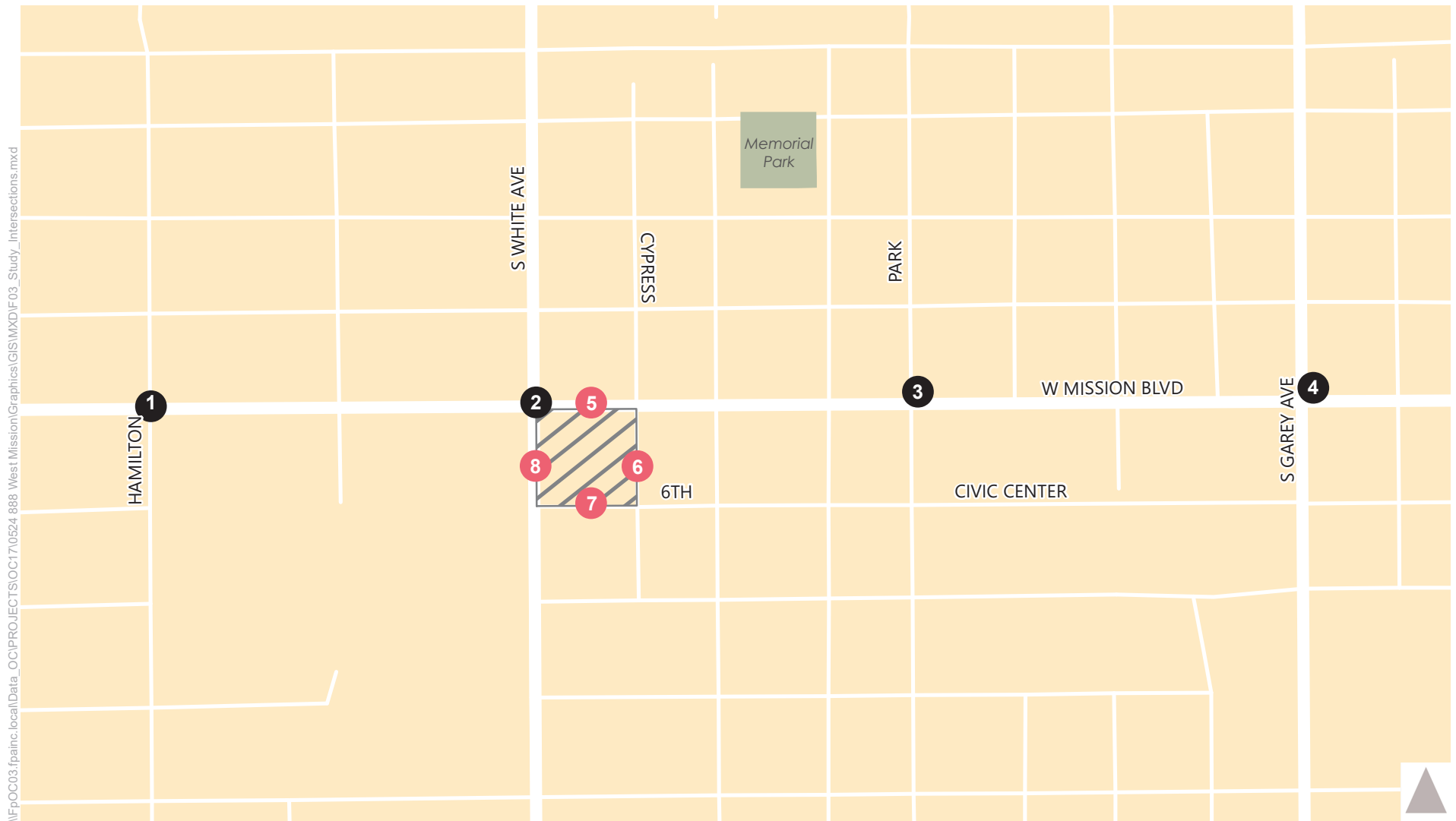
STUDY LOCATIONS

The study area and analyzed intersections were determined based on preliminary trip generation, trip distribution, and trip assignment estimates developed for the project, knowledge of the study area, and input from staff at the City of Pomona. The eight intersections selected for evaluation and analyzed in this traffic impact study are:

1. Hamilton Boulevard & Mission Boulevard
2. White Avenue & Mission Boulevard
3. Park Avenue & Mission Boulevard
4. Garey Avenue & Mission Boulevard
5. Project Driveway & Mission Boulevard
6. Cypress Street & Project Driveway
7. Project Driveway & 6th Street
8. Project Driveway & White Street

The analyzed intersections are shown on **Figure 3**.





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- # Study Intersections
- # Study Project Driveways
- Project Location



Figure 3
Study Intersections

EXISTING CONDITIONS

This section evaluates the Existing (2017) Conditions in the project study area, including the roadway, transit, and pedestrian networks in order to document the baseline conditions against which the project has been assessed.

EXISTING ROADWAY NETWORK

REGIONAL ROADS

- Interstate 10 (I-10) – I-10, also known as the San Bernardino Freeway, provides regional east-west access. The freeway has four lanes in each direction with an additional lane designated for high occupancy vehicles (HOV). Regional access to the project is available from the interchange at N. White Avenue.
- State Route 71 (SR-71) – SR-71, also known as the Chino Valley Freeway, provides northwest-southeast access west of the project site. The freeway connects to the I-10 Freeway in Pomona at the northern end and connects to SR-91 freeway in Corona to the south. The freeway has two lanes in each direction near the project site. Regional access to the project site provided via the interchange at W. Mission Boulevard.

LOCAL ROADS

- Mission Avenue – Mission Avenue is classified as a Major Arterial in the City of Pomona General Plan. It provides east-west mobility with two travel lanes in each direction and a center two-way left turn lane in some areas. Portions of the roadway are divided by a raised median and the posted speed limit is 35 miles per hour (MPH). On-street parking is generally allowed along Mission Avenue.
- White Avenue – White Avenue is classified as a Minor Arterial in the City of Pomona General Plan. It runs north-south immediately adjacent to the project site with two travel lanes in each direction and a center two-way left turn lane. The posted speed limit is 35 MPH and on-street parking is generally allowed.
- Park Avenue – Park Avenue is classified as a Collector in the City of Pomona General Plan. It runs north-south east of the project site with one travel lane in each direction, Class II & III bicycle facilities, and a center two-way left turn lane. The posted speed limit is 35 MPH and on-street parking is allowed on some segments.
- Garey Avenue – Garey Avenue is classified as a Minor Arterial in the City of Pomona General Plan. It runs north-west to the east of the project site with two travel lanes in each direction and a center



two-way left turn lane in most sections, and a raised median in some sections. The posted speed limit is 30 MPH north of Mission Boulevard and 35 MPH south of Mission Boulevard. On-street parking is generally allowed along the corridor.

- W. Sixth Street – W. Sixth Street is classified as a Local Street in the City of Pomona General Plan. It runs east-west, south of the project site and has one travel lane in each direction. There is no posted speed limit. Every intersection is controlled by stop signs. On-street parking is allowed.
- Hamilton Boulevard – Hamilton Boulevard is classified as a Collector in the City of Pomona General Plan. It runs north-south to the west of the project. It provides one to two travel lanes in each direction, a center two-way left turn lane, and class II bicycle lanes in some segments. The posted speed limit is 35 MPH and on-street parking is generally allowed.
- Cypress Street – Cypress Street is classified as a Local Street in the City of Pomona General Plan. It runs in a north-south direction to the east of the project site. The roadway provides one travel lane in each direction. There is no posted speed limit. All intersections are controlled by stop signs. On-street parking is allowed.

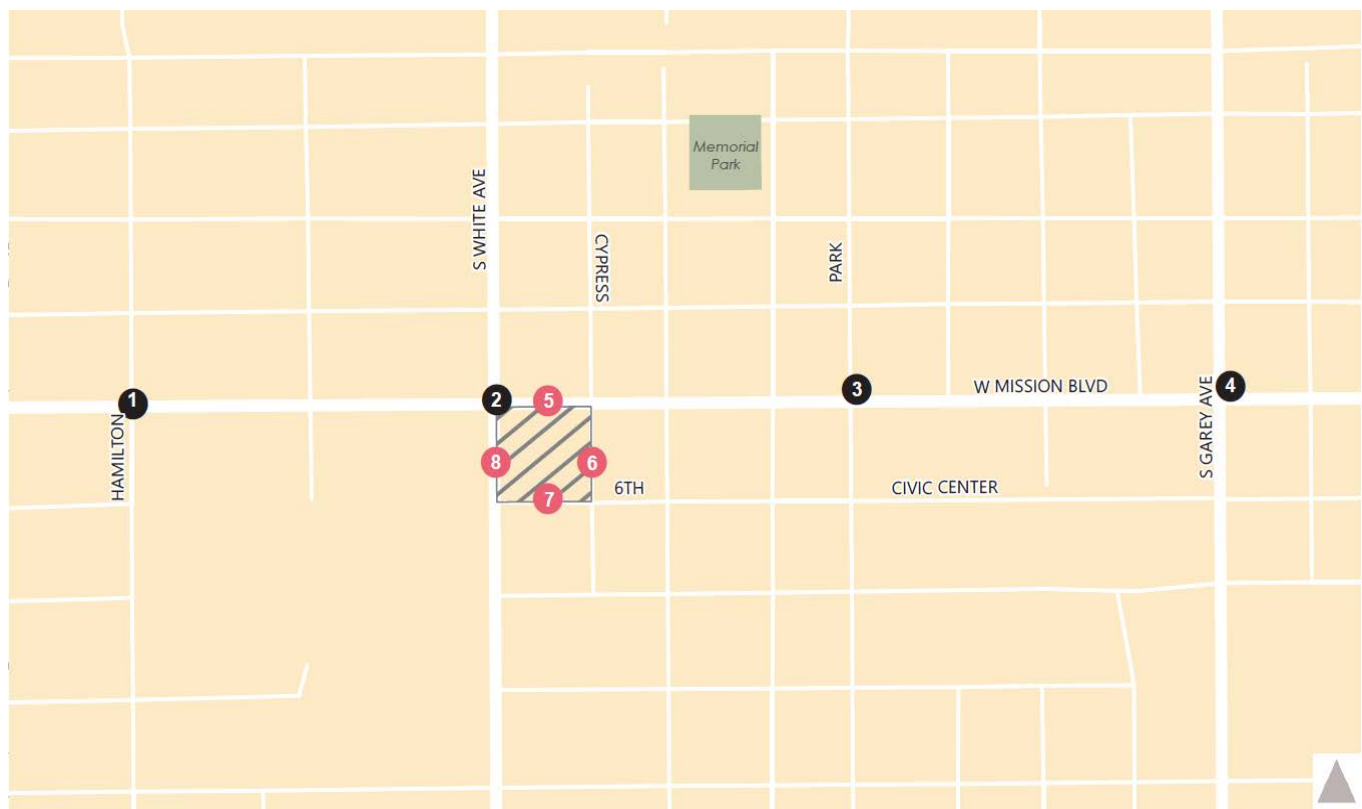
EXISTING TRAFFIC VOLUMES AND INTERSECTION CHARACTERISTICS

Existing traffic control and intersection geometries were collected at the four existing study intersections. All four existing intersections are signalized. Existing AM and PM peak hour traffic volumes were collected on Thursday, November 2, 2017 at all four analyzed intersections. Traffic volumes and intersection characteristics are shown on **Figure 4** and existing count sheets are provided in **Appendix A**.

EXISTING LEVEL OF SERVICE

This section describes the methodology used to assess the traffic conditions at the study intersections and provides an analysis of the resulting operating conditions at each, indicating the intersection delay and levels of service (LOS).





Study Intersections # Study Project Driveways
 Project Location

1. Hamilton Blvd/Mission Blvd	2. White Ave/Mission Blvd	3. Park Ave/Mission Blvd	4. Garey Ave/Mission Blvd
Hamilton Blvd Mission Blvd 92 (100) 130 (216) 71 (67) 43 (55) 1,058 (707) 41 (42) 56 (76) 707 (856) 62 (67) 95 (48) 191 (110) 74 (35)	White Ave Mission Blvd 118 (75) 502 (771) 98 (106) 107 (112) 863 (640) 45 (62) 62 (92) 687 (788) 97 (96) 166 (89) 735 (537) 52 (39)	Park Ave Mission Blvd 35 (67) 132 (158) 24 (47) 29 (39) 924 (671) 49 (67) 74 (42) 588 (816) 162 (41) 66 (171) 167 (157) 60 (62)	Garey Ave Mission Blvd 75 (92) 402 (617) 54 (100) 109 (93) 813 (526) 75 (150) 117 (138) 440 (700) 117 (145) 124 (145) 539 (624) 92 (129)

Figure 1
Peak Hour Traffic Volumes
and Lane Configurations
Existing (2017) Conditions



LEVEL OF SERVICE METHODOLOGY

Intersections

Signalized intersection operations are evaluated using the Highway Capacity Manual (HCM) 6th Edition methodology. HCM 6th Edition is considered state-of-the-practice and is consistent with the City of Pomona's Traffic Impact Study guidelines requirements to use the latest version of the Transportation Research Board Highway Capacity Manual (HCM) methodology. The 6th Edition methodology for signalized and all-way stop-controlled intersections estimates the average control delay for the vehicle at the intersection, while the worst-approach delay is reported for side-street stop-controlled intersections. After the quantitative delay estimates are complete, the methodology assigns a qualitative letter grade that represents the operations of the intersection. These grades range from level of service (LOS) A (minimal delay) to LOS F (excessive congestion). LOS E represents at-capacity operations. Descriptions of the LOS letter grades for signalized and unsignalized intersections are provided in **Table 1**.

EXISTING LEVELS OF SERVICE

Intersections

Existing year intersection traffic volumes presented on **Figure 4** and in **Appendix A** were analyzed using the HCM methodology described above to determine the existing operating conditions at the study intersections. Analysis sheets are provided in **Appendix B**.

Table 2 summarizes the results of the analysis of the existing weekday morning and afternoon peak-hour delay, along with the corresponding LOS at each of the analyzed intersections. As indicated, all four existing study intersections operate at LOS C or better during both peak periods.



**TABLE 1 - LEVEL OF SERVICE DEFINITIONS FOR SIGNALIZED INTERSECTIONS
(2010 HIGHWAY CAPACITY OPERATIONS METHOD)**

Level of Service	Unsignalized Delay	Signalized Intersections	Description
	Average Control Delay (seconds/Vehicle)	Average Stopped Delay per Vehicle (seconds)	
A	<10.0	<10.0	Operations with very low delay occurring with favorable progression and/or short cycle length.
B	>10.0 to 15.0	>10.0 to 20.0	Operations with low delay occurring with good progression and/or short cycle lengths.
C	>15.0 to 25.0	>20.0 to 35.0	Operations with average delays resulting from fair progression and or/longer cycle lengths. Individual cycle failures begin to appear.
D	>25.0 to 35.0	>35.0 to 55.0	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.
E	>35.0 to 50.0	>55.0 to 80.0	Operations with high delay values indicating poor progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.
F	>50.0	>80.0	Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.

Source: *Highway Capacity Manual, Sixth Edition: A Guide for Multimodal Mobility Analysis*



TABLE 2- INTERSECTION LEVEL OF SERVICE EXISTING (2017) CONDITIONS

Intersection	Control	AM Peak		PM Peak	
		Delay (seconds) ¹	LOS ²	Delay (seconds) ¹	LOS ²
1. Hamilton Boulevard & Mission Boulevard	Signal	15.1	B	12.4	B
2. White Avenue & Mission Boulevard	Signal	25.5	C	20.3	C
3. Park Avenue & Mission Boulevard	Signal	7.9	A	9.7	A
4. Garey Avenue & Mission Boulevard	Signal	34.3	C	34	C

Notes:

1. Average Intersection Delay is based on application of *Highway Capacity Manual* (HCM) methodology using Synchro software.

2. LOS based on delay reported for signalized intersections.

Source: Fehr & Peers, 2017

EXISTING BICYCLE AND PEDESTRIAN FACILITIES

Figure 5 shows citywide designated bicycle facilities in the project area. As shown in the figure, Class II bicycle lanes currently exist on the following streets within the study area:

- Hamilton Boulevard (South of Mission Boulevard)
- Park Avenue (3rd Street to Mission Boulevard)

As shown in the figure, Class III bicycle routes currently exist on the following streets within the study area:

- Park Avenue (north of 3rd Street)

The City of Pomona Active Transportation Plan (2012) identifies planned facilities within the City of Pomona and adjacent areas. Planned facilities, also shown on **Figure 5**, are as follows:

- 2nd Street – Bike Route (Class III)
- Hamilton Boulevard (North of Mission Boulevard) – Bike Lane (Class II)
- Mission Boulevard – Potential bicycle facility
- Park Avenue (South of Mission Boulevard) – Bike Lane (Class II)
- 9th Street – Bike Lane (Class II)

The project area has a mature network of pedestrian facilities around the project site including sidewalks, crosswalks, and pedestrian safety features. Approximately five- to ten-foot sidewalks with parkways that



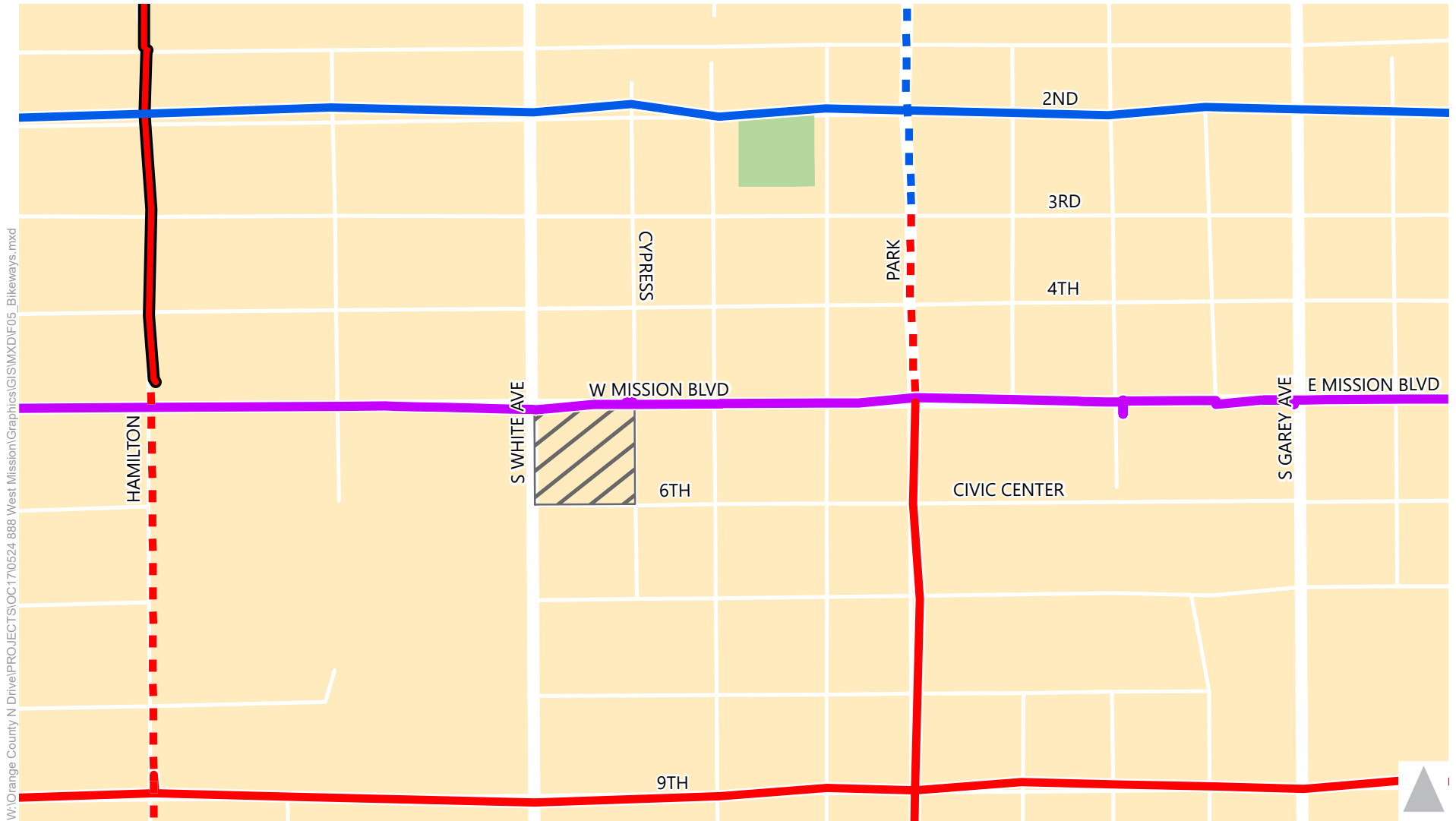
act as buffers between the travel way of cars and walking path of pedestrians exist adjacent to the project site.

EXISTING TRANSIT FACILITIES

Foothill Transit provides public transportation through the San Gabriel and Pomona Valleys. **Figure 6** shows the various transit lines providing access to the study area.

- Foothill Transit Line 291 – Line 291 provides local service between Pomona and La Verne, with stops in Claremont. This line runs along Garey Avenue in the project study area. Line 291 operates at 15- to 30-minute headways during the weekday AM and PM peak periods and at approximately 30-minute headways on weekends.
- Foothill Transit Line 286 – Line 286 provides service between Pomona and Brea Mall, with stops in Diamond Bar. This line runs along Garey Avenue and Mission Boulevard in the project study area. Line 286 operates from 6AM to 10PM during the weekdays with one-hour headways. During the weekend, the bus line operates from 7AM to 7PM, with one-hour headways.
- Foothill Transit Line 480 – Line 480 provides local service between Montclair and West Covina, with stops in Pomona and Covina. This line runs along Mission Boulevard and Garey Avenue in the project study area. Line 480 operates at 30-minute headways on weekdays and at 30- to 60-minute headways on weekends.





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-  Project Location
- Existing Bikeways
-  Bike Lane (Class II)
 -  Bike Route (Class III)

- Proposed Bikeways
-  Bike Lane
 -  Bike Route
 -  Bike Lane After Road Diet
 -  Potential Future Bike Facilities



Figure 5
Existing & Planned Bicycle Facilities

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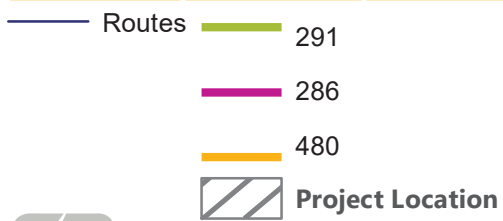
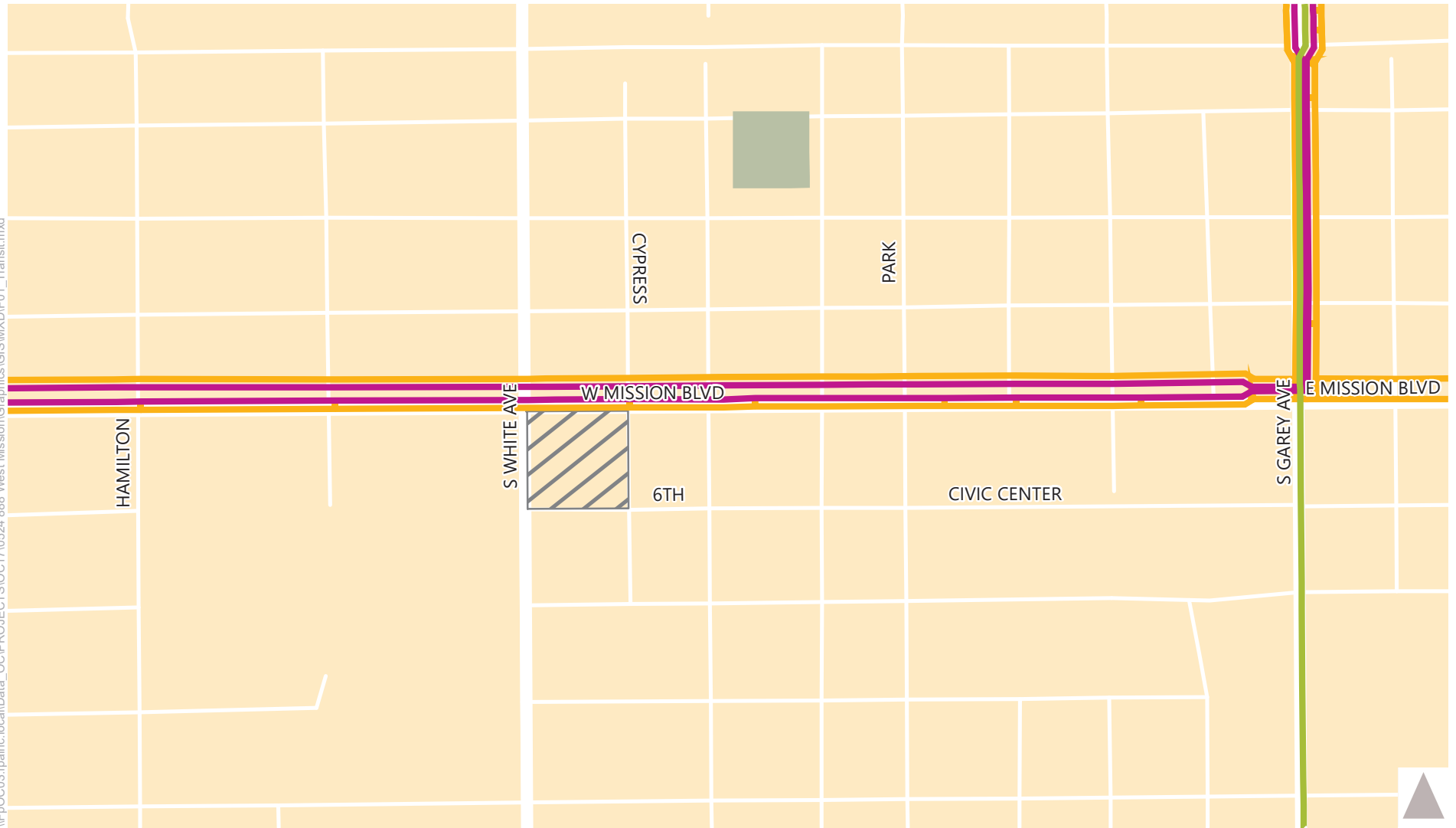


Figure 6
Existing Transit Lines

FUTURE CONDITIONS

PROJECT TRAFFIC

The development of trip estimates on local facilities for the proposed project involves the use of a three-step process: trip generation, trip distribution, and traffic assignment.

TRIP GENERATION

As discussed in Chapter 1, the proposed project consists of the following: a 5,550 square foot sit-down restaurant, Family Dollar store measuring 8,559 square feet, and a 2,324 square foot laundromat. Trip generation rates from *Trip Generation, 10th Edition* (Institute of Transportation Engineers [ITE], 2017) were used to estimate the number of trips associated with the project and are presented in **Table 3**. The project is estimated to generate 1,254 daily trips, including 84 trips (46 inbound/38 outbound) during the AM peak hour and 128 trips (71 inbound/57 outbound) during the PM peak hour.

TRIP DISTRIBUTION AND ASSIGNMENT

The geographic distribution of trips generated by the proposed project is dependent on characteristics of the street system serving the project site, the level of accessibility of routes to and from the proposed project site, locations of employment, and commercial centers to which residents of the project would be drawn. As this project is a local serving project, trip distribution was determined based on land uses in the area surrounding the site and consultation with City of Pomona staff. The distribution of project trips is illustrated on **Figure 7**.

The traffic to be generated by the proposed project was assigned to the street network using the distribution pattern described on **Figure 7**. **Figure 8** provides the assignment of the proposed project-generated peak hour traffic volumes at the analyzed intersections and roadway segments during the AM and PM peak hours.

EXISTING PLUS PROJECT TRAFFIC VOLUMES

Project traffic was added to the traffic counts to develop Existing Plus Project traffic volumes. **Figure 9** provides the Existing Plus Project volumes.



TABLE 3
TRIP GENERATION ESTIMATE

Land Use	ITE Code	Size (KSF)	Daily	AM Peak Hour			PM Peak Hour			Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
				Rate	% In	% Out	Rate	% In	% Out		In	Out	Total	In	Out	Total
High-Turnover (Sit-Down) Restaurant	932	5.550	112.18	9.94	55%	45%	9.77	62%	38%	623	30	25	55	33	21	54
<i>Pass-by credit [c]</i>			10%	10%			10%			(62)	(3)	(3)	(6)	(3)	(2)	(5)
Net External Trips										561	27	22	49	30	19	49
Variety Store [d]	814	8.559	63.47	3.18	57%	43%	6.84	52%	48%	543	15	12	27	32	30	62
<i>Pass-by credit [c]</i>			10%	10%			10%			(54)	(2)	(1)	(3)	(3)	(3)	(6)
Net External Trips										489	13	11	24	29	27	56
Shopping Center (Laundromat)	820	2.324	37.75	0.94	62%	38%	3.81	48%	52%	88	1	1	2	6	6	12
<i>Pass-by credit [c]</i>			10%	10%			10%			0	0	0	0	(1)	(1)	(2)
Net External Trips										88	1	1	2	5	5	10
Total Project Trips										1,254	46	38	84	71	57	128
Total Driveway Trips										1,254	46	38	84	71	57	128
<i>Pass-by credit [c]</i>										(116)	(5)	(4)	(9)	(6)	(5)	(11)
Net New Project Trips										1,138	41	34	75	65	52	117



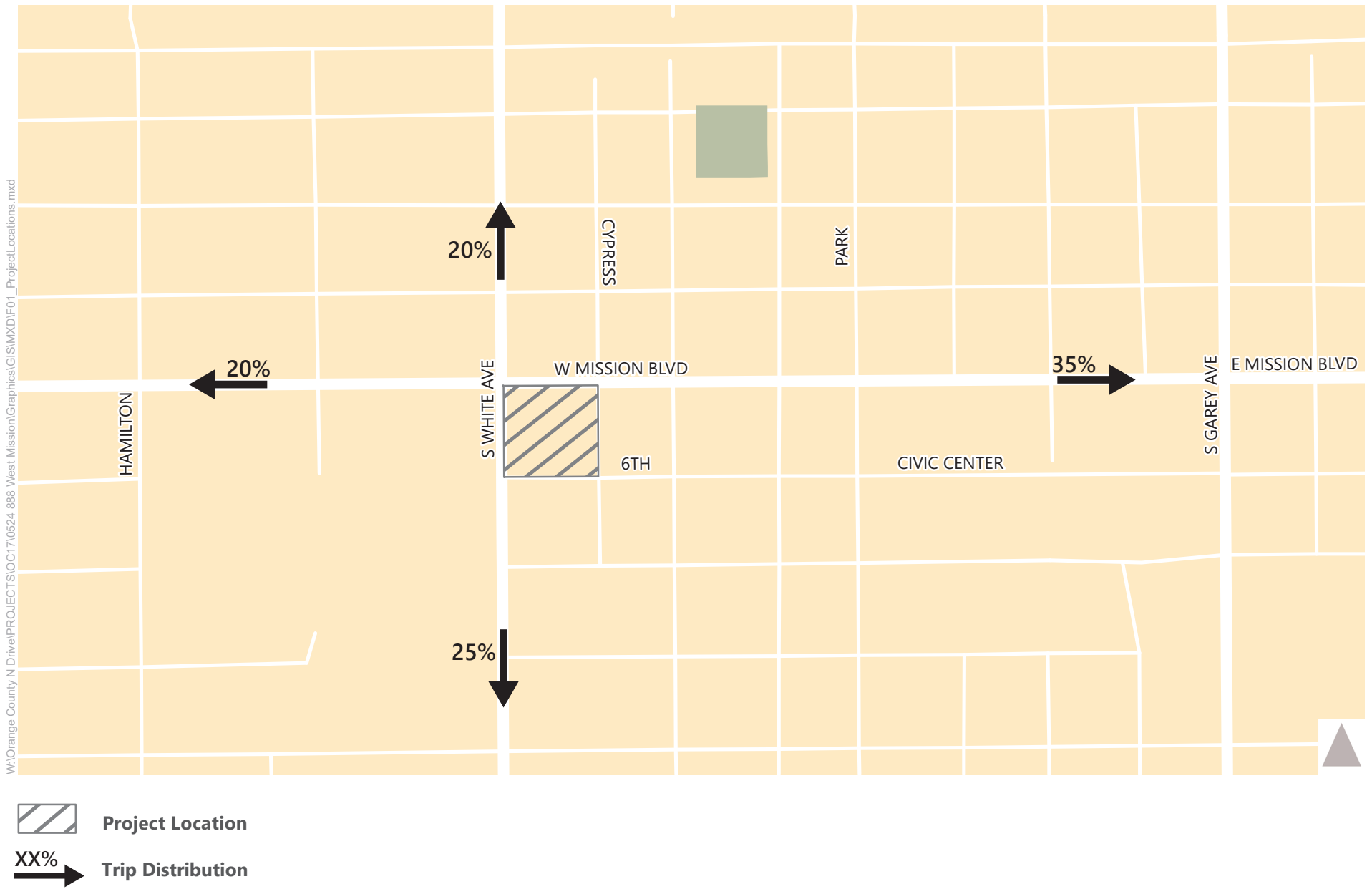
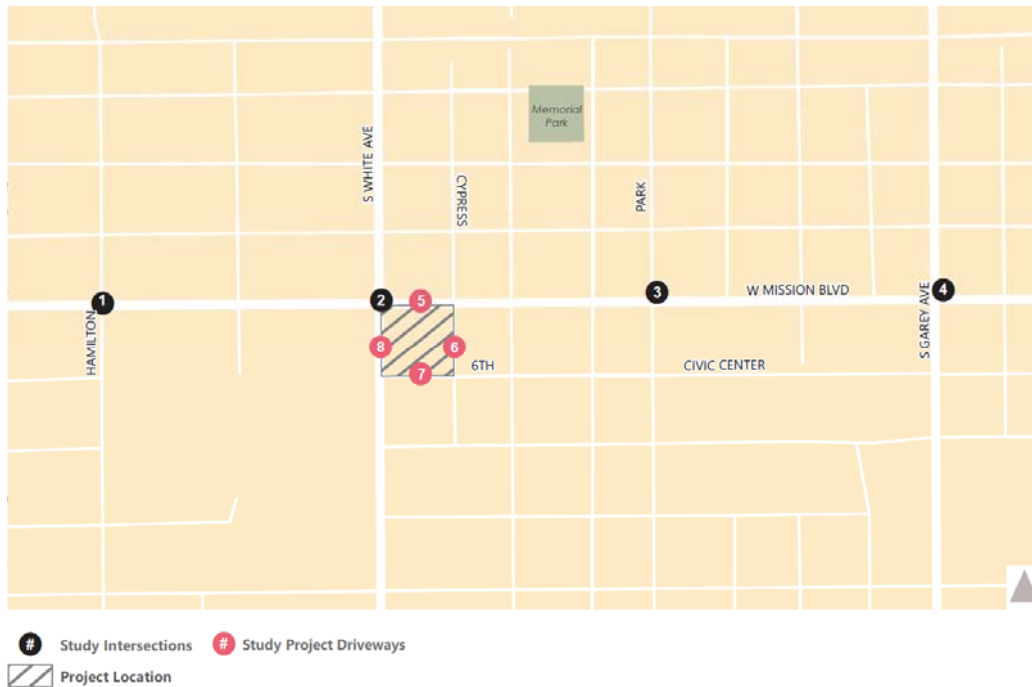


Figure 7
Trip Distribution

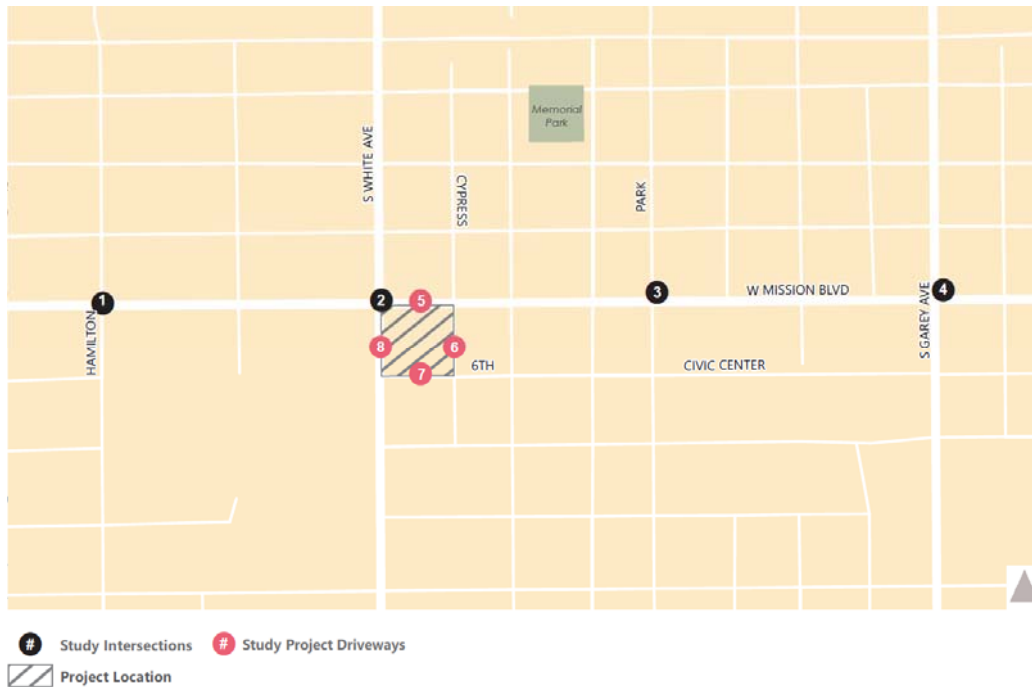


1. Hamilton Blvd/Mission Blvd	2. White Ave/Mission Blvd	3. Park Ave/Mission Blvd	4. Garey Ave/Mission Blvd
← 2 (3) ↑ 1 (2) ↓ 4 (6) → 2 (3) Mission Blvd 5 (7) → Hamilton Blvd 2 (3) ↗	↓ 8 (13) ↘ 9 (13) ↙ 0 (0) Mission Blvd 7 (11) ↗ 7 (10) ↘ White Ave	← 15 (23) → 11 (19) Mission Blvd Park Ave	← 8 (12) ↘ 2 (4) ↙ 6 (10) → 3 (5) Mission Blvd 4 (6) ↗ Garey Ave
5. Driveway/Mission Blvd	6. Cypress St/Driveway	7. Driveway/6th St	8. White/Driveway
→ 12 (16) ↗ 12 (19) Mission Blvd Driveway	↘ 15 (23) ↗ 3 (5) Driveway Cypress St	↘ 9 (12) ↗ 11 (17) 6th St Driveway	↘ 8 (13) ↗ 14 (21) ↙ 0 (0) White Driveway

Figure 8



Peak Hour Traffic Volumes Project Only



1. Hamilton Blvd/Mission Blvd	2. White Ave/Mission Blvd	3. Park Ave/Mission Blvd	4. Garey Ave/Mission Blvd
Mission Blvd Hamilton Blvd 92 (100) 130 (216) 73 (70) 44 (57) 1,062 (713) 43 (45) 56 (76) 712 (863) 62 (67) 95 (48) 191 (110) 76 (38)	Mission Blvd White Ave 118 (75) 510 (784) 98 (106) 107 (112) 863 (640) 45 (62) 62 (92) 696 (801) 97 (96) 173 (100) 742 (547) 52 (39)	Mission Blvd Park Ave 35 (67) 132 (158) 24 (47) 29 (39) 939 (694) 49 (67) 74 (42) 599 (835) 162 (41) 66 (171) 167 (157) 60 (62)	Mission Blvd Garey Ave 78 (97) 402 (617) 54 (100) 109 (93) 821 (538) 75 (150) 119 (142) 446 (710) 120 (150) 128 (151) 539 (624) 92 (129)
5. Driveway/Mission Blvd	6. Cypress St/Driveway	7. Driveway/6th St	8. White Ave/Driveway
Mission Blvd Driveway 1,015 (894) 837 (933) 9 (13) 8 (14)	Driveway Cypress St 15 (23) 6 (10) 3 (5) 0 (0) 0 (0) 6 (13)	Driveway 6th St 9 (12) 0 (0) 11 (17) 11 (29) 0 (0) 17 (15)	White Ave Driveway 652 (942) 14 (21) 953 (665) 8 (12)

Figure 9



Existing Plus Project
Peak Hour Traffic Volumes

BACKGROUND TRAFFIC

OPENING YEAR (2018) NO PROJECT CONDITIONS

Estimates of future traffic volumes in the project study area both with and without project traffic were developed. For the opening year, an annual growth factor of two percent (2.0%) per year was applied to traffic counts to develop opening year baseline conditions. A two percent growth rate was determined to be appropriate for the study area based on consultation with City Staff. Since the project is scheduled to open in year 2018, a growth factor of 1.02% was applied to traffic counts. The Opening Year (2018) No Project volumes are shown on **Figure 10**.

OPENING YEAR (2018) PLUS PROJECT CONDITIONS

Trips forecasted for the project were applied to the Opening Year No Project volumes, and are provided on **Figure 11**.



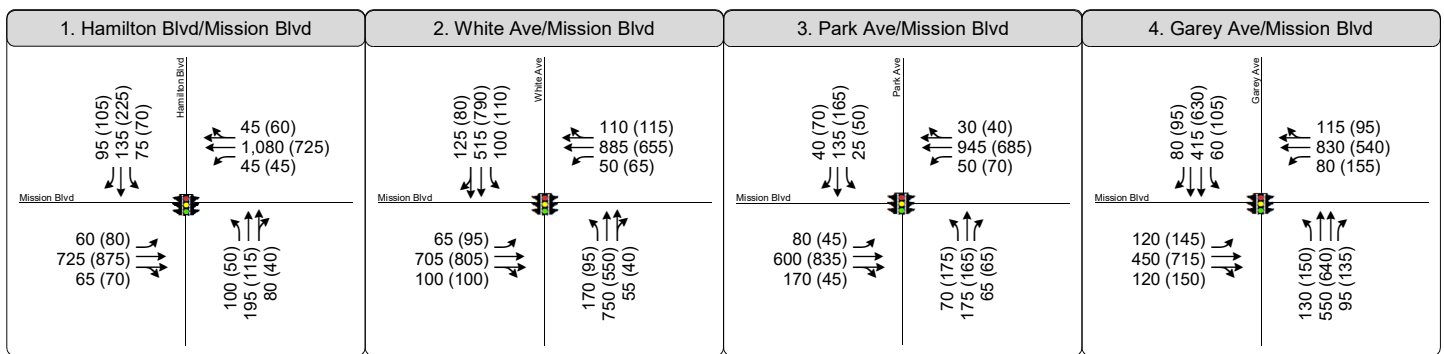
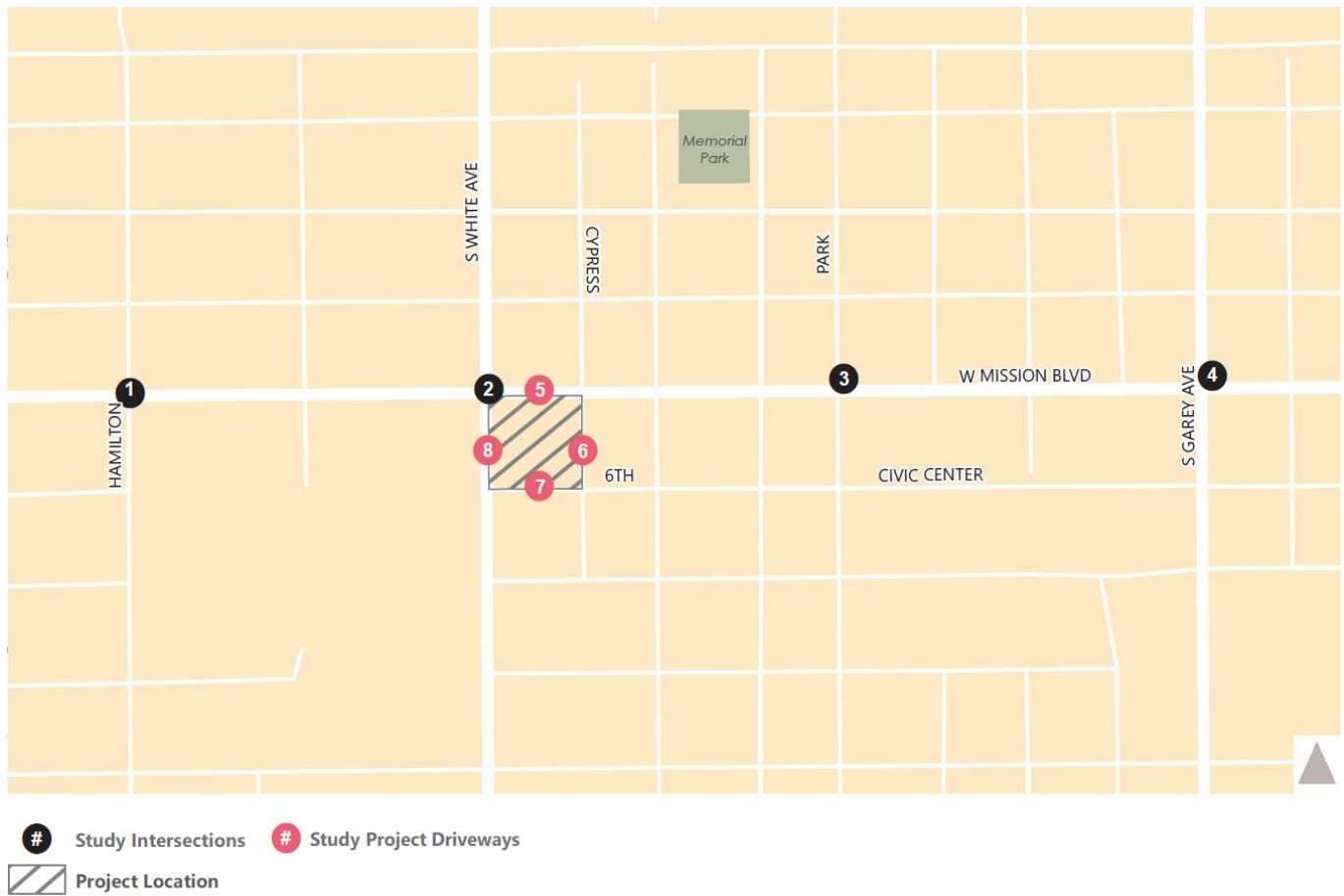
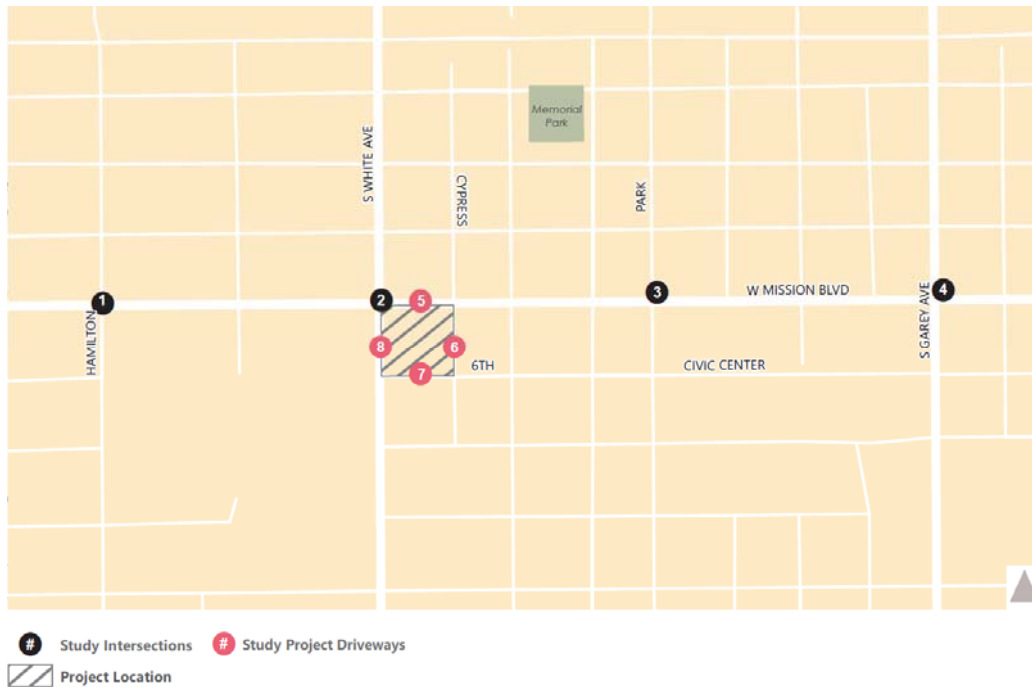


Figure 10
Peak Hour Traffic Volumes
and Lane Configurations
Opening Year (2018) No Project





1. Hamilton Blvd/Mission Blvd	2. White Ave/Mission Blvd	3. Park Ave/Mission Blvd	4. Garey Ave/Mission Blvd
Mission Blvd Hamilton Blvd 95 (105) 135 (225) 77 (73) 46 (62) 1,084 (731) 47 (48) 60 (80) 730 (882) 65 (70) 100 (50) 195 (115) 82 (43)	Mission Blvd White Ave 125 (80) 523 (803) 100 (110) 110 (115) 885 (655) 50 (65) 65 (95) 714 (818) 100 (100) 177 (106) 757 (560) 55 (40)	Mission Blvd Park Ave 40 (70) 135 (165) 25 (50) 30 (40) 960 (708) 50 (70) 80 (45) 611 (854) 170 (45) 70 (175) 175 (165) 65 (65)	Mission Blvd Garey Ave 83 (100) 415 (630) 60 (105) 115 (95) 838 (552) 80 (155) 122 (149) 456 (725) 123 (155) 134 (156) 550 (640) 95 (135)
5. Driveway/Mission Blvd	6. Cypress St/Driveway	7. Driveway/6th St	8. White Ave/Driveway
Mission Blvd Driveway 1,040 (915) 855 (955) 9 (13) 8 (14)	Cypress St Driveway 15 (23) 10 (15) 3 (5) 0 (0) 0 (0) 10 (15)	Driveway 6th St 9 (12) 0 (0) 11 (17) 15 (30) 0 (0) 20 (20)	White Ave Driveway 668 (963) 14 (21) 975 (680) 8 (12)

Figure 11



Opening Year (2018) Plus Project
Peak Hour Traffic Volumes

TRAFFIC ANALYSIS

ANALYSIS METHODOLOGY

Intersection analyses were performed using HCM 6th Edition methodology- **Table 1** describes the Level of Service criteria for intersections is summarized in the Level of Service Methodology Section.

EXISTING PLUS PROJECT ANALYSIS

Existing Plus Project traffic volumes presented on **Figure 9** were analyzed to determine the projected delay and LOS for each of the study intersections under this scenario. **Table 4** summarizes the Existing Plus Project intersection LOS. Analysis sheets are provided in **Appendix B**. As indicated in **Table 4**, all eight study intersections operate at LOS D or better during both peak hours.

**TABLE 4 - INTERSECTION LEVEL OF SERVICE
EXISTING (2017) PLUS PROJECT CONDITIONS**

Intersection	Peak Hour	Existing (2017) No Project		Existing (2017) with Project			
		Delay (seconds) ¹	LOS ²	Delay (seconds) ¹	LOS ²	Project Change ³	Significant Impact
1. Hamilton Blvd & Mission Blvd	AM	15.1	B	13.3	B	-1.8	No
	PM	12.4	B	11.8	B	-0.6	No
2. White Ave & Mission Blvd	AM	25.5	C	24.3	C	-1.2	No
	PM	20.3	C	19.4	B	-0.9	No
3. Park Ave & Mission Blvd	AM	7.9	A	7.8	A	-0.1	No
	PM	9.7	A	9.3	A	-0.4	No
4. Garey Ave & Mission Blvd	AM	34.3	C	32.8	C	-1.5	No
	PM	34.0	C	32.4	C	-1.6	No
5. Driveway & Mission Blvd	AM	-	-	11.8	B	11.8	No
	PM	-	-	12.2	B	12.2	No
6. Cypress St & Driveway	AM	-	-	8.6	A	8.6	No
	PM	-	-	8.7	A	8.7	No
7. Driveway & 6 th St	AM	-	-	8.4	A	8.4	No
	PM	-	-	8.4	A	8.4	No



8. White Ave & Driveway	AM	-	-	12.0	C	12.0	No
	PM	-	-	10.7	B	10.7	No

Notes:

1. Average Intersection Delay is based on application of Highway Capacity Manual (HCM) methodology using Synchro software.
2. LOS based on delay reported for signalized intersections.
3. Project Change is reported as the change in delay for signalized intersections. Negative delay occurs when project traffic is added to movements with lower delay.

Source: Fehr & Peers, 2018

OPENING YEAR (2018) ANALYSIS

Opening Year (2018) No Project traffic volumes presented on **Figure 10** and Opening Year (2018) Plus Project traffic volumes presented on **Figure 11** were analyzed to determine the projected delay and LOS for each of the study intersections and roadway segments under their respective scenarios. **Table 5** summarizes the Opening Year No Project and Opening Year Plus Project intersection LOS. Analysis sheets are provided in **Appendix B**. As indicated in **Table 5**, all five intersections operate at LOS D or better during both peak hours.

TABLE 5- INTERSECTION LEVEL OF SERVICE OPENING YEAR (2018) PLUS PROJECT CONDITIONS

Intersection	Peak Hour	Opening Year (2018) No Project		Opening Year (2018) with Project			
		Delay (seconds) ¹	LOS ²	Delay (seconds) ³	LOS ²	Project Change ³	Significant Impact
1. Hamilton Blvd & Mission Blvd	AM	15.9	B	15.0	B	-0.9	No
	PM	12.8	B	12.2	B	-0.6	No
2. White Ave & Mission Blvd	AM	26.9	C	25.5	C	-1.4	No
	PM	21.7	C	21.1	C	-0.6	No
3. Park Ave & Mission Blvd	AM	8.1	A	7.7	A	-0.4	No
	PM	1.0	A	9.7	A	-0.3	No
4. Garey Ave & Mission Blvd	AM	37.1	D	35.6	D	-1.5	No
	PM	36.2	D	34.3	C	-1.9	No
5. Driveway & Mission Blvd	AM	-	-	11.9	B	11.9	No
	PM	-	-	12.3	B	12.3	No
6. Cypress St & Driveway	AM	-	-	8.7	A	8.7	No
	PM	-	-	8.7	A	8.7	No



7. Driveway & 6 th St	AM	-	-	8.5	A	8.5	No
	PM	-	-	8.5	A	8.5	No
8. White Ave & Driveway	AM	-	-	12.6	B	12.6	No
	PM	-	-	10.8	B	10.8	No

Notes:

1. Average Intersection Delay is based on application of *Highway Capacity Manual* (HCM) methodology using Synchro software.
2. LOS based on delay reported for signalized intersections.
3. Project Change is reported as the change in delay for signalized intersections. Negative delay occurs when project traffic is added to movements with lower delay.

Source: Fehr & Peers, 2018



CMP ANALYSIS

No study intersection is identified as a Congestion Management Program (CMP) Facility, per the 2010 Congestion Management Program (Metro). As such, no subsequent CMP analysis was completed for this study.

The study area is also not located near a CMP Transit Corridor. As such, no subsequent CMP Transit analysis was completed for this study.



TRAFFIC IMPACTS

DETERMINATION OF SIGNIFICANT IMPACTS

Significance criteria established by the City of Pomona was used to assess the potential for significant project impacts at the intersections and roadway segments.

INTERSECTIONS

The City of Pomona has established threshold criteria to determine significant traffic impacts of a proposed project in its jurisdiction. Under the City of Pomona's TIS guidelines, a signalized intersection would be significantly impacted if it were to degrade from LOS A, B, C, or D to LOS E or F with the addition of project traffic; or if an intersection operating at LOS E or F were to have an increase in delay with the addition of project traffic. The following summarizes the impact criteria.

LOS Without Project	LOS With Project	Impact?
A, B, C, or D	A, B, C, or D	No significant impact
A, B, C, or D	E or F	Significant Impact – must be mitigated to bring intersection back to at least LOS D
E or F	E or F, with increased delay	Significant Impact – must be mitigated to bring intersection back to overall level of delay pre-project



INTERSECTION IMPACT ANALYSIS

EXISTING PLUS PROJECT INTERSECTION IMPACTS

As shown in , after applying the City of Pomona significant impact criteria, the proposed project does not result in any significant impacts at study intersections under Existing Plus Project conditions and does not require mitigation.

OPENING YEAR PLUS PROJECT INTERSECTION IMPACTS

As shown in , after applying the City of Pomona significant impact criteria, the proposed project does not result in any significant impacts at study intersections under Opening Year Plus Project conditions and does not require mitigation.

SITE ACCESS ANALYSIS

The City of Pomona Traffic Impact Study Guidelines require the following analyses for site access:

- Intersection Site Distance – All on-site intersections, project access driveways, or streets to public roadways shall provide adequate sight distance. Adequate intersection sight distance shall be determined using the City of Pomona, Public Works Department, Standard No. A-34-11.
- Driveway Length and Entrance – Primary project driveways shall have a throat of sufficient length to allow vehicles to enter the project area without causing subsequent vehicles to back out onto the city street system.
- Limit Driveway Impacts – Driveways and local streets access on arterial streets shall be limited to minimize the impacts on arterial streets. Driveways should be located to maintain a reasonable distance from an adjacent intersection and/or driveway. Whenever possible, driveways shall be consolidated with adjacent properties. For this project, special consideration was also given to the overlap of peak hour uses with Lopez Elementary to the south of the project site on White Avenue.
- Corner Clearance – A driveway should be a sufficient distance from a signalized intersection so that right-turn egress movements do not interfere with the right-turn queue at the intersection. In addition, every effort should be made to provide right-turn egress movements with sufficient distance to enter the left-turn pocket at the adjacent intersection.
- Right-Turn Lanes at Driveways – If the project right-turn peak hour volume is 50 or more vehicles, a right-turn deceleration lane shall be reviewed for appropriateness on all driveways accessing major arterial and secondary streets. The length of the right-turn lane should be sufficient to allow



a vehicle traveling at the posted speed to decelerate before entering the driveway as outlined in the Highway Capacity Manual.

- Adequacy of pedestrian facilities
- Bicycle accessibility
- Accessibility from adjacent transit stops

QUEUEING ANALYSIS

Queueing analysis was completed for the proposed project using Synchro software. **Table 6** and **Table 7** below summarize the queueing at the project driveways.

TABLE 6 – EXISTING (2017) PLUS PROJECT QUEUEING

Intersection	Movement	Storage (ft)	Queue (ft)	
			AM Peak Hour	PM Peak Hour
2. White Ave & Mission Blvd	NBL	70	170	94
	WBL	50	5	5
5. Driveway & Mission Blvd	EBR	135	0	0
	NBLR	120	5	5
6. Cypress St & Driveway	SBR	120	0	0
	NBL	120	0	0
	EBLR	120	0	0
7. Driveway & 6 th St	WBL	65	0	0
	EBR	165	0	0
	SBRL	100	5	5
8. White Ave & Driveway	NBR	120	0	0
	WBLR	100	10	10

Source: Fehr & Peers, 2018

Under Existing Plus Project conditions storage would not be exceeded for any of the driveway movements.



TABLE 7 – OPENING YEAR (2018) PLUS PROJECT QUEUEING

Intersection	Movement	Storage (ft)	Queue (ft)	
			AM Peak Hour	PM Peak Hour
2. White Ave & Mission Blvd	NBL	70	176	106
	WBL	50	5	5
5. Driveway & Mission Blvd	EBR	135	0	0
	NBLR	120	5	5
	SBR	120	0	0
6. Cypress St & Driveway	NBL	120	0	0
	EBLR	120	0	0
	WBL	65	0	0
7. Driveway & 6 th St	EBR	165	0	0
	SBLR	100	5	0
	SBTL	120	5	5
8. White Ave & Driveway	NBR	120	0	0
	WBLR	100	10	10

Source: Fehr & Peers, 2018

Under Opening Year (2018) Plus Project conditions storage would not be exceeded for any of the driveway movements.

Although queueing at the project driveways would not exceed the available storage, the northbound left-turn at White Avenue and Mission Boulevard is projected to queue past the White Avenue Driveway under the following scenarios:

- Existing AM Peak Hour (166 feet)
- Existing Plus Project AM Peak Hour (170 feet)
- Opening Year AM Peak Hour (167 feet)
- Opening Year Plus Project AM Peak Hour (176 feet)

Due to the queueing associated with the northbound left-turn at the intersection of White Avenue and Mission Boulevard it is recommended the White Avenue Driveway be limited to right-in/right-out access only. Because of the back-to-back turn pocket storage for the White Avenue intersection and the Cypress Street intersection should also be limited to right-in/right-out access. In order to restrict left-turns at the project driveways on White Avenue and Mission Avenue, it is recommended that the Project install pork-chop islands at both entrances



INTERSECTION SIGHT DISTANCE

Intersection sight distance was determined using the City of Pomona, Public Works Department, Standard Plan No. A-34-11. **Figure 12** shows the sight distance for the four project driveways. The spaces highlighted in blue indicates the area that should be kept clear of all obstructions over 30 inches high, including vegetation. The proposed project site plan includes vegetation on the sidewalk parkway that may cause visibility obstructions, especially at the driveways on White Avenue and Mission Boulevard. Vegetation over 30 inches should be reduced or removed and on-street parking should not be allowed within the areas shown in blue.

DRIVEWAY LENGTH AND ENTRANCE

Users will be able to access the project from one driveway along Mission Boulevard, one along Cypress Street, one along 6th Street, and one along White Avenue. The project provides a driveway length of approximately 120 feet at the driveways on Mission Boulevard, Cypress Street, and White Avenue. The driveway on 6th Street has a driveway length of approximately 100 feet. As shown in the queueing analysis above, queueing at the driveways will not exceed driveway length for any of the four project driveways.

The impact to the roadway network regarding driveway length and entrance is less than significant.



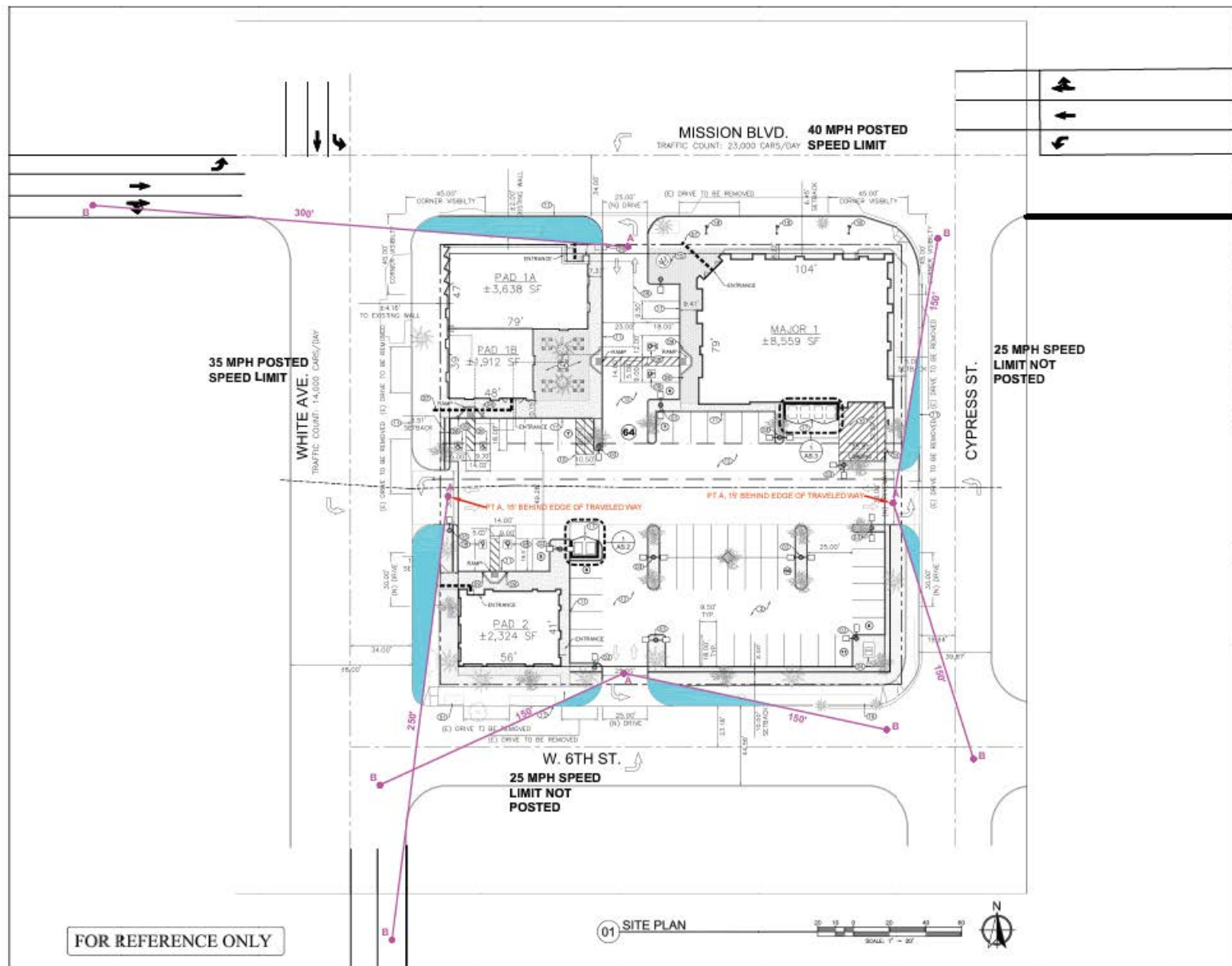


Figure 12
Intersection Sight Distance



LIMIT DRIVEWAY IMPACTS

The project is located southeast of the intersection at Mission Boulevard & White Avenue. Mission Boulevard is a Major Arterial within the Pomona roadway network, while White Avenue is a Minor Arterial. Cypress Street and 6th Street are both residential streets that run along the eastern and southern portions of the project site. Four project driveways allow access to the project site on each street that borders the project site.

The Mission Boulevard driveway is not directly aligned with any driveways on the north side of Mission Boulevard, but does not have any potential left-turn conflicts with driveways along that approach as it is a minimum of 350 feet from the closest opposite driveway.

The westerly driveway is not aligned with any driveways on the opposite side of White Avenue, but is offset from the opposing driveway to the southeast by 45 feet. Ideally, these driveways would be aligned. However, the sight distance and physical distance are sufficient such that left turns should not conflict with one another. Therefore, there is no impact considered significant at this location.

Special consideration was also given to the location of and queueing caused by the project driveway on White Avenue due to the proximity to the school to the south of the project site. According to the counts collected at the intersection of Mission Boulevard and White Avenue, the AM peak hour was found to occur from 7:15 AM to 8:15 AM, while the PM peak hour was found to occur from 5:00 PM to 6:00 PM. Therefore, only the AM peak hour would interact with traffic associated with school drop-off. During the AM peak hour, a total of 20 inbound trips and 14 outbound trips are expected to utilize the driveway off White Avenue. As queueing is not projected to exceed storage, or queue back to any adjacent intersections at the project driveway inbound trips are not expected to impact the traffic associated with school drop-off. The northbound left queue at Mission Boulevard is expected to exceed capacity, however the addition of project traffic does not create any spillback to the White Avenue and 6th Street intersection. Therefore, no impacts are expected from the interaction of the project traffic and traffic associated with school drop-off.

CORNER CLEARANCE

The project driveway on Mission Boulevard is located approximately 160 feet from the intersection of Mission Boulevard & White Avenue. This is a sufficient distance such that right-turn egress movements should not interfere with the right-turn queue at the intersection based on the queueing analysis summarized above.



RIGHT-TURN LANES AT DRIVEWAYS

The project right-turn peak hour volume is less than 50 vehicles per hour. As such, a right-turn lane at this intersection is not warranted.

ADEQUACY OF PEDESTRIAN FACILITIES

Sidewalks around the perimeter of the project site are approximately 5-10 feet, and include some parkways that act as buffers between vehicles on the street and persons walking. The project includes building access from sidewalks and has a network of internal sidewalks between buildings to improve the internal pedestrian environment. Project traffic would not negatively impact the adequacy of pedestrian facilities on- or off-site.

BICYCLE ACCESSIBILITY

There are currently no existing bicycle facilities that directly connect to the project site. There is an existing bicycle lane (Class II) along Hamilton Boulevard and bike route (Class III)/Bicycle lane (Class II) on Park Avenue, north of Mission Boulevard. According to the Pomona Active Transportation Plan (November 2012), there is a planned bicycle facility along Mission Boulevard. Project traffic would not interfere with bicycle accessibility along Mission Boulevard because the project provides adequate sight distance and sufficient queuing storage. The driveway impacts to bicycle accessibility would be less than significant. However, it is recommended that should the bicycle facility along Mission Boulevard be implemented, bicycle parking should be provided at the project site to accommodate bicyclists accessing the site via the facility on Mission Boulevard.

ACCESSIBILITY FROM ADJACENT TRANSIT STOPS

The transit stop closest to the project site is located at the southeast corner of Mission Boulevard & White Avenue. The project site is located directly in front of the stop, with sidewalks that will provide access to and from the project site to the transit stop.

SAFETY AND OPERATIONS IMPROVEMENT ANALYSIS

The City of Pomona Traffic Impact Study Guidelines require that existing roadway conditions be analyzed to determine if safety and/or operational improvements are necessary due to an increase in traffic from the project. The following improvements shall be analyzed:



- Addition of through lane(s), right turn lane(s), and left turn lane(s)
- Left and/or right turn lane pocket length (queue length)
- Bus turnouts
- Parking restrictions on adjacent streets
- Free right-turn lane
- Traffic signal coordination
- Bicycle circulation

ADDITION OF NEW LANES

The project generates 75 net AM peak hour trips and 117 net PM peak hour trips. These trips would be distributed throughout the roadway network. There are no locations where the addition of project traffic would warrant the addition of new lanes.

LEFT- AND/OR RIGHT-TURN LANE POCKET LENGTH

Based on the queueing analysis summarized above, no turning movements at the project driveways will exceed existing storage capacity. As such, providing additional queueing storage is not necessary to provide acceptable operations.

BUS TURNOUTS

There are no existing bus turnouts at the southeast or northeast corners of Mission Boulevard and White Avenue. The project would add a maximum of seven peak hour trips to the eastbound movement. The peak hour project traffic volumes at these locations would not create significant safety or operational issues. As such, a bus turnout at this location is not warranted.

PARKING RESTRICTIONS ON ADJACENT STREETS

Parking is restricted along Mission Boulevard and permitted along White Avenue, Cypress Street, and 6th Street. The project provides on-site parking for visitors. As such, the project is not anticipated to affect parking on the adjacent street where parking is allowed.

FREE RIGHT-TURN LANE

The project will have no more than 12 right turns at any project driveway during the AM or PM peak hour. Therefore, a free right-turn lane is not warranted at any of the proposed project driveways.



TRAFFIC SIGNAL COORDINATION

Traffic signal coordination can improve overall operations within the City of Pomona's roadway network. The project itself generates 75 net new AM peak hour trips and 117 net new PM peak hour trips. Coordinating all of the signals within the study area would only have a nominal impact on segment operations and is therefore, not warranted.

BICYCLE CIRCULATION

The existing and proposed bicycle network would not be significantly impacted by the traffic generated by this project.



MITIGATIONS AND RECOMMENDATIONS

PROPOSED MITIGATION MEASURES AT SIGNIFICANTLY IMPACTED INTERSECTIONS

There are no significant impacts to study locations under any scenarios based on the City of Pomona determination of traffic impacts criteria. Thus, no mitigation measures are required for the proposed project.

RECOMMENDATIONS

It is recommended that the project sponsor the improvements listed below to improve site access:

- Installation of pork-chop islands at the White Avenue and W. Mission Boulevard Driveway. Installation of these islands will restrict access allowing for only right-in and right-out access at both project driveways.
- Striping Curb for No Parking at Project Driveways to ensure adequate sight distance. The following striping would be required:
 - o Mission Avenue: 80 Feet from the Project Driveway to White Avenue
 - o White Avenue: 78 Feet from the Project Driveway to W. 6th Street.
 - o W. 6th Street: 15 Feet from the Project Driveway to the west.
 - o W. 6th Street: 55 Feet from the Project Driveway to the east.
 - o Cypress Street: 60 Feet from the Project Driveway to the north.
 - o Cypress Street: 25 Feet from the Project Driveway to the south.

TRAFFIC SIGNAL WARRANT ANALYSIS

EXISTING (2017) PLUS PROJECT

Traffic signal warrants for the Existing (2017) Plus Project scenario are summarized below. No unsignalized intersections meet the traffic signal warrant under Existing Plus Project.



**TABLE 8 -
EXISTING (2017) PLUS PROJECT SIGNAL WARRANT ANALYSIS**

	Intersection	Peak Hour	Signal Warrant Met?
5	Project Driveway & Mission Boulevard	AM	Not Met
		PM	Not Met
6	Cypress & Project Driveway	AM	Not Met
		PM	Not Met
7	Project Driveway & 6 th Street	AM	Not Met
		PM	Not Met
8	White Avenue & Project Driveway	AM	Not Met
		PM	Not Met

Source: Fehr & Peers, 2018

OPENING YEAR (2018) PLUS PROJECT

The traffic signal warrants for the Opening Year (2018) Plus Project scenario are summarized below. No unsignalized intersections meet the signal warrant analysis, and therefore were evaluated as stop controlled intersections under Opening Year (2018) Plus Project conditions.

**TABLE 9 -
OPENING YEAR (2018) PLUS PROJECT SIGNAL WARRANT ANALYSIS**

	Intersection	Peak Hour	Signal Warrant Met?
5	Project Driveway & Mission Boulevard	AM	Not Met
		PM	Not Met
6	Cypress & Project Driveway	AM	Not Met
		PM	Not Met



7	Project Driveway & 6 th Street	AM	Not Met
		PM	Not Met
8	White Avenue & Project Driveway	AM	Not Met
		PM	Not Met

Source: Fehr & Peers, 2018



APPENDIX A: TRAFFIC COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
Thu, Nov 2, 17

LOCATION: Pomona
NORTH & SOUTH: Hamilton
EAST & WEST: Mission

PROJECT #: SC1514
LOCATION #: 1
CONTROL: SIGNAL

NOTES:	AM		▲	
	PM		N	
	MD	◀ W		E ▶
	OTHER		S	
	OTHER		▼	

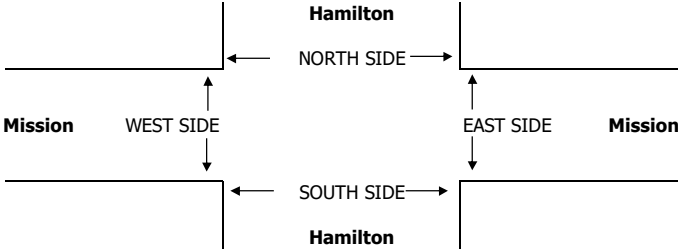
☒ Add U-Turns to Left Turns

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Hamilton			Hamilton			Mission			Mission			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	2	0	1	1	1	1	2	0	1	2	0	

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0

AM	7:00 AM	16	20	8	5	15	13	7	114	7	4	247	5	461
	7:15 AM	16	37	13	11	25	21	7	149	12	5	294	6	596
	7:30 AM	30	53	20	18	25	22	14	172	19	14	264	12	663
	7:45 AM	25	57	25	26	48	27	18	209	17	9	262	14	737
	8:00 AM	24	44	16	16	32	22	17	177	14	13	238	11	624
	8:15 AM	12	21	8	4	15	15	17	178	6	11	197	9	493
	8:30 AM	7	18	8	6	18	15	13	141	7	2	185	15	435
	8:45 AM	10	27	15	7	17	16	6	151	9	9	158	5	430
	VOLUMES	140	277	113	93	195	151	99	1,291	91	67	1,845	77	4,439
	APPROACH %	26%	52%	21%	21%	44%	34%	7%	87%	6%	3%	93%	4%	
PM	APP/DEPART	530	/	453	439	/	353	1,481	/	1,497	1,989	/	2,136	0
	BEGIN PEAK HR	7:15 AM												
	VOLUMES	95	191	74	71	130	92	56	707	62	41	1,058	43	2,620
	APPROACH %	26%	53%	21%	24%	44%	31%	7%	86%	8%	4%	93%	4%	
	PEAK HR FACTOR	0.841												
	APP/DEPART	360	/	290	293	/	233	825	/	852	1,142	/	1,245	0
	4:00 PM	12	25	12	21	47	20	30	189	27	11	228	21	643
	4:15 PM	10	20	20	13	30	13	16	233	10	13	179	16	573
	4:30 PM	11	23	11	15	40	15	26	201	26	9	195	14	586
	4:45 PM	9	18	8	7	31	20	21	213	12	7	167	29	542
	5:00 PM	6	26	4	13	56	21	28	205	9	8	184	14	574
	5:15 PM	10	31	10	22	56	26	14	199	22	12	188	10	600
	5:30 PM	14	26	12	19	61	25	20	221	19	12	175	16	620
	5:45 PM	18	27	9	13	43	28	14	231	17	10	160	15	585
	VOLUMES	90	196	86	123	364	168	169	1,692	142	82	1,476	135	4,723
	APPROACH %	24%	53%	23%	19%	56%	26%	8%	84%	7%	5%	87%	8%	
	APP/DEPART	372	/	500	655	/	588	2,003	/	1,901	1,693	/	1,734	0
	BEGIN PEAK HR	5:00 PM												
	VOLUMES	48	110	35	67	216	100	76	856	67	42	707	55	2,379
	APPROACH %	25%	57%	18%	17%	56%	26%	8%	86%	7%	5%	88%	7%	
	PEAK HR FACTOR	0.894												
	APP/DEPART	193	/	241	383	/	325	999	/	958	804	/	855	0

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0	0	0	0	0
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0	0	0	0	0
0	0	0	0	0
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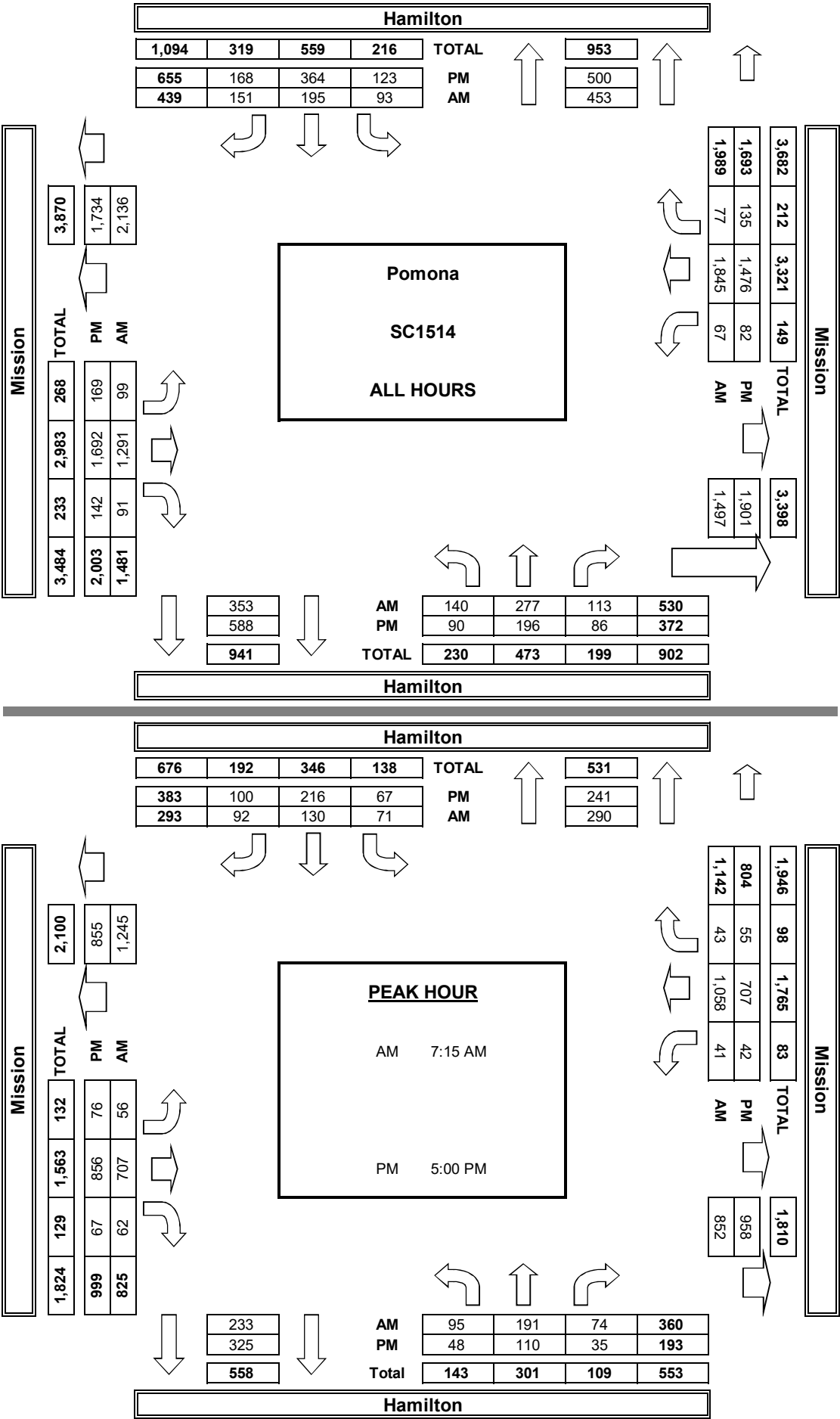
AM	7:00 AM	1	6	0	6	13
	7:15 AM	5	1	6	3	15
	7:30 AM	2	6	7	3	18
	7:45 AM	3	13	7	7	30
	8:00 AM	3	3	2	5	13
	8:15 AM	0	2	5	2	9
	8:30 AM	3	2	0	3	8
	8:45 AM	5	6	3	2	16
	TOTAL	22	39	30	31	122
PM	4:00 PM	4	7	1	5	17
	4:15 PM	7	2	4	6	19
	4:30 PM	1	8	5	11	25
	4:45 PM	1	5	5	4	15
	5:00 PM	2	5	3	2	12
	5:15 PM	6	6	1	4	17
	5:30 PM	2	4	2	7	15
	5:45 PM	1	2	1	5	9
	TOTAL	24	39	22	44	129

PEDESTRIAN + BIKE CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
1	6	0	6	13
5	1	6	3	15
2	6	7	3	18
3	13	7	7	30
3	3	2	5	13
0	2	5	2	9
3	2	0	3	8
5	6	3	2	16
22	39	30	31	122
4	7	1	5	17
7	2	4	6	19
1	8	5	11	25
1	5	5	4	15
2	5	3	2	12
6	6	1	4	17
2	4	2	7	15
1	2	1	5	9
24	39	22	44	129

PEDESTRIAN CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
1	3	0	6	10
5	0	6	3	14
2	4	7	3	16
2	13	7	6	28
2	3	2	4	11
0	2	5	2	9
2	2	0	2	6
4	4	3	0	11
18	31	30	26	105
4	4	1	5	14
4	1	1	5	11
1	5	4	11	21
1	3	2	4	10
0	5	2	2	9
5	3	0	3	11
1	3	2	6	12
1	2	1	4	8
17	26	13	40	96

BICYCLE CROSSINGS				
NS	SS	ES	WS	TOTAL
0	3	0	0	3
0	1	0	0	1
0	2	0	0	2
1	0	0	1	2
1	0	0	1	2
0	0	0	0	0
1	0	0	1	2
1	2	0	2	5
4	8	0	5	17
0	3	0	0	3
3	1	3	1	8
0	3	1	0	4
0	2	3	0	5
2	0	1	0	3
1	3	1	1	6
1	1	0	1	3
0	0	0	1	1
7	13	9	4	33

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
Thu, Nov 2, 17

LOCATION: Pomona
NORTH & SOUTH: White
EAST & WEST: Mission

PROJECT #: SC1514
LOCATION #: 2
CONTROL: SIGNAL

NOTES:

AM
PM
MD
OTHER
OTHER

▲
N
◀ W
S
▶ E
▼

☒ Add U-Turns to Left Turns

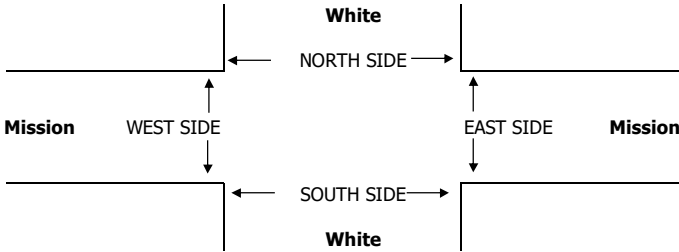
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	White			White			Mission			Mission			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	2	0	1	2	0	1	2	0	1	2	0	

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	

AM	7:00 AM	25	129	8	15	79	25	13	102	13	8	222	29	668
	7:15 AM	42	196	8	15	89	29	12	140	12	8	246	28	825
	7:30 AM	46	188	14	29	135	26	18	149	22	8	208	25	868
	7:45 AM	37	169	17	25	177	36	14	212	37	16	208	24	972
	8:00 AM	41	182	13	29	101	27	18	186	26	13	201	30	867
	8:15 AM	29	139	12	29	88	27	13	153	20	4	164	24	702
	8:30 AM	37	127	13	20	89	30	15	115	14	6	142	15	623
	8:45 AM	23	108	14	20	88	18	16	147	9	14	116	17	590
	VOLUMES	280	1,238	99	182	846	218	119	1,204	153	77	1,507	192	6,115
	APPROACH %	17%	77%	6%	15%	68%	17%	8%	82%	10%	4%	85%	11%	
PM	APP/DEPART	1,617	/	1,548	1,246	/	1,076	1,476	/	1,485	1,776	/	2,006	0
	BEGIN PEAK HR	7:15 AM												
	VOLUMES	166	735	52	98	502	118	62	687	97	45	863	107	3,532
	APPROACH %	17%	77%	5%	14%	70%	16%	7%	81%	11%	4%	85%	11%	
	PEAK HR FACTOR	0.961												
	APP/DEPART	953	/	904	718	/	644	846	/	837	1,015	/	1,147	0
	4:00 PM	20	150	15	32	163	16	26	173	30	13	200	27	865
	4:15 PM	22	149	16	22	168	15	35	203	29	16	173	30	878
	4:30 PM	15	136	8	23	172	26	30	193	21	19	175	23	841
	4:45 PM	16	132	6	21	170	27	27	182	25	14	165	33	818
	5:00 PM	27	123	12	23	177	17	18	200	23	16	196	28	860
	5:15 PM	14	133	7	30	216	16	20	205	19	16	150	24	850
	5:30 PM	27	142	10	28	191	16	21	194	23	17	153	32	854
	5:45 PM	21	139	10	25	187	26	33	189	31	13	141	28	843
	VOLUMES	162	1,104	84	204	1,444	159	210	1,539	201	124	1,353	225	6,809
	APPROACH %	12%	82%	6%	11%	80%	9%	11%	79%	10%	7%	79%	13%	
	APP/DEPART	1,350	/	1,539	1,807	/	1,769	1,950	/	1,827	1,702	/	1,674	0
	BEGIN PEAK HR	5:00 PM												
	VOLUMES	89	537	39	106	771	75	92	788	96	62	640	112	3,407
	APPROACH %	13%	81%	6%	11%	81%	8%	9%	81%	10%	8%	79%	14%	
	PEAK HR FACTOR	0.929												
	APP/DEPART	665	/	741	952	/	929	976	/	933	814	/	804	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1

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0	0	0	0	0
0	0	0	0	0
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0	0	0	0	0
0	0	0	0	0



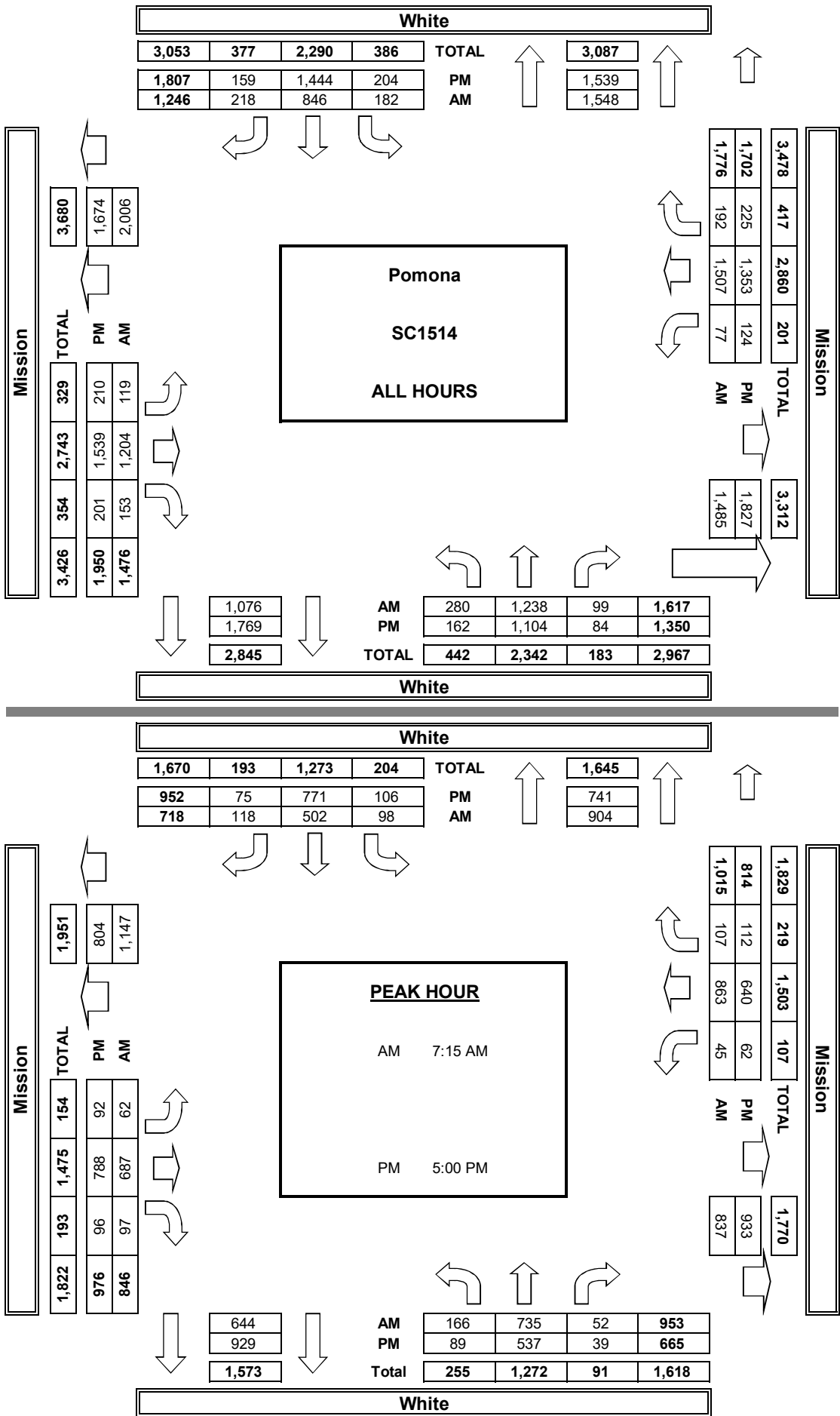
AM	7:00 AM	0	4	0	1	5
	7:15 AM	3	1	1	6	11
	7:30 AM	1	4	5	4	14
	7:45 AM	4	7	7	12	30
	8:00 AM	10	7	0	11	28
	8:15 AM	2	4	1	2	9
	8:30 AM	1	3	2	0	6
	8:45 AM	4	5	0	3	12
	TOTAL	25	35	16	39	115
	4:00 PM	2	3	0	3	8
PM	4:15 PM	6	2	3	5	16
	4:30 PM	2	8	1	4	15
	4:45 PM	9	6	0	4	19
	5:00 PM	8	4	0	1	13
	5:15 PM	3	13	0	1	17
	5:30 PM	2	9	2	4	17
	5:45 PM	9	3	0	5	17
	TOTAL	41	48	6	27	122

PEDESTRIAN + BIKE CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	4	0	1	5
3	1	1	6	11
1	4	5	4	14
4	7	7	12	30
10	7	0	11	28
2	4	1	2	9
1	3	2	0	6
4	5	0	3	12
25	35	16	39	115
2	3	0	3	8
6	2	3	5	16
2	8	1	4	15
9	6	0	4	19
8	4	0	1	13
3	13	0	1	17
2	9	2	4	17
9	3	0	5	17
41	48	6	27	122

PEDESTRIAN CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	1	0	0	1
3	1	1	5	10
0	4	4	4	12
2	4	7	11	24
9	6	0	9	24
1	2	0	2	5
0	3	2	0	5
4	4	0	3	11
19	25	14	34	92
2	2	0	3	7
4	2	3	5	14
2	3	0	4	9
6	5	0	4	15
4	4	0	1	9
2	9	0	1	12
2	7	2	3	14
8	3	0	5	16
30	35	5	26	96

BICYCLE CROSSINGS				
NS	SS	ES	WS	TOTAL
0	3	0	1	4
0	0	0	1	1
1	0	1	0	2
2	3	0	1	6
1	1	0	2	4
1	2	1	0	4
1	0	0	0	1
0	1	0	0	1
6	10	2	5	23
0	1	0	0	1
2	0	0	0	2
0	5	1	0	6
3	1	0	0	4
4	0	0	0	4
1	4	0	0	5
0	2	0	1	3
1	0	0	0	1
11	13	1	1	26

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

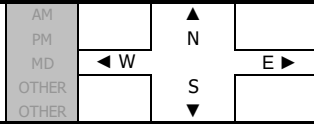
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
Thu, Nov 2, 17

LOCATION: Pomona
NORTH & SOUTH: Park
EAST & WEST: Mission

PROJECT #: SC1514
LOCATION #: 3
CONTROL: SIGNAL

NOTES:

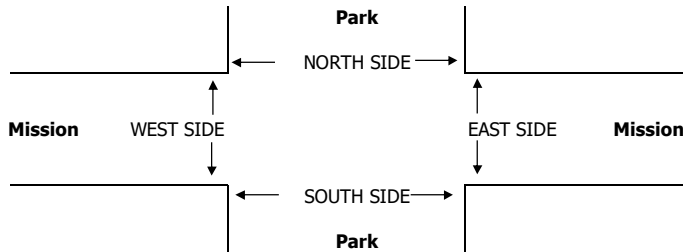


☒ Add U-Turns to Left Turns

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Park			Park			Mission			Mission			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	1	1	1	1	1	1	2	0	1	2	0	
7:00 AM	13	30	7	4	14	2	6	81	36	6	238	11	448
7:15 AM	9	25	21	4	26	5	11	122	31	11	258	9	532
7:30 AM	17	41	10	1	30	5	12	142	52	5	233	4	552
7:45 AM	23	53	11	8	44	14	27	179	35	20	223	7	644
8:00 AM	17	48	18	11	32	11	24	145	44	13	210	9	582
8:15 AM	12	40	10	5	28	4	18	136	48	13	179	3	496
8:30 AM	12	32	3	7	25	4	11	105	37	4	144	11	395
8:45 AM	21	22	10	6	14	6	22	124	16	8	111	18	378
VOLUMES	124	291	90	46	213	51	131	1,034	299	80	1,596	72	4,027
APPROACH %	25%	58%	18%	15%	69%	16%	9%	71%	20%	5%	91%	4%	
APP/DEPART	505	/	495	310	/	592	1,464	/	1,169	1,748	/	1,771	0
BEGIN PEAK HR	7:15 AM												
VOLUMES	66	167	60	24	132	35	74	588	162	49	924	29	2,310
APPROACH %	23%	57%	20%	13%	69%	18%	9%	71%	20%	5%	92%	3%	
PEAK HR FACTOR	0.842			0.723			0.855			0.901			0.897
APP/DEPART	293	/	271	191	/	343	824	/	671	1,002	/	1,025	0
4:00 PM	53	45	18	6	52	17	6	205	11	18	185	10	626
4:15 PM	44	32	17	15	41	19	15	210	8	15	148	6	570
4:30 PM	44	50	15	18	29	18	6	217	15	18	166	12	608
4:45 PM	30	30	12	8	36	13	15	184	7	16	172	11	534
5:00 PM	22	36	13	15	71	19	13	188	11	13	198	6	605
5:15 PM	17	45	6	15	40	12	15	217	10	16	167	6	566
5:30 PM	24	26	4	11	34	19	10	229	15	9	184	13	578
5:45 PM	17	40	9	4	41	8	8	207	12	2	160	6	514
VOLUMES	251	304	94	92	344	125	88	1,657	89	107	1,380	70	4,601
APPROACH %	39%	47%	14%	16%	61%	22%	5%	90%	5%	7%	89%	4%	
APP/DEPART	649	/	462	561	/	539	1,834	/	1,844	1,557	/	1,756	0
BEGIN PEAK HR	4:00 PM												
VOLUMES	171	157	62	47	158	67	42	816	41	67	671	39	2,338
APPROACH %	44%	40%	16%	17%	58%	25%	5%	91%	5%	9%	86%	5%	
PEAK HR FACTOR	0.841			0.907			0.944			0.912			0.934
APP/DEPART	390	/	238	272	/	266	899	/	925	777	/	909	0

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1



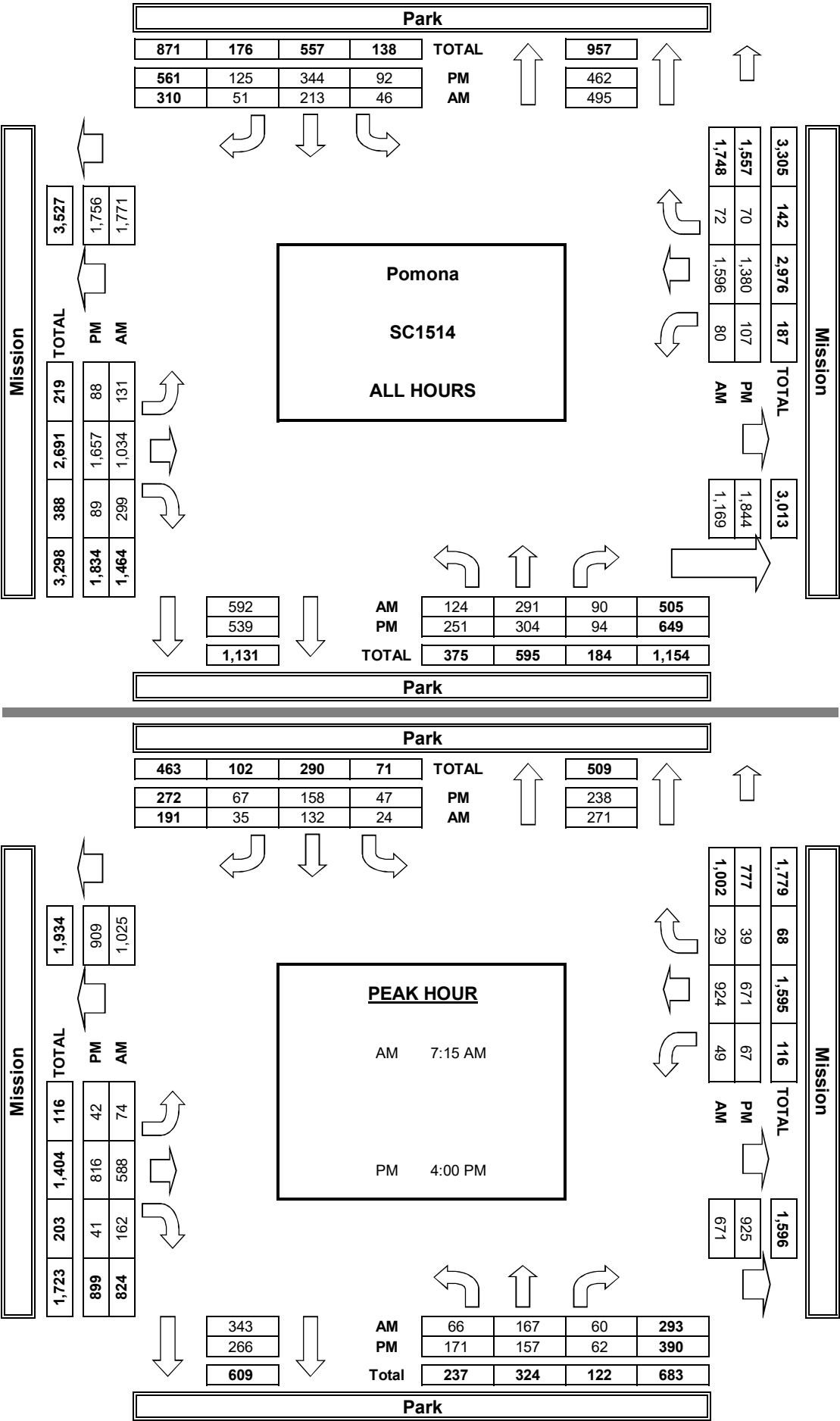
AM	7:00 AM
	7:15 AM
	7:30 AM
	7:45 AM
	8:00 AM
	8:15 AM
	8:30 AM
	8:45 AM
	TOTAL
PM	4:00 PM
	4:15 PM
	4:30 PM
	4:45 PM
	5:00 PM
	5:15 PM
	5:30 PM
	5:45 PM
	TOTAL

PEDESTRIAN + BIKE CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
2	5	2	0	9
2	2	4	1	9
0	3	1	0	4
2	9	1	7	19
2	6	4	2	14
2	6	2	4	14
0	7	3	4	14
8	5	7	0	20
18	43	24	18	103
2	1	6	3	12
4	3	3	6	16
8	4	7	3	22
12	1	5	0	18
2	5	3	4	14
1	5	2	0	8
1	6	2	1	10
4	3	3	1	11
34	28	31	18	111

PEDESTRIAN CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
1	3	1	0	5
2	2	4	1	9
0	3	1	0	4
1	6	1	3	11
2	4	4	2	12
2	5	2	4	13
0	7	3	3	13
7	2	5	0	14
15	32	21	13	81
2	1	6	3	12
2	2	3	6	13
5	2	6	2	15
7	1	4	0	12
2	3	2	4	11
1	2	2	0	5
1	4	2	1	8
2	2	1	1	6
22	17	26	17	82

BICYCLE CROSSINGS				
NS	SS	ES	WS	TOTAL
1	2	1	0	4
0	0	0	0	0
0	0	0	0	0
1	3	0	4	8
0	2	0	0	2
0	1	0	0	1
0	0	0	1	1
1	3	2	0	6
3	11	3	5	22
0	0	0	0	0
2	1	0	0	3
3	2	1	1	7
5	0	1	0	6
0	2	1	0	3
0	3	0	0	3
0	2	0	0	2
2	1	2	0	5
12	11	5	1	29

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

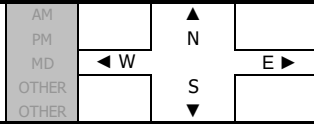
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
Thu, Nov 2, 17

LOCATION: Pomona
NORTH & SOUTH: Garey
EAST & WEST: Mission

PROJECT #: SC1514
LOCATION #: 4
CONTROL: SIGNAL

NOTES:



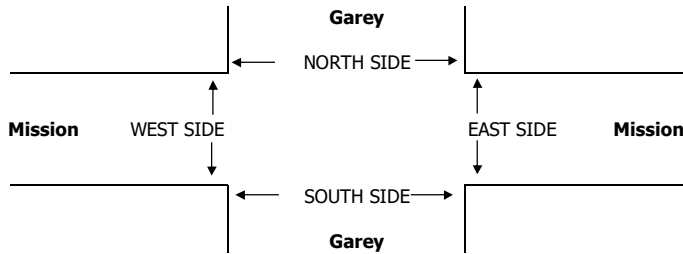
☒ Add U-Turns to Left Turns

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Garey			Garey			Mission			Mission			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	2	1	1	2	1	1	2	0	1	2	0	

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	

AM	7:00 AM	32	77	8	5	65	14	9	71	14	15	226	14	550
	7:15 AM	27	82	13	4	96	22	25	85	23	15	217	24	633
	7:30 AM	29	130	16	16	92	16	18	103	31	19	201	27	698
	7:45 AM	46	180	35	12	122	18	35	132	31	17	229	37	894
	8:00 AM	22	147	28	22	92	19	39	120	32	24	166	21	732
	8:15 AM	21	108	26	12	108	21	18	94	33	12	149	17	619
	8:30 AM	33	111	17	12	85	16	16	78	29	16	133	22	568
	8:45 AM	30	94	26	18	82	13	22	117	22	25	118	24	591
	VOLUMES	240	929	169	101	742	139	182	800	215	143	1,439	186	5,285
	APPROACH %	18%	69%	13%	10%	76%	14%	15%	67%	18%	8%	81%	11%	
PM	APP/DEPART	1,338	/	1,297	982	/	1,101	1,197	/	1,070	1,768	/	1,817	0
	BEGIN PEAK HR	7:15 AM												
	VOLUMES	124	539	92	54	402	75	117	440	117	75	813	109	2,957
	APPROACH %	16%	71%	12%	10%	76%	14%	17%	65%	17%	8%	82%	11%	
	PEAK HR FACTOR	0.723												0.827
	APP/DEPART	755	/	765	531	/	595	674	/	586	997	/	1,011	0
	4:00 PM	37	156	20	32	132	27	36	182	35	34	151	15	857
	4:15 PM	42	187	29	20	160	27	37	168	35	48	111	19	883
	4:30 PM	33	143	40	20	153	22	40	198	31	40	118	27	865
	4:45 PM	38	138	30	32	135	17	36	166	50	28	151	27	848
PM	5:00 PM	32	156	30	28	169	26	25	168	29	34	146	20	863
	5:15 PM	21	137	24	25	132	15	27	199	34	35	149	20	818
	5:30 PM	27	146	32	18	151	22	29	196	20	36	125	17	819
	5:45 PM	28	142	28	20	131	21	30	159	28	34	124	24	769
	VOLUMES	258	1,205	233	195	1,163	177	260	1,436	262	289	1,075	169	6,722
	APPROACH %	15%	71%	14%	13%	76%	12%	13%	73%	13%	19%	70%	11%	
	APP/DEPART	1,696	/	1,635	1,535	/	1,714	1,958	/	1,863	1,533	/	1,510	0
	BEGIN PEAK HR	4:15 PM												
	VOLUMES	145	624	129	100	617	92	138	700	145	150	526	93	3,459
	APPROACH %	16%	69%	14%	12%	76%	11%	14%	71%	15%	20%	68%	12%	
	PEAK HR FACTOR	0.870												0.979
	APP/DEPART	898	/	855	809	/	912	983	/	929	769	/	763	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
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0	0	0	0	0
0	1	0	0	1
0	1	0	0	1



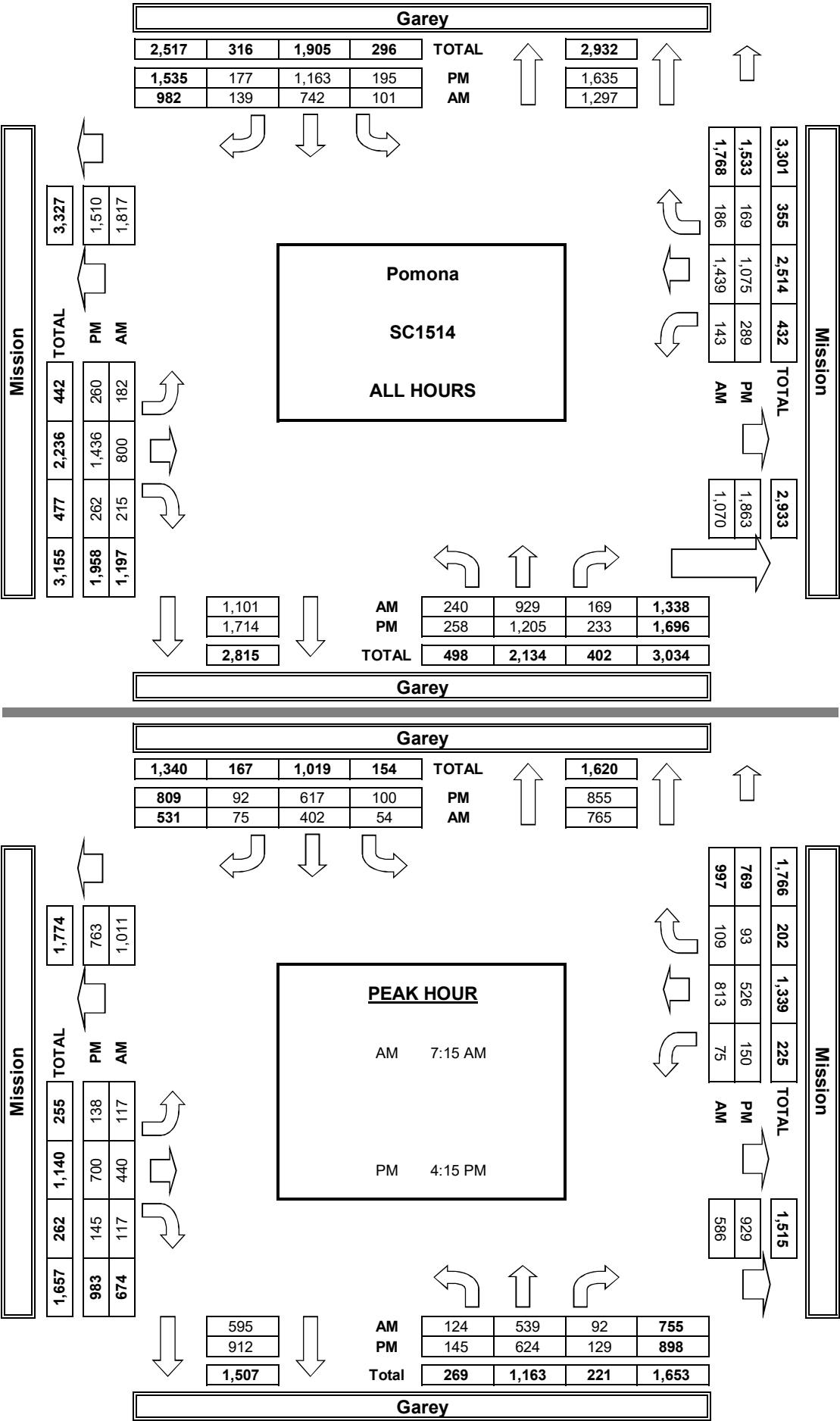
AM	7:00 AM	7	2	2	8	19
	7:15 AM	6	1	3	2	12
	7:30 AM	2	5	10	6	23
	7:45 AM	0	11	2	9	22
	8:00 AM	2	7	6	10	25
	8:15 AM	4	3	5	6	18
	8:30 AM	5	3	5	4	17
	8:45 AM	11	6	6	4	27
	TOTAL	37	38	39	49	163
PM	4:00 PM	9	1	3	4	17
	4:15 PM	6	4	5	7	22
	4:30 PM	13	7	8	5	33
	4:45 PM	9	5	2	7	23
	5:00 PM	0	2	6	4	12
	5:15 PM	5	5	6	9	25
	5:30 PM	2	2	2	3	9
	5:45 PM	6	4	5	6	21
	TOTAL	50	30	37	45	162

PEDESTRIAN + BIKE CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
7	2	2	8	19
6	1	3	2	12
2	5	10	6	23
0	11	2	9	22
2	7	6	10	25
4	3	5	6	18
5	3	5	4	17
11	6	6	4	27
37	38	39	49	163
9	1	3	4	17
6	4	5	7	22
13	7	8	5	33
9	5	2	7	23
0	2	6	4	12
5	5	6	9	25
2	2	2	3	9
6	4	5	6	21
50	30	37	45	162

PEDESTRIAN CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
7	2	2	8	19
5	1	1	2	9
1	2	6	5	14
0	10	2	9	21
1	5	5	10	21
4	1	2	5	12
5	3	5	4	17
9	6	4	4	23
32	30	27	47	136
7	1	2	4	14
4	2	3	7	16
12	7	7	4	30
4	5	2	7	18
0	2	5	2	9
5	1	4	7	17
0	2	2	1	5
4	3	4	5	16
36	23	29	37	125

BICYCLE CROSSINGS				
NS	SS	ES	WS	TOTAL
0	0	0	0	0
1	0	2	0	3
1	3	4	1	9
0	1	0	0	1
1	2	1	0	4
0	2	3	1	6
0	0	0	0	0
2	0	2	0	4
5	8	12	2	27
2	0	1	0	3
2	2	2	0	6
1	0	1	1	3
5	0	0	0	5
0	0	1	2	3
0	4	2	2	8
2	0	0	2	4
2	1	1	1	5
14	7	8	8	37

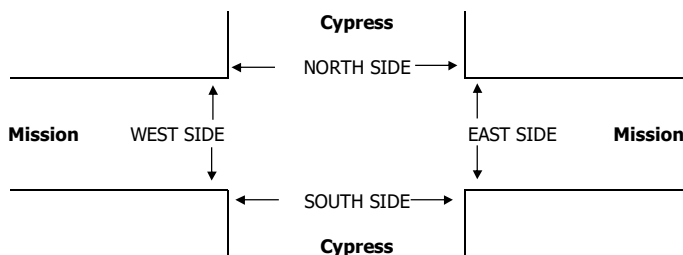
AimTD LLC
TURNING MOVEMENT COUNTS



 Add U-Turns to Left Turns

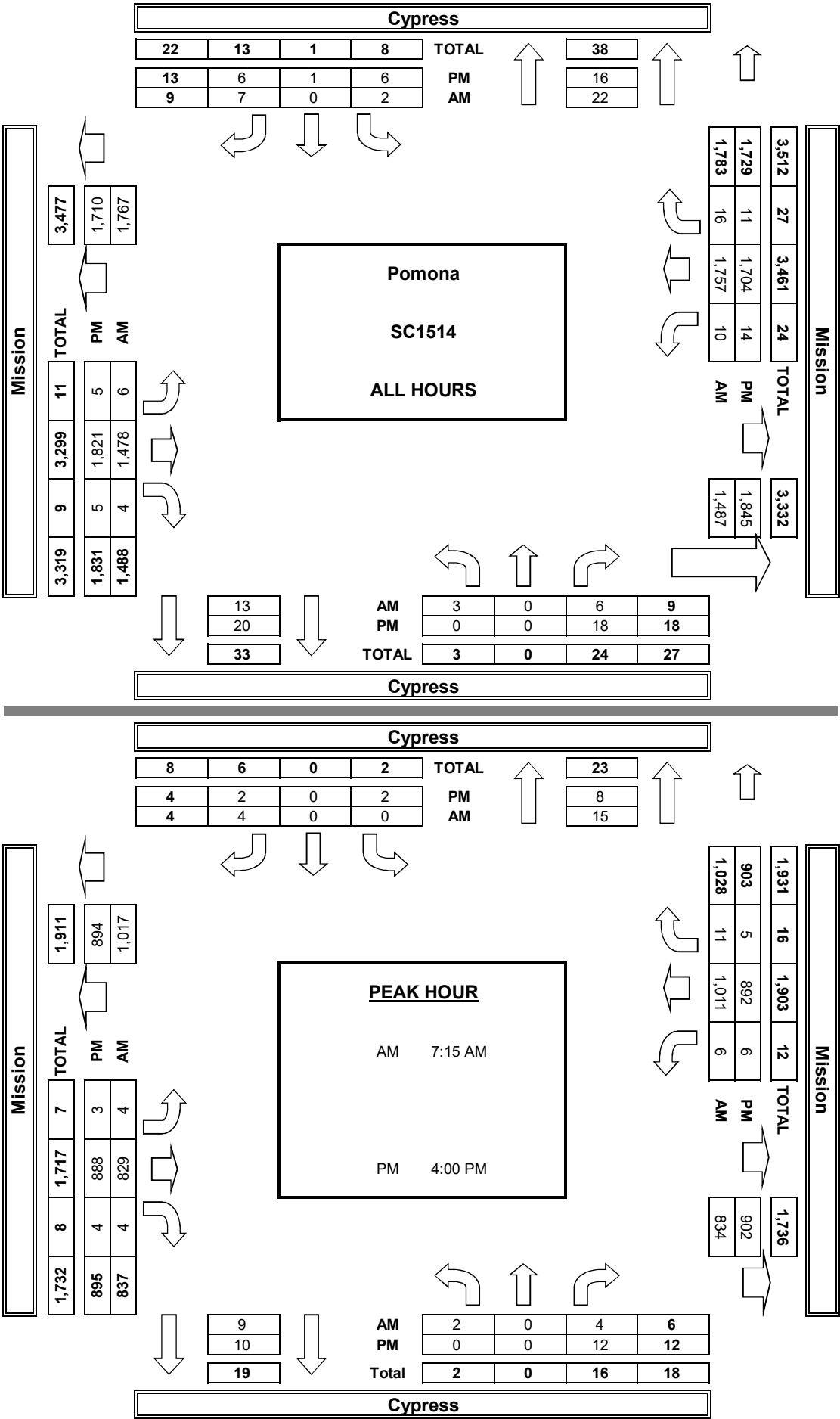
U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1

[illegible]

BICYCLE CROSSINGS				
NS	SS	ES	WS	TOTAL
0	2	0	0	2
0	0	0	0	0
0	0	0	0	0
2	2	0	0	4
0	1	0	0	1
0	3	0	0	3
1	0	0	0	1
0	1	0	0	1
3	9	0	0	12
1	1	1	0	3
2	0	0	0	2
1	5	0	0	6
3	1	0	0	4
3	0	0	0	3
1	4	0	0	5
0	2	0	0	2
1	1	0	0	2
12	14	1	0	27

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

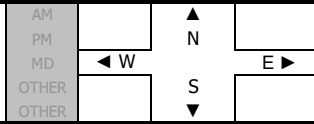
T816

DATE:
Thu, Nov 2, 17

LOCATION:
NORTH & SOUTH: Pomona
EAST & WEST: Cypress
6th

PROJECT #: SC1514
LOCATION #: 6
CONTROL: STOP N/S

NOTES:



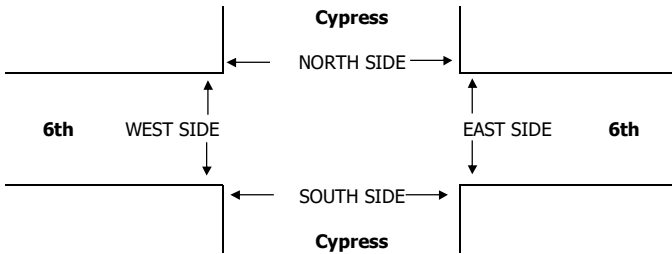
☒ Add U-Turns to Left Turns

	NORTHBOUND Cypress			SOUTHBOUND Cypress			EASTBOUND 6th			WESTBOUND 6th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	0	0	1	0	0	1	0	0	1	0	

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	

AM	7:00 AM	0	1	0	0	0	1	0	0	1	1	0	5
	7:15 AM	0	0	0	1	0	0	1	0	0	0	0	3
	7:30 AM	0	2	2	1	0	0	0	4	0	2	0	11
	7:45 AM	0	1	1	0	0	2	0	3	0	4	7	18
	8:00 AM	1	1	0	0	1	0	0	3	0	0	3	9
	8:15 AM	0	0	0	0	1	1	0	1	0	0	1	5
	8:30 AM	0	0	0	0	1	0	0	1	1	0	1	5
	8:45 AM	1	0	2	0	0	1	0	2	0	0	1	7
	VOLUMES	2	5	5	2	3	5	1	15	1	6	15	63
	APPROACH %	17%	42%	42%	20%	30%	50%	6%	88%	6%	25%	63%	13%
PM	4:00 PM	0	0	1	0	2	0	1	4	2	0	3	14
	4:15 PM	0	1	1	1	0	0	1	5	2	0	5	16
	4:30 PM	0	1	2	1	2	2	0	6	1	2	2	20
	4:45 PM	0	1	2	0	0	0	1	6	0	1	3	19
	5:00 PM	0	2	0	0	0	0	1	1	0	0	1	6
	5:15 PM	1	1	0	1	1	0	1	3	0	0	4	12
	5:30 PM	0	0	1	1	1	0	1	4	0	2	2	12
	5:45 PM	2	1	1	0	1	0	0	2	0	1	4	12
	VOLUMES	3	7	8	4	7	2	6	31	5	6	24	111
	APPROACH %	17%	39%	44%	31%	54%	15%	14%	74%	12%	16%	63%	21%
	4:00 PM	0	3	6	2	4	2	3	21	5	3	13	7
	APPROACH %	0%	33%	67%	25%	50%	25%	10%	72%	17%	13%	57%	30%
	PEAK HR FACTOR	0.500	0.750	0.400	0.750	0.400	0.906	0.688	0.639	0.597	0.639	0.639	0.863
	APP/DEPART	8	/	5	6	/	5	11	/	16	18	/	17
	BEGIN PEAK HR	12	/	9	10	/	9	17	/	23	24	/	22
	VOLUMES	1	4	3	1	2	3	0	11	0	4	13	1
	APPROACH %	13%	50%	38%	17%	33%	50%	0%	100%	0%	22%	72%	6%
	PEAK HR FACTOR	0.500	0.750	0.400	0.750	0.400	0.906	0.688	0.639	0.597	0.639	0.639	0.863
	APP/DEPART	8	/	5	6	/	5	11	/	16	18	/	17
	BEGIN PEAK HR	12	/	9	10	/	9	17	/	23	24	/	22
	VOLUMES	1	4	3	1	2	3	0	11	0	4	13	1

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
0	0	1	0	1
0	0	1	0	1
0	0	0	0	0
0	0	0	1	1
0	0	3	1	4



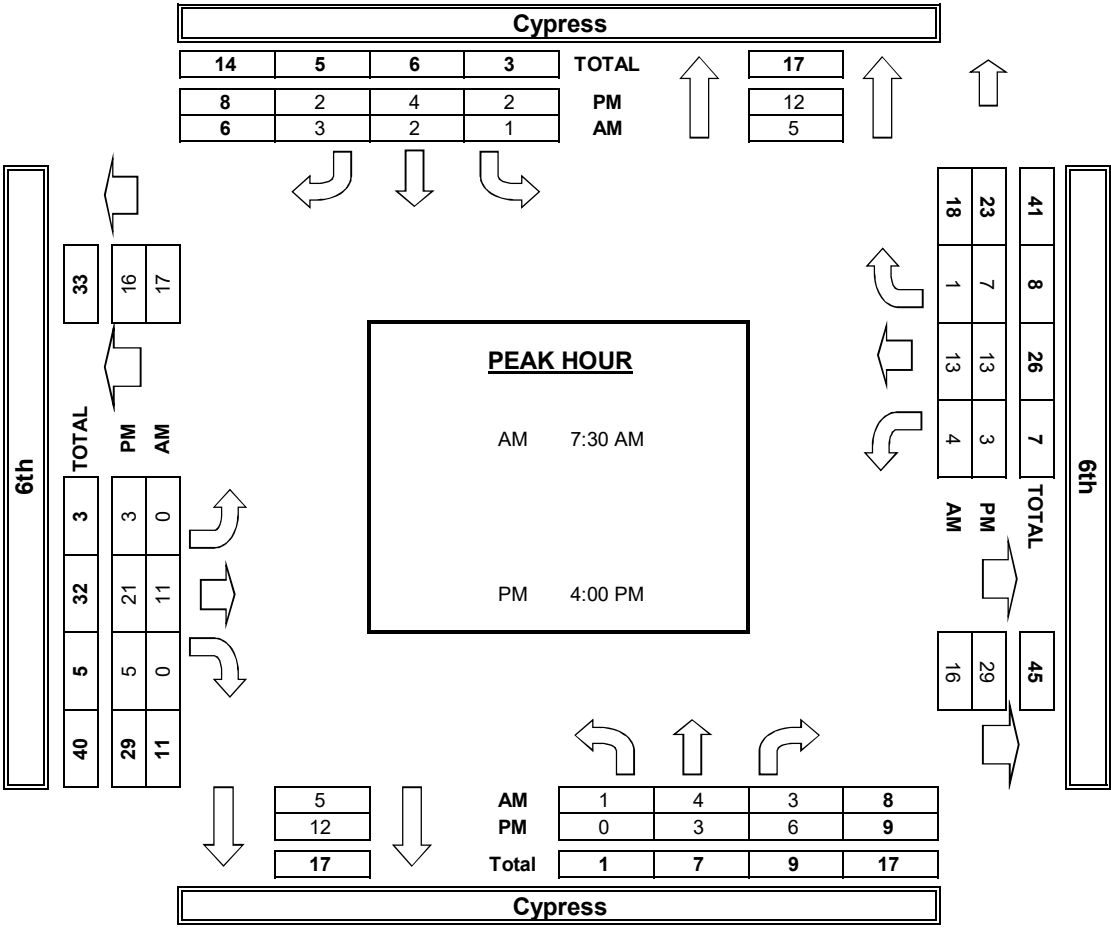
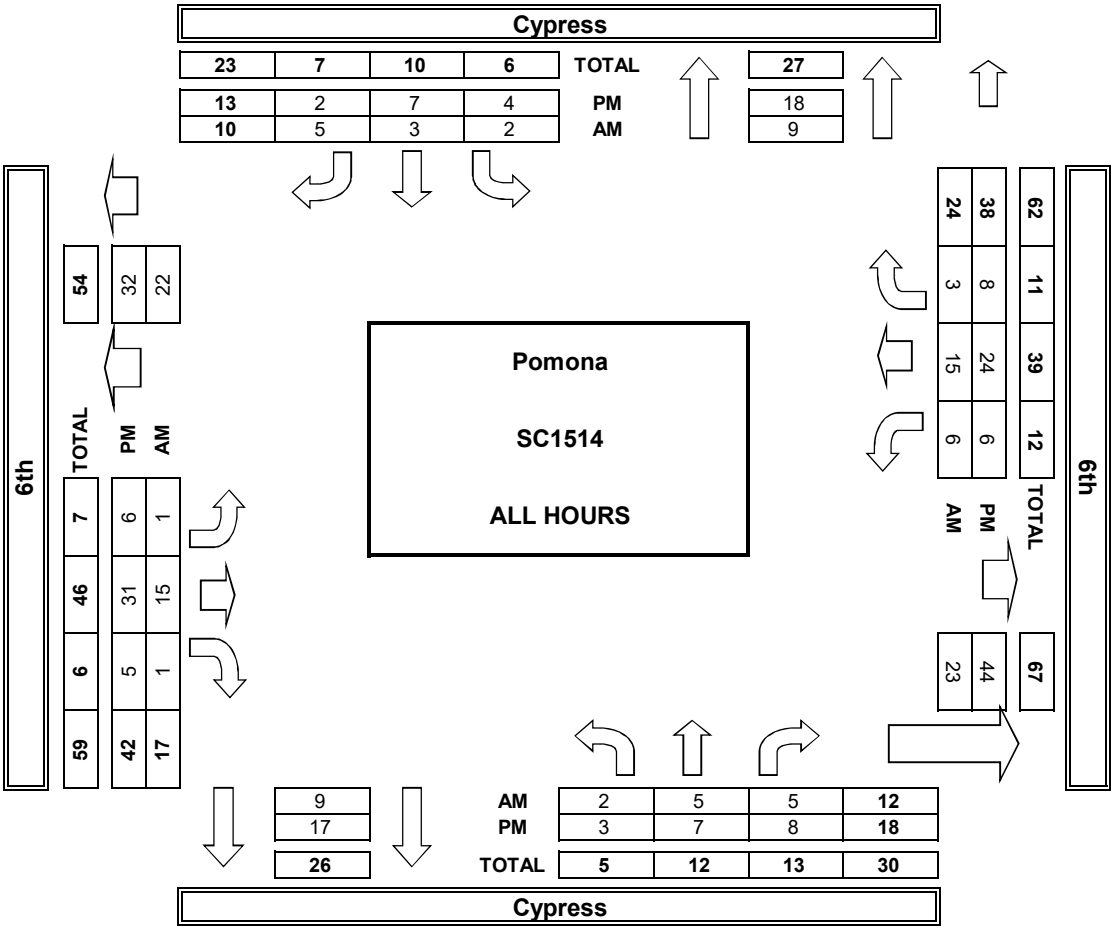
AM	7:00 AM	0	0	0	1	1
	7:15 AM	4	0	0	0	4
	7:30 AM	0	0	0	0	0
	7:45 AM	3	0	1	0	4
	8:00 AM	3	0	0	0	3
	8:15 AM	3	1	0	1	5
	8:30 AM	0	1	0	1	2
	8:45 AM	0	0	0	0	0
	TOTAL	13	2	1	3	19
	TOTAL	13	2	1	3	19
PM	4:00 PM	1	0	0	0	1
	4:15 PM	0	0	0	0	0
	4:30 PM	0	0	0	0	0
	4:45 PM	1	1	1	0	3
	5:00 PM	1	0	0	0	1
	5:15 PM	0	1	0	0	1
	5:30 PM	2	0	0	2	4
	5:45 PM	3	0	1	0	4
	TOTAL	8	2	2	2	14
	TOTAL	8	2	2	2	14

PEDESTRIAN + BIKE CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	0	0	1	1
4	0	0	0	4
0	0	0	0	0
3	0	1	0	4
3	0	0	0	3
3	1	0	1	5
0	1	0	1	2
0	0	0	0	0
13	2	1	3	19
1	0	0	0	1
0	0	0	0	0
0	0	0	0	0
1	1	1	0	3
1	0	0	0	1
0	1	0	0	1
2	0	0	2	4
3	0	1	0	4
8	2	2	2	14

PEDESTRIAN CROSSINGS				
N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
0	0	0	1	1
4	0	0	0	4
0	0	0	0	0
3	0	1	0	4
2	0	0	0	2
3	1	0	1	5
0	0	0	1	1
0	0	0	0	0
12	1	1	3	17
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	1	1	0	3
1	0	0	0	1
0	1	0	0	1
2	0	0	2	4
3	0	1	0	4
7	2	2	2	13

BICYCLE CROSSINGS				
NS	SS	ES	WS	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	0	0	0	1
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
1	1	0	0	2
1	0	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	0	0	0	1

AimTD LLC
TURNING MOVEMENT COUNTS



APPENDIX B: LOS WORKSHEETS



HCM 6th Signalized Intersection Summary

1: Hamilton Blvd & Mission Blvd

Existing AM Peak Hour
888 West Mission

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	707	62	41	1058	43	95	191	74	71	130	92
Future Volume (veh/h)	56	707	62	41	1058	43	95	191	74	71	130	92
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.96	1.00		0.97	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	63	794	59	46	1189	42	107	215	10	80	146	13
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	220	1634	121	325	1707	60	132	640	30	98	309	248
Arrive On Green	0.52	0.52	0.52	0.52	0.52	0.52	0.08	0.20	0.20	0.06	0.17	0.17
Sat Flow, veh/h	405	3170	236	578	3311	117	1594	3271	151	1594	1772	1424
Grp Volume(v), veh/h	63	421	432	46	604	627	107	110	115	80	146	13
Grp Sat Flow(s),veh/h/ln	405	1683	1723	578	1683	1745	1594	1683	1738	1594	1772	1424
Q Serve(g_s), s	8.3	9.6	9.6	3.3	16.1	16.1	3.9	3.3	3.4	2.9	4.4	0.5
Cycle Q Clear(g_c), s	24.4	9.6	9.6	12.9	16.1	16.1	3.9	3.3	3.4	2.9	4.4	0.5
Prop In Lane	1.00		0.14	1.00		0.07	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	220	868	888	325	868	900	132	329	340	98	309	248
V/C Ratio(X)	0.29	0.49	0.49	0.14	0.70	0.70	0.81	0.33	0.34	0.81	0.47	0.05
Avail Cap(c_a), veh/h	256	1020	1043	377	1020	1057	201	532	550	180	537	431
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.1	9.3	9.3	13.5	10.9	10.9	26.8	20.6	20.6	27.6	22.1	20.4
Incr Delay (d2), s/veh	0.7	0.4	0.4	0.2	1.7	1.6	13.2	0.6	0.6	14.7	1.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	2.8	2.9	0.4	5.0	5.2	1.9	1.3	1.3	1.4	1.8	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.8	9.7	9.7	13.7	12.6	12.5	40.0	21.2	21.2	42.3	23.2	20.5
LnGrp LOS	C	A	A	B	B	B	D	C	C	D	C	C
Approach Vol, veh/h	916			1277			332			239		
Approach Delay, s/veh	10.5			12.6			27.2			29.4		
Approach LOS	B			B			C			C		
Timer - Assigned Phs	2		3	4		6		7	8			
Phs Duration (G+Y+Rc), s	35.1		8.2	16.1		35.1		9.4	14.9			
Change Period (Y+Rc), s	4.5		4.5	4.5		4.5		4.5	4.5			
Max Green Setting (Gmax), s	36.0		6.7	18.8		36.0		7.5	18.0			
Max Q Clear Time (g_c+I1), s	26.4		4.9	5.4		18.1		5.9	6.4			
Green Ext Time (p_c), s	4.2		0.0	0.9		8.3		0.0	0.5			
Intersection Summary												
HCM 6th Ctrl Delay	15.1											
HCM 6th LOS	B											

HCM 6th Signalized Intersection Summary

2: White Ave & Mission Blvd

Existing AM Peak Hour
888 West Mission



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	687	97	45	863	107	166	735	52	98	502	118
Future Volume (veh/h)	62	687	97	45	863	107	166	735	52	98	502	118
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	1.00		0.98	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	68	755	86	49	948	99	182	808	47	108	552	93
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	172	1180	134	226	1190	124	219	998	58	133	729	122
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.14	0.31	0.31	0.08	0.25	0.25
Sat Flow, veh/h	482	3037	346	584	3061	320	1594	3228	188	1594	2860	480
Grp Volume(v), veh/h	68	418	423	49	521	526	182	421	434	108	324	321
Grp Sat Flow(s),veh/h/ln	482	1683	1699	584	1683	1698	1594	1683	1733	1594	1683	1657
Q Serve(g_s), s	7.1	12.5	12.5	4.6	16.9	16.9	6.9	14.2	14.2	4.1	11.0	11.1
Cycle Q Clear(g_c), s	24.0	12.5	12.5	17.1	16.9	16.9	6.9	14.2	14.2	4.1	11.0	11.1
Prop In Lane	1.00		0.20	1.00		0.19	1.00		0.11	1.00		0.29
Lane Grp Cap(c), veh/h	172	654	660	226	654	660	219	520	535	133	429	422
V/C Ratio(X)	0.40	0.64	0.64	0.22	0.80	0.80	0.83	0.81	0.81	0.81	0.75	0.76
Avail Cap(c_a), veh/h	172	654	660	226	654	660	245	573	589	168	491	483
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.0	15.4	15.4	22.3	16.7	16.7	25.9	19.7	19.7	27.8	21.2	21.3
Incr Delay (d2), s/veh	1.5	2.1	2.1	0.5	6.8	6.8	19.0	7.9	7.7	20.6	5.7	6.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	4.5	4.5	0.6	6.8	6.9	3.6	6.1	6.2	2.2	4.6	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.5	17.4	17.4	22.8	23.5	23.5	44.9	27.6	27.4	48.4	27.0	27.3
LnGrp LOS	C	B	B	C	C	C	D	C	C	D	C	C
Approach Vol, veh/h	909		1096				1037			753		
Approach Delay, s/veh	18.3		23.5				30.5			30.2		
Approach LOS	B		C				C			C		
Timer - Assigned Phs	2		3		4		6		7		8	
Phs Duration (G+Y+Rc), s	28.5		9.7		23.6		28.5		13.0		20.2	
Change Period (Y+Rc), s	4.5		4.5		4.5		4.5		4.5		4.5	
Max Green Setting (Gmax), s	24.0		6.5		21.0		24.0		9.5		18.0	
Max Q Clear Time (g_c+I1), s	26.0		6.1		16.2		19.1		8.9		13.1	
Green Ext Time (p_c), s	0.0		0.0		2.2		2.9		0.0		1.7	
Intersection Summary												
HCM 6th Ctrl Delay			25.5									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary

3: Park Ave & Mission Blvd

Existing AM Peak Hour
888 West Mission



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	588	162	49	924	29	66	167	60	24	132	35
Future Volume (veh/h)	74	588	162	49	924	29	66	167	60	24	132	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	0.99		0.99	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	82	653	124	54	1027	28	73	186	27	27	147	16
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	341	1480	281	427	1764	48	370	417	349	341	417	344
Arrive On Green	0.53	0.53	0.53	0.53	0.53	0.53	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	477	2805	532	619	3344	91	1085	1772	1482	1037	1772	1459
Grp Volume(v), veh/h	82	391	386	54	517	538	73	186	27	27	147	16
Grp Sat Flow(s),veh/h/ln	477	1683	1654	619	1683	1751	1085	1772	1482	1037	1772	1459
Q Serve(g_s), s	5.4	5.4	5.5	2.2	8.0	8.0	2.3	3.4	0.5	0.9	2.6	0.3
Cycle Q Clear(g_c), s	13.3	5.4	5.5	7.7	8.0	8.0	4.9	3.4	0.5	4.3	2.6	0.3
Prop In Lane	1.00		0.32	1.00		0.05	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	341	888	873	427	888	924	370	417	349	341	417	344
V/C Ratio(X)	0.24	0.44	0.44	0.13	0.58	0.58	0.20	0.45	0.08	0.08	0.35	0.05
Avail Cap(c_a), veh/h	441	1241	1219	557	1241	1291	628	839	702	588	839	691
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.7	5.5	5.5	7.9	6.1	6.1	14.2	12.4	11.3	14.2	12.1	11.2
Incr Delay (d2), s/veh	0.4	0.3	0.4	0.1	0.6	0.6	0.3	0.7	0.1	0.1	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.0	1.0	0.2	1.6	1.6	0.5	1.1	0.1	0.2	0.9	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.0	5.9	5.9	8.0	6.7	6.7	14.4	13.2	11.4	14.3	12.6	11.3
LnGrp LOS	B	A	A	A	A	A	B	B	B	B	B	B
Approach Vol, veh/h	859			1109			286			190		
Approach Delay, s/veh	6.4			6.8			13.3			12.7		
Approach LOS	A			A			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	24.5			13.4			24.5			13.4		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	28.0			18.0			28.0			18.0		
Max Q Clear Time (g_c+I1), s	15.3			6.9			10.0			6.3		
Green Ext Time (p_c), s	4.7			1.0			7.0			0.6		

Intersection Summary

HCM 6th Ctrl Delay	7.9
HCM 6th LOS	A

HCM 6th Signalized Intersection Summary

4: Garey Ave & Mission Blvd

Existing AM Peak Hour
888 West Mission



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	440	117	75	813	109	124	539	92	54	402	75
Future Volume (veh/h)	117	440	117	75	813	109	124	539	92	54	402	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	141	530	105	90	980	113	149	649	0	65	484	0
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	170	1138	224	112	1125	130	179	854	381	80	645	288
Arrive On Green	0.11	0.41	0.41	0.07	0.37	0.37	0.11	0.25	0.00	0.05	0.19	0.00
Sat Flow, veh/h	1594	2793	551	1594	3030	349	1594	3367	1502	1594	3367	1502
Grp Volume(v), veh/h	141	318	317	90	544	549	149	649	0	65	484	0
Grp Sat Flow(s),veh/h/ln	1594	1683	1660	1594	1683	1696	1594	1683	1502	1594	1683	1502
Q Serve(g_s), s	7.2	11.4	11.5	4.6	24.8	24.8	7.5	14.7	0.0	3.3	11.2	0.0
Cycle Q Clear(g_c), s	7.2	11.4	11.5	4.6	24.8	24.8	7.5	14.7	0.0	3.3	11.2	0.0
Prop In Lane	1.00		0.33	1.00		0.21	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	170	686	677	112	625	630	179	854	381	80	645	288
V/C Ratio(X)	0.83	0.46	0.47	0.80	0.87	0.87	0.83	0.76	0.00	0.81	0.75	0.00
Avail Cap(c_a), veh/h	184	686	677	216	692	697	203	902	402	126	739	330
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	36.1	17.9	17.9	37.8	24.1	24.1	35.8	28.5	0.0	38.8	31.5	0.0
Incr Delay (d2), s/veh	24.7	0.5	0.5	12.3	10.9	10.9	22.4	3.6	0.0	19.4	3.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	4.2	4.2	2.1	11.0	11.1	3.9	6.0	0.0	1.7	4.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.8	18.3	18.4	50.1	35.0	35.0	58.2	32.1	0.0	58.2	35.2	0.0
LnGrp LOS	E	B	B	D	C	C	E	C	A	E	D	A
Approach Vol, veh/h	776			1183			798			549		
Approach Delay, s/veh	26.1			36.1			37.0			37.9		
Approach LOS	C			D			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	38.1	8.6	25.4	13.3	35.1	13.8	20.3					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	32.2	6.5	22.1	9.5	33.9	10.5	18.1					
Max Q Clear Time (g_c+10), s	13.5	5.3	16.7	9.2	26.8	9.5	13.2					
Green Ext Time (p_c), s	0.1	3.7	0.0	1.9	0.0	3.8	0.0	1.3				

Intersection Summary

HCM 6th Ctrl Delay	34.3
HCM 6th LOS	C

Queues

2: White Ave & Mission Blvd

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	68	862	49	1066	182	865	108	682
v/c Ratio	0.64	0.71	0.41	0.87	0.77	0.74	0.66	0.77
Control Delay	50.0	20.4	27.6	28.2	51.6	23.7	50.4	26.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Total Delay	50.0	20.4	27.6	28.2	51.6	24.0	50.4	26.5
Queue Length 50th (ft)	22	144	14	196	71	160	42	120
Queue Length 95th (ft)	#84	205	#48	#312	#166	#235	#113	177
Internal Link Dist (ft)		1234		263		242		331
Turn Bay Length (ft)	75		150		65		75	
Base Capacity (vph)	111	1279	126	1282	242	1174	165	964
Starvation Cap Reductn	0	0	0	0	0	51	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.67	0.39	0.83	0.75	0.77	0.65	0.71

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary

1: Hamilton Blvd & Mission Blvd

Existing PM Peak Hour
888 West Mission

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	856	67	42	707	55	48	110	35	67	216	100
Future Volume (veh/h)	76	856	67	42	707	55	48	110	35	67	216	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.96	1.00		0.98	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	79	892	61	44	736	48	50	115	7	70	225	22
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	324	1367	94	274	1371	89	83	629	38	105	370	302
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.05	0.20	0.20	0.07	0.21	0.21
Sat Flow, veh/h	615	3192	218	526	3199	209	1594	3221	194	1594	1772	1447
Grp Volume(v), veh/h	79	470	483	44	387	397	50	60	62	70	225	22
Grp Sat Flow(s),veh/h/ln	615	1683	1727	526	1683	1725	1594	1683	1732	1594	1772	1447
Q Serve(g_s), s	4.8	9.6	9.6	3.1	7.4	7.4	1.3	1.3	1.3	1.9	5.0	0.5
Cycle Q Clear(g_c), s	12.2	9.6	9.6	12.8	7.4	7.4	1.3	1.3	1.3	1.9	5.0	0.5
Prop In Lane	1.00		0.13	1.00		0.12	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	324	721	740	274	721	739	83	329	338	105	370	302
V/C Ratio(X)	0.24	0.65	0.65	0.16	0.54	0.54	0.60	0.18	0.18	0.67	0.61	0.07
Avail Cap(c_a), veh/h	393	910	933	333	910	932	183	697	717	183	734	599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.7	9.9	9.9	14.9	9.2	9.2	20.2	14.6	14.6	19.8	15.6	13.8
Incr Delay (d2), s/veh	0.4	1.1	1.1	0.3	0.6	0.6	6.8	0.3	0.3	7.2	1.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.7	2.8	0.3	2.0	2.1	0.6	0.4	0.5	0.8	1.8	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.1	11.0	11.0	15.2	9.8	9.8	27.0	14.9	14.9	27.0	17.2	13.9
LnGrp LOS	B	B	B	B	A	A	C	B	B	C	B	B
Approach Vol, veh/h	1032				828				172			
Approach Delay, s/veh	11.2				10.1				18.4			
Approach LOS	B				B				B			
Timer - Assigned Phs	2		3	4	6		7	8				
Phs Duration (G+Y+Rc), s	23.1		7.4	13.0	23.1		6.8	13.6				
Change Period (Y+Rc), s	4.5		4.5	4.5	4.5		4.5	4.5				
Max Green Setting (Gmax), s	23.5		5.0	18.0	23.5		5.0	18.0				
Max Q Clear Time (g_c+I1), s	14.2		3.9	3.3	14.8		3.3	7.0				
Green Ext Time (p_c), s	4.4		0.0	0.4	3.4		0.0	0.9				
Intersection Summary												
HCM 6th Ctrl Delay	12.4											
HCM 6th LOS	B											

HCM 6th Signalized Intersection Summary

2: White Ave & Mission Blvd

Existing PM Peak Hour
888 West Mission



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	788	96	62	640	112	89	537	39	106	771	75
Future Volume (veh/h)	92	788	96	62	640	112	89	537	39	106	771	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	1.00		0.94	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	93	796	80	63	646	87	90	542	30	107	779	63
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	255	1105	111	216	1062	143	112	962	53	131	971	79
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.07	0.30	0.30	0.08	0.31	0.31
Sat Flow, veh/h	642	3077	309	564	2958	398	1594	3243	179	1594	3148	255
Grp Volume(v), veh/h	93	435	441	63	367	366	90	281	291	107	416	426
Grp Sat Flow(s),veh/h/ln	642	1683	1703	564	1683	1672	1594	1683	1739	1594	1683	1719
Q Serve(g_s), s	7.2	11.5	11.5	5.6	9.2	9.2	2.9	7.3	7.3	3.4	11.7	11.7
Cycle Q Clear(g_c), s	16.4	11.5	11.5	17.1	9.2	9.2	2.9	7.3	7.3	3.4	11.7	11.7
Prop In Lane	1.00		0.18	1.00		0.24	1.00		0.10	1.00		0.15
Lane Grp Cap(c), veh/h	255	605	612	216	605	600	112	499	516	131	519	530
V/C Ratio(X)	0.36	0.72	0.72	0.29	0.61	0.61	0.80	0.56	0.56	0.82	0.80	0.80
Avail Cap(c_a), veh/h	255	605	612	216	605	600	155	588	608	155	588	601
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.3	14.3	14.3	21.7	13.5	13.5	23.6	15.3	15.3	23.3	16.4	16.4
Incr Delay (d2), s/veh	0.9	4.2	4.1	0.7	1.8	1.8	18.7	1.0	1.0	24.4	7.0	6.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	4.3	4.3	0.7	3.1	3.1	1.6	2.5	2.6	2.0	4.8	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.1	18.4	18.4	22.4	15.3	15.3	42.3	16.3	16.3	47.7	23.4	23.3
LnGrp LOS	C	B	B	C	B	B	D	B	B	D	C	C
Approach Vol, veh/h	969		796			662			949			
Approach Delay, s/veh	18.7		15.9			19.8			26.1			
Approach LOS	B		B			B			C			
Timer - Assigned Phs	2		3		4		6		7		8	
Phs Duration (G+Y+Rc), s	23.0		8.7		19.8		23.0		8.1		20.4	
Change Period (Y+Rc), s	4.5		4.5		4.5		4.5		4.5		4.5	
Max Green Setting (Gmax), s	18.5		5.0		18.0		18.5		5.0		18.0	
Max Q Clear Time (g_c+l1), s	18.4		5.4		9.3		19.1		4.9		13.7	
Green Ext Time (p_c), s	0.1		0.0		2.2		0.0		0.0		2.0	
Intersection Summary												
HCM 6th Ctrl Delay			20.3									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary

3: Park Ave & Mission Blvd

Existing PM Peak Hour
888 West Mission



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	816	41	67	671	39	171	157	62	47	158	67
Future Volume (veh/h)	42	816	41	67	671	39	171	157	62	47	158	67
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	1.00		0.95	0.99		0.97	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	45	877	36	72	722	31	184	169	25	51	170	27
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	362	1470	60	312	1467	63	450	586	482	451	586	482
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	632	3289	135	545	3281	141	1048	1772	1456	1051	1772	1457
Grp Volume(v), veh/h	45	449	464	72	370	383	184	169	25	51	170	27
Grp Sat Flow(s),veh/h/ln	632	1683	1741	545	1683	1739	1048	1772	1456	1051	1772	1457
Q Serve(g_s), s	2.2	8.1	8.1	4.6	6.3	6.3	6.4	2.9	0.5	1.5	2.9	0.5
Cycle Q Clear(g_c), s	8.5	8.1	8.1	12.8	6.3	6.3	9.3	2.9	0.5	4.4	2.9	0.5
Prop In Lane	1.00		0.08	1.00		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	362	752	778	312	752	777	450	586	482	451	586	482
V/C Ratio(X)	0.12	0.60	0.60	0.23	0.49	0.49	0.41	0.29	0.05	0.11	0.29	0.06
Avail Cap(c_a), veh/h	438	956	989	378	956	988	570	788	648	571	788	648
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.0	8.4	8.4	13.3	7.9	7.9	13.5	10.0	9.2	11.6	10.0	9.2
Incr Delay (d2), s/veh	0.2	0.8	0.7	0.4	0.5	0.5	0.6	0.3	0.0	0.1	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.1	2.1	0.5	1.6	1.6	1.2	0.9	0.1	0.3	0.9	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.1	9.2	9.2	13.6	8.4	8.4	14.1	10.3	9.3	11.8	10.3	9.3
LnGrp LOS	B	A	A	B	A	A	B	B	A	B	B	A
Approach Vol, veh/h	958			825			378			248		
Approach Delay, s/veh	9.3			8.9			12.1			10.5		
Approach LOS	A			A			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	22.6			17.9			22.6			17.9		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	23.0			18.0			23.0			18.0		
Max Q Clear Time (g_c+l1), s	10.5			11.3			14.8			6.4		
Green Ext Time (p_c), s	4.9			1.0			3.3			0.9		

Intersection Summary

HCM 6th Ctrl Delay	9.7
HCM 6th LOS	A

HCM 6th Signalized Intersection Summary

4: Garey Ave & Mission Blvd

Existing PM Peak Hour
888 West Mission



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	700	145	150	526	93	145	624	129	100	617	92
Future Volume (veh/h)	138	700	145	150	526	93	145	624	129	100	617	92
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	1.00		0.97	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No				No			No		
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	141	714	122	153	537	76	148	637	32	102	630	21
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	173	820	140	185	867	122	179	894	385	126	782	335
Arrive On Green	0.11	0.29	0.29	0.12	0.29	0.29	0.11	0.27	0.27	0.08	0.23	0.23
Sat Flow, veh/h	1594	2861	489	1594	2946	415	1594	3367	1450	1594	3367	1441
Grp Volume(v), veh/h	141	420	416	153	306	307	148	637	32	102	630	21
Grp Sat Flow(s),veh/h/ln	1594	1683	1666	1594	1683	1678	1594	1683	1450	1594	1683	1441
Q Serve(g_s), s	6.2	16.9	16.9	6.7	11.2	11.3	6.5	12.2	1.2	4.5	12.6	0.8
Cycle Q Clear(g_c), s	6.2	16.9	16.9	6.7	11.2	11.3	6.5	12.2	1.2	4.5	12.6	0.8
Prop In Lane	1.00		0.29	1.00		0.25	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	173	482	477	185	495	494	179	894	385	126	782	335
V/C Ratio(X)	0.82	0.87	0.87	0.83	0.62	0.62	0.82	0.71	0.08	0.81	0.81	0.06
Avail Cap(c_a), veh/h	224	520	514	190	495	494	190	894	385	172	850	364
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.1	24.2	24.2	30.8	21.7	21.7	30.9	23.7	19.7	32.3	25.8	21.3
Incr Delay (d2), s/veh	16.3	14.1	14.3	24.6	2.3	2.4	23.7	2.7	0.1	17.9	5.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	8.0	8.0	3.7	4.4	4.4	3.5	4.7	0.4	2.3	5.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.4	38.3	38.5	55.4	24.0	24.1	54.7	26.4	19.7	50.2	31.2	21.4
LnGrp LOS	D	D	D	E	C	C	D	C	B	D	C	C
Approach Vol, veh/h	977		766			817			753			
Approach Delay, s/veh	39.7		30.3			31.2			33.5			
Approach LOS	D		C			C			C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	24.9	10.1	23.4	12.2	25.5	12.5	21.1					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	22.0	7.7	18.8	10.0	20.5	8.5	18.0					
Max Q Clear Time (g_c+I), s	18.9	6.5	14.2	8.2	13.3	8.5	14.6					
Green Ext Time (p_c), s	0.0	1.5	0.0	1.7	0.1	2.1	0.0	1.3				

Intersection Summary

HCM 6th Ctrl Delay	34.0
HCM 6th LOS	C

Queues

2: White Ave & Mission Blvd

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	93	893	63	759	90	581	107	855
v/c Ratio	0.65	0.78	0.48	0.66	0.56	0.52	0.66	0.77
Control Delay	42.0	21.7	31.2	17.6	41.0	16.1	49.0	21.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.0	21.7	31.2	17.6	41.0	16.1	49.0	21.5
Queue Length 50th (ft)	25	132	16	103	29	77	35	127
Queue Length 95th (ft)	#91	#222	#62	155	#87	119	#106	#195
Internal Link Dist (ft)		1234		263		242		331
Turn Bay Length (ft)	75		150		65		75	
Base Capacity (vph)	160	1264	144	1267	162	1237	162	1236
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.71	0.44	0.60	0.56	0.47	0.66	0.69

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary

1: Hamilton Blvd & Mission Blvd

Existing Plus Project AM Peak Hour
888 West Mission

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	712	62	43	1062	44	95	191	76	73	130	92
Future Volume (veh/h)	56	712	62	43	1062	44	95	191	76	73	130	92
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		0.98	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	63	800	60	48	1193	39	107	215	50	82	146	14
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	239	1684	126	344	1766	58	146	482	109	118	283	230
Arrive On Green	0.53	0.53	0.52	0.53	0.53	0.52	0.09	0.18	0.17	0.07	0.16	0.16
Sat Flow, veh/h	404	3169	238	574	3322	109	1594	2712	616	1594	1772	1436
Grp Volume(v), veh/h	63	425	435	48	604	628	107	131	134	82	146	14
Grp Sat Flow(s),veh/h/ln	404	1683	1723	574	1683	1748	1594	1683	1644	1594	1772	1436
Q Serve(g_s), s	7.5	8.7	8.8	3.2	14.5	14.5	3.6	3.9	4.0	2.8	4.2	0.5
Cycle Q Clear(g_c), s	22.0	8.7	8.8	11.9	14.5	14.5	3.6	3.9	4.0	2.8	4.2	0.5
Prop In Lane	1.00		0.14	1.00		0.06	1.00		0.37	1.00		1.00
Lane Grp Cap(c), veh/h	239	895	916	344	895	929	146	299	292	118	283	230
V/C Ratio(X)	0.26	0.47	0.48	0.14	0.68	0.68	0.73	0.44	0.46	0.70	0.52	0.06
Avail Cap(c_a), veh/h	291	1111	1137	418	1111	1153	231	587	574	207	593	480
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.5	8.1	8.1	11.9	9.5	9.5	24.5	20.3	20.4	25.0	21.3	19.7
Incr Delay (d2), s/veh	0.6	0.4	0.4	0.2	1.2	1.1	6.9	1.0	1.1	7.2	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.4	2.5	0.4	4.2	4.3	1.5	1.4	1.5	1.2	1.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.1	8.5	8.5	12.0	10.6	10.6	31.4	21.3	21.6	32.2	22.7	19.8
LnGrp LOS	B	A	A	B	B	B	C	C	C	C	C	B
Approach Vol, veh/h	923			1280				372			242	
Approach Delay, s/veh	9.2			10.7				24.3			25.8	
Approach LOS	A			B				C			C	
Timer - Assigned Phs	2		3	4		6		7	8			
Phs Duration (G+Y+Rc), s	33.4		8.1	13.8		33.4		9.1	12.8			
Change Period (Y+Rc), s	4.5		4.5	4.5		4.5		4.5	4.5			
Max Green Setting (Gmax), s	36.0		6.7	18.8		36.0		7.5	18.0			
Max Q Clear Time (g_c+I1), s	24.0		4.8	6.0		16.5		5.6	6.2			
Green Ext Time (p_c), s	4.9		0.0	1.1		8.7		0.0	0.5			
Intersection Summary												
HCM 6th Ctrl Delay	13.3											
HCM 6th LOS	B											

HCM 6th Signalized Intersection Summary 2: White Ave & Mission Blvd

Existing Plus Project AM Peak Hour
888 West Mission



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	696	97	45	863	107	173	742	52	98	510	118
Future Volume (veh/h)	62	696	97	45	863	107	173	742	52	98	510	118
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	68	765	87	49	948	89	190	815	47	108	560	116
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	180	1202	137	227	1228	115	239	1031	59	145	718	148
Arrive On Green	0.40	0.40	0.39	0.40	0.40	0.39	0.15	0.32	0.31	0.09	0.26	0.25
Sat Flow, veh/h	486	3034	345	578	3100	291	1594	3235	187	1594	2765	571
Grp Volume(v), veh/h	68	424	428	49	515	522	190	424	438	108	340	336
Grp Sat Flow(s),veh/h/ln	486	1683	1696	578	1683	1708	1594	1683	1738	1594	1683	1652
Q Serve(g_s), s	8.0	12.6	12.6	4.6	16.5	16.5	7.1	14.2	14.2	4.1	11.6	11.7
Cycle Q Clear(g_c), s	24.5	12.6	12.6	17.2	16.5	16.5	7.1	14.2	14.2	4.1	11.6	11.7
Prop In Lane	1.00		0.20	1.00		0.17	1.00		0.11	1.00		0.35
Lane Grp Cap(c), veh/h	180	667	672	227	667	676	239	537	554	145	437	429
V/C Ratio(X)	0.38	0.64	0.64	0.22	0.77	0.77	0.79	0.79	0.79	0.74	0.78	0.78
Avail Cap(c_a), veh/h	180	667	672	227	667	676	258	585	604	180	503	494
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.2	15.1	15.1	22.1	16.2	16.3	25.4	19.2	19.2	27.4	21.2	21.4
Incr Delay (d2), s/veh	1.3	2.0	2.0	0.5	5.6	5.5	14.7	6.7	6.5	12.0	6.6	7.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.5	4.5	0.6	6.4	6.5	3.5	5.9	6.0	1.9	4.9	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.5	17.1	17.1	22.5	21.8	21.8	40.1	25.9	25.7	39.4	27.9	28.4
LnGrp LOS	C	B	B	C	C	C	D	C	C	D	C	C
Approach Vol, veh/h	920			1086			1052			784		
Approach Delay, s/veh	18.0			21.8			28.4			29.7		
Approach LOS	B			C			C			C		
Timer - Assigned Phs	2		3	4		6		7	8			
Phs Duration (G+Y+Rc), s	28.5		9.6	23.7		28.5		13.3	20.1			
Change Period (Y+Rc), s	4.5		4.5	4.5		4.5		4.5	4.5			
Max Green Setting (Gmax), s	24.0		6.5	21.0		24.0		9.5	18.0			
Max Q Clear Time (g_c+I1), s	26.5		6.1	16.2		19.2		9.1	13.7			
Green Ext Time (p_c), s	0.0		0.0	2.2		2.8		0.0	1.6			

Intersection Summary

HCM 6th Ctrl Delay	24.3
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary

3: Park Ave & Mission Blvd

Existing Plus Project AM Peak Hour
888 West Mission



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	599	162	49	939	29	66	167	60	24	132	35
Future Volume (veh/h)	74	599	162	49	939	29	66	167	60	24	132	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	0.98		0.96	0.99		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	82	666	172	54	1043	22	73	186	24	27	147	-8
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	337	1410	364	403	1809	38	395	463	378	362	463	392
Arrive On Green	0.54	0.54	0.52	0.54	0.54	0.52	0.26	0.26	0.26	0.26	0.26	0.00
Sat Flow, veh/h	473	2625	677	585	3368	71	1101	1772	1449	1034	1772	1502
Grp Volume(v), veh/h	82	427	411	54	521	544	73	186	24	27	147	-8
Grp Sat Flow(s),veh/h/ln	473	1683	1619	585	1683	1755	1101	1772	1449	1034	1772	1502
Q Serve(g_s), s	5.6	6.2	6.3	2.5	8.2	8.2	2.3	3.4	0.5	0.9	2.6	0.0
Cycle Q Clear(g_c), s	13.8	6.2	6.3	8.8	8.2	8.2	4.9	3.4	0.5	4.3	2.6	0.0
Prop In Lane	1.00		0.42	1.00		0.04	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	337	904	870	403	904	943	395	463	378	362	463	392
V/C Ratio(X)	0.24	0.47	0.47	0.13	0.58	0.58	0.18	0.40	0.06	0.07	0.32	-0.02
Avail Cap(c_a), veh/h	423	1210	1164	509	1210	1262	622	827	676	575	827	701
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	10.8	5.7	5.8	8.4	6.2	6.2	13.8	12.1	11.0	13.9	11.8	0.0
Incr Delay (d2), s/veh	0.4	0.4	0.4	0.1	0.6	0.6	0.2	0.6	0.1	0.1	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.2	1.2	0.2	1.7	1.7	0.5	1.1	0.1	0.2	0.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.2	6.1	6.2	8.6	6.7	6.7	14.0	12.7	11.1	14.0	12.2	0.0
LnGrp LOS	B	A	A	A	A	A	B	B	B	B	B	A
Approach Vol, veh/h	920			1119			283			166		
Approach Delay, s/veh	6.6			6.8			12.9			13.1		
Approach LOS	A			A			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	25.3			14.3			25.3			14.3		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	28.0			18.0			28.0			18.0		
Max Q Clear Time (g_c+I1), s	15.8			6.9			10.8			6.3		
Green Ext Time (p_c), s	5.0			1.0			6.9			0.6		

Intersection Summary

HCM 6th Ctrl Delay	7.8
HCM 6th LOS	A

HCM 6th Signalized Intersection Summary

4: Garey Ave & Mission Blvd

Existing Plus Project AM Peak Hour
888 West Mission



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	446	120	75	821	109	128	539	92	54	402	78
Future Volume (veh/h)	119	446	120	75	821	109	128	539	92	54	402	78
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		1.00	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	143	537	115	90	989	108	154	649	-7	65	484	1
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	181	1136	242	121	1147	125	193	879	392	89	659	281
Arrive On Green	0.11	0.41	0.41	0.08	0.38	0.37	0.12	0.26	0.00	0.06	0.20	0.20
Sat Flow, veh/h	1594	2747	586	1594	3049	333	1594	3367	1502	1594	3367	1434
Grp Volume(v), veh/h	143	328	324	90	546	551	154	649	-7	65	484	1
Grp Sat Flow(s),veh/h/ln	1594	1683	1649	1594	1683	1699	1594	1683	1502	1594	1683	1434
Q Serve(g_s), s	7.2	11.8	11.9	4.6	24.8	24.8	7.8	14.6	0.0	3.3	11.2	0.0
Cycle Q Clear(g_c), s	7.2	11.8	11.9	4.6	24.8	24.8	7.8	14.6	0.0	3.3	11.2	0.0
Prop In Lane	1.00		0.36	1.00		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	181	696	682	121	633	639	193	879	392	89	659	281
V/C Ratio(X)	0.79	0.47	0.47	0.74	0.86	0.86	0.80	0.74	-0.02	0.73	0.73	0.00
Avail Cap(c_a), veh/h	193	696	682	225	700	706	212	919	410	135	757	322
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.7	17.7	17.8	37.4	23.8	23.9	35.4	28.0	0.0	38.4	31.2	26.8
Incr Delay (d2), s/veh	18.7	0.5	0.5	8.6	10.0	10.0	17.6	3.0	0.0	10.7	3.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	4.3	4.3	2.0	10.8	11.0	3.8	5.9	0.0	1.5	4.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.4	18.2	18.3	46.0	33.8	33.9	53.0	31.0	0.0	49.2	34.4	26.8
LnGrp LOS	D	B	B	D	C	C	D	C	A	D	C	C
Approach Vol, veh/h	795		1187			796			550			
Approach Delay, s/veh	24.7		34.8			35.6			36.2			
Approach LOS	C		C			D			D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	30.3	38.2	8.6	25.6	13.4	35.1	14.0	20.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	1.2	32.2	6.5	22.1	9.5	33.9	10.5	18.1				
Max Q Clear Time (g_c+I), s	10.6	13.9	5.3	16.6	9.2	26.8	9.8	13.2				
Green Ext Time (p_c), s	0.1	3.8	0.0	1.9	0.0	3.8	0.0	1.3				

Intersection Summary

HCM 6th Ctrl Delay	32.8
HCM 6th LOS	C

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↱			↑↑↑↑		↱↑
Traffic Vol, veh/h	837	9	0	1015	0	8
Future Vol, veh/h	837	9	0	1015	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	60	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	940	10	0	1140	0	9
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	-	-	-	475
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	536
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	536
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	0		11.8		
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	536	-	-	-		
HCM Lane V/C Ratio	0.017	-	-	-		
HCM Control Delay (s)	11.8	-	-	-		
HCM Lane LOS	B	-	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	-		

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	0	0	6	6	15
Future Vol, veh/h	3	0	0	6	6	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	0	0	7	7	17
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	23	16	24	0	-	0
Stage 1	16	-	-	-	-	-
Stage 2	7	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	993	1063	1591	-	-	-
Stage 1	1007	-	-	-	-	-
Stage 2	1016	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	993	1063	1591	-	-	-
Mov Cap-2 Maneuver	993	-	-	-	-	-
Stage 1	1007	-	-	-	-	-
Stage 2	1016	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.6	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1591	-	993	-	-	
HCM Lane V/C Ratio	-	-	0.004	-	-	
HCM Control Delay (s)	0	-	8.6	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Intersection

Int Delay, s/veh 3.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	11	17	0	0	9
Future Vol, veh/h	11	11	17	0	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	13	20	0	0	10

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	20	0	0 59 20
Stage 1	-	-	- 20 -
Stage 2	-	-	- 39 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1596	-	- 948 1058
Stage 1	-	-	- 1003 -
Stage 2	-	-	- 983 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1596	-	- 940 1058
Mov Cap-2 Maneuver	-	-	- 940 -
Stage 1	-	-	- 995 -
Stage 2	-	-	- 983 -

Approach	EB	WB	SB
HCM Control Delay, s	3.6	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1596	-	-	-	1058
HCM Lane V/C Ratio	0.008	-	-	-	0.01
HCM Control Delay (s)	7.3	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

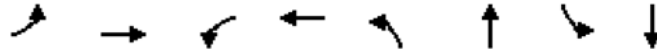
Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			↕
Traffic Vol, veh/h	0	14	953	8	0	652
Future Vol, veh/h	0	14	953	8	0	652
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	14	963	8	0	659
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	486	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	527	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	527	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	12	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT			
Capacity (veh/h)	-	-	527	-		
HCM Lane V/C Ratio	-	-	0.027	-		
HCM Control Delay (s)	-	-	12	-		
HCM Lane LOS	-	-	B	-		
HCM 95th %tile Q(veh)	-	-	0.1	-		

Queues

2: White Ave & Mission Blvd

Existing Plus Project AM Peak Hour

888 West Mission



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	68	872	49	1066	190	872	108	690
v/c Ratio	0.64	0.70	0.42	0.85	0.77	0.72	0.62	0.75
Control Delay	49.8	19.9	27.8	26.5	49.2	22.9	45.6	25.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
Total Delay	49.8	19.9	27.8	26.5	49.2	23.3	45.6	25.4
Queue Length 50th (ft)	21	144	14	193	74	160	42	120
Queue Length 95th (ft)	#84	206	#49	#306	#171	#228	#107	177
Internal Link Dist (ft)		1234		77		111		331
Turn Bay Length (ft)	75				65		75	
Base Capacity (vph)	111	1308	124	1308	254	1203	178	996
Starvation Cap Reductn	0	0	0	0	0	73	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.67	0.40	0.81	0.75	0.77	0.61	0.69

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary

1: Hamilton Blvd & Mission Blvd

Existing Plus Project PM Peak Hour
888 West Mission

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	863	67	45	713	57	48	110	38	70	216	100
Future Volume (veh/h)	76	863	67	45	713	57	48	110	38	70	216	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.96	1.00		0.98	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	79	899	61	47	743	50	50	115	8	73	225	22
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	331	1405	95	281	1404	94	102	651	45	126	389	318
Arrive On Green	0.44	0.44	0.43	0.44	0.44	0.43	0.06	0.20	0.19	0.08	0.22	0.22
Sat Flow, veh/h	610	3194	217	523	3192	215	1594	3190	220	1594	1772	1449
Grp Volume(v), veh/h	79	474	486	47	392	401	50	60	63	73	225	22
Grp Sat Flow(s),veh/h/ln	610	1683	1727	523	1683	1723	1594	1683	1727	1594	1772	1449
Q Serve(g_s), s	4.7	9.5	9.5	3.3	7.4	7.4	1.3	1.3	1.3	1.9	4.9	0.5
Cycle Q Clear(g_c), s	12.1	9.5	9.5	12.9	7.4	7.4	1.3	1.3	1.3	1.9	4.9	0.5
Prop In Lane	1.00		0.13	1.00		0.12	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	331	740	760	281	740	758	102	344	353	126	389	318
V/C Ratio(X)	0.24	0.64	0.64	0.17	0.53	0.53	0.49	0.17	0.18	0.58	0.58	0.07
Avail Cap(c_a), veh/h	399	928	952	340	928	950	202	719	737	206	761	622
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.3	9.5	9.5	14.5	8.9	8.9	19.6	14.2	14.3	19.3	15.1	13.4
Incr Delay (d2), s/veh	0.4	1.0	1.0	0.3	0.6	0.6	3.7	0.2	0.2	4.2	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.6	2.7	0.3	2.0	2.0	0.5	0.4	0.4	0.8	1.8	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.6	10.5	10.5	14.8	9.4	9.5	23.3	14.5	14.5	23.4	16.5	13.5
LnGrp LOS	B	B	B	B	A	A	C	B	B	C	B	B
Approach Vol, veh/h		1039			840			173			320	
Approach Delay, s/veh		10.7			9.8			17.0			17.9	
Approach LOS		B			A			B			B	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		23.1	7.4	12.8		23.1	6.8	13.5				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		23.4	5.1	18.0		23.4	5.0	18.1				
Max Q Clear Time (g_c+I1), s		14.1	3.9	3.3		14.9	3.3	6.9				
Green Ext Time (p_c), s		4.5	0.0	0.4		3.4	0.0	0.9				
Intersection Summary												
HCM 6th Ctrl Delay			11.8									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary

2: White Ave & Mission Blvd

Existing Plus Project PM Peak Hour
888 West Mission



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	801	96	62	640	112	100	547	39	106	784	75
Future Volume (veh/h)	92	801	96	62	640	112	100	547	39	106	784	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	93	809	79	63	646	87	101	553	30	107	792	63
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	259	1127	110	216	1083	146	138	1016	55	146	1002	80
Arrive On Green	0.37	0.37	0.36	0.37	0.37	0.36	0.09	0.31	0.30	0.09	0.32	0.31
Sat Flow, veh/h	644	3087	301	558	2968	399	1594	3247	176	1594	3153	251
Grp Volume(v), veh/h	93	441	447	63	366	367	101	286	297	107	423	432
Grp Sat Flow(s),veh/h/ln	644	1683	1705	558	1683	1683	1594	1683	1740	1594	1683	1720
Q Serve(g_s), s	7.1	11.7	11.7	5.7	9.2	9.2	3.2	7.3	7.4	3.4	11.9	11.9
Cycle Q Clear(g_c), s	16.4	11.7	11.7	17.4	9.2	9.2	3.2	7.3	7.4	3.4	11.9	11.9
Prop In Lane	1.00		0.18	1.00		0.24	1.00		0.10	1.00		0.15
Lane Grp Cap(c), veh/h	259	615	622	216	615	615	138	527	545	146	535	547
V/C Ratio(X)	0.36	0.72	0.72	0.29	0.60	0.60	0.73	0.54	0.54	0.74	0.79	0.79
Avail Cap(c_a), veh/h	259	615	622	216	615	615	168	598	618	168	598	611
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.1	14.2	14.3	21.7	13.4	13.5	23.2	14.8	14.8	23.0	16.2	16.2
Incr Delay (d2), s/veh	0.8	4.0	4.0	0.7	1.6	1.6	12.1	0.9	0.9	13.2	6.4	6.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.3	4.4	0.7	3.1	3.1	1.6	2.5	2.6	1.7	4.8	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.9	18.2	18.2	22.5	15.0	15.1	35.2	15.7	15.7	36.3	22.6	22.5
LnGrp LOS	C	B	B	C	B	B	D	B	B	D	C	C
Approach Vol, veh/h	981			796			684			962		
Approach Delay, s/veh	18.5			15.6			18.6			24.1		
Approach LOS	B			B			B			C		
Timer - Assigned Phs	2		3	4		6		7	8			
Phs Duration (G+Y+Rc), s	23.0		8.8	20.3		23.0		8.5	20.5			
Change Period (Y+Rc), s	4.5		4.5	4.5		4.5		4.5	4.5			
Max Green Setting (Gmax), s	18.5		5.0	18.0		18.5		5.0	18.0			
Max Q Clear Time (g_c+I1), s	18.4		5.4	9.4		19.4		5.2	13.9			
Green Ext Time (p_c), s	0.1		0.0	2.2		0.0		0.0	1.9			

Intersection Summary

HCM 6th Ctrl Delay	19.4
HCM 6th LOS	B

HCM 6th Signalized Intersection Summary

3: Park Ave & Mission Blvd

Existing Plus Project PM Peak Hour
888 West Mission



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	835	41	67	694	39	171	157	62	47	158	67
Future Volume (veh/h)	42	835	41	67	694	39	171	157	62	47	158	67
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.95	0.99		0.97	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	45	898	36	72	746	32	184	169	25	51	170	27
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	365	1522	61	317	1517	65	461	603	496	462	603	496
Arrive On Green	0.46	0.46	0.45	0.46	0.46	0.45	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	618	3293	132	534	3281	141	1049	1772	1457	1052	1772	1458
Grp Volume(v), veh/h	45	459	475	72	383	395	184	169	25	51	170	27
Grp Sat Flow(s),veh/h/ln	618	1683	1742	534	1683	1739	1049	1772	1457	1052	1772	1458
Q Serve(g_s), s	2.2	8.2	8.2	4.7	6.4	6.4	6.3	2.8	0.5	1.5	2.8	0.5
Cycle Q Clear(g_c), s	8.6	8.2	8.2	12.9	6.4	6.4	9.1	2.8	0.5	4.3	2.8	0.5
Prop In Lane	1.00		0.08	1.00		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	365	778	805	317	778	804	461	603	496	462	603	496
V/C Ratio(X)	0.12	0.59	0.59	0.23	0.49	0.49	0.40	0.28	0.05	0.11	0.28	0.05
Avail Cap(c_a), veh/h	438	976	1009	379	976	1008	583	808	665	584	808	665
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.6	8.1	8.1	12.8	7.6	7.6	13.1	9.8	9.0	11.3	9.8	9.0
Incr Delay (d2), s/veh	0.1	0.7	0.7	0.4	0.5	0.5	0.6	0.3	0.0	0.1	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.0	2.1	0.5	1.6	1.6	1.2	0.8	0.1	0.3	0.9	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.7	8.8	8.8	13.2	8.1	8.1	13.6	10.0	9.0	11.4	10.0	9.0
LnGrp LOS	B	A	A	B	A	A	B	B	A	B	B	A
Approach Vol, veh/h	979			850			378			248		
Approach Delay, s/veh	8.9			8.5			11.7			10.2		
Approach LOS	A			A			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	22.7			17.8			22.7			17.8		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	23.0			18.0			23.0			18.0		
Max Q Clear Time (g_c+I1), s	10.6			11.1			14.9			6.3		
Green Ext Time (p_c), s	5.0			1.0			3.4			0.9		

Intersection Summary

HCM 6th Ctrl Delay	9.3
HCM 6th LOS	A

HCM 6th Signalized Intersection Summary

4: Garey Ave & Mission Blvd

Existing Plus Project PM Peak Hour
888 West Mission



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	710	150	150	538	93	151	624	129	100	617	97
Future Volume (veh/h)	142	710	150	150	538	93	151	624	129	100	617	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	1.00		0.97	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	145	724	127	153	549	76	154	637	32	102	630	20
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	187	839	147	195	885	122	196	925	399	137	800	343
Arrive On Green	0.12	0.29	0.29	0.12	0.30	0.29	0.12	0.27	0.27	0.09	0.24	0.24
Sat Flow, veh/h	1594	2848	499	1594	2955	408	1594	3367	1452	1594	3367	1442
Grp Volume(v), veh/h	145	428	423	153	312	313	154	637	32	102	630	20
Grp Sat Flow(s),veh/h/ln	1594	1683	1664	1594	1683	1680	1594	1683	1452	1594	1683	1442
Q Serve(g_s), s	6.3	17.3	17.3	6.7	11.4	11.6	6.7	12.2	1.2	4.5	12.6	0.8
Cycle Q Clear(g_c), s	6.3	17.3	17.3	6.7	11.4	11.6	6.7	12.2	1.2	4.5	12.6	0.8
Prop In Lane	1.00		0.30	1.00		0.24	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	187	496	490	195	504	503	196	925	399	137	800	343
V/C Ratio(X)	0.77	0.86	0.86	0.78	0.62	0.62	0.79	0.69	0.08	0.75	0.79	0.06
Avail Cap(c_a), veh/h	235	527	521	200	504	503	200	925	399	182	867	371
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.8	24.0	24.1	30.6	21.6	21.7	30.6	23.3	19.3	32.1	25.7	21.2
Incr Delay (d2), s/veh	11.8	13.2	13.5	18.0	2.3	2.4	18.2	2.2	0.1	11.0	4.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	8.1	8.1	3.4	4.5	4.5	3.4	4.6	0.4	2.0	5.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.6	37.2	37.5	48.6	23.9	24.1	48.8	25.5	19.4	43.1	30.3	21.2
LnGrp LOS	D	D	D	D	C	C	D	C	B	D	C	C
Approach Vol, veh/h	996		778				823			752		
Approach Delay, s/veh	38.1		28.9				29.6			31.8		
Approach LOS	D		C				C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	2.8	25.2	10.2	23.7	12.4	25.5	12.8	21.1				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	22.0	22.0	7.7	18.8	10.1	20.4	8.5	18.0				
Max Q Clear Time (g_c+I), s	19.3	19.3	6.5	14.2	8.3	13.6	8.7	14.6				
Green Ext Time (p_c), s	0.0	1.4	0.0	1.7	0.1	2.1	0.0	1.3				

Intersection Summary

HCM 6th Ctrl Delay	32.4
HCM 6th LOS	C

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑↑		↗
Traffic Vol, veh/h	933	13	0	894	0	14
Future Vol, veh/h	933	13	0	894	0	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	60	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	993	14	0	951	0	15
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	504
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	513
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	513
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		12.2	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	513	-	-	-		
HCM Lane V/C Ratio	0.029	-	-	-		
HCM Control Delay (s)	12.2	-	-	-		
HCM Lane LOS	B	-	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	-		

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	0	0	13	10	23
Future Vol, veh/h	5	0	0	13	10	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	0	0	15	12	27
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	41	26	39	0	-	0
Stage 1	26	-	-	-	-	-
Stage 2	15	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	970	1050	1571	-	-	-
Stage 1	997	-	-	-	-	-
Stage 2	1008	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	970	1050	1571	-	-	-
Mov Cap-2 Maneuver	970	-	-	-	-	-
Stage 1	997	-	-	-	-	-
Stage 2	1008	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.7	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1571	-	970	-	-	
HCM Lane V/C Ratio	-	-	0.006	-	-	
HCM Control Delay (s)	0	-	8.7	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Intersection

Int Delay, s/veh 3.1

Movement EBL EBT WBT WBR SBL SBR

Lane Configurations						
Traffic Vol, veh/h	17	29	15	0	0	12
Future Vol, veh/h	17	29	15	0	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	34	17	0	0	14

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	17	0	-	0	91	17
Stage 1	-	-	-	-	17	-
Stage 2	-	-	-	-	74	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1600	-	-	-	909	1062
Stage 1	-	-	-	-	1006	-
Stage 2	-	-	-	-	949	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1600	-	-	-	897	1062
Mov Cap-2 Maneuver	-	-	-	-	897	-
Stage 1	-	-	-	-	993	-
Stage 2	-	-	-	-	949	-

Approach EB WB SB

HCM Control Delay, s	2.7	0	8.4
HCM LOS			A

Minor Lane/Major Mvmt EBL EBT WBT WBR SBLn1

Capacity (veh/h)	1600	-	-	-	1062
HCM Lane V/C Ratio	0.012	-	-	-	0.013
HCM Control Delay (s)	7.3	0	-	-	8.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			↕
Traffic Vol, veh/h	0	21	665	12	0	942
Future Vol, veh/h	0	21	665	12	0	942
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	21	672	12	0	952
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	342	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	654	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	654	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	10.7	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT			
Capacity (veh/h)	-	-	654	-		
HCM Lane V/C Ratio	-	-	0.032	-		
HCM Control Delay (s)	-	-	10.7	-		
HCM Lane LOS	-	-	B	-		
HCM 95th %tile Q(veh)	-	-	0.1	-		

HCM Unsignalized Intersection Capacity Analysis 5: Driveway & Mission Blvd

Existing Plus Project PM Peak Hour
888 West Mission

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑↑		↑
Traffic Volume (veh/h)	933	13	0	894	0	14
Future Volume (Veh/h)	933	13	0	894	0	14
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	993	14	0	951	0	15
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	157			1177		
pX, platoon unblocked			0.77		0.77	0.77
vC, conflicting volume			1007		1317	504
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			396		801	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	98
cM capacity (veh/h)			887		247	830
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	662	345	317	317	317	15
Volume Left	0	0	0	0	0	0
Volume Right	0	14	0	0	0	15
cSH	1700	1700	1700	1700	1700	830
Volume to Capacity	0.39	0.20	0.19	0.19	0.19	0.02
Queue Length 95th (ft)	0	0	0	0	0	1
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	9.4
Lane LOS						A
Approach Delay (s)	0.0		0.0			9.4
Approach LOS						A
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			36.2%		ICU Level of Service	A
Analysis Period (min)			15			

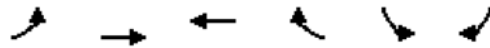
HCM Unsignalized Intersection Capacity Analysis 6: Cypress St & Driveway

Existing Plus Project PM Peak Hour
888 West Mission

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	0	0	13	10	23
Future Volume (Veh/h)	5	0	0	13	10	23
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	6	0	0	15	12	27
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	40	26	39			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	40	26	39			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	100			
cM capacity (veh/h)	971	1050	1571			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	6	15	39			
Volume Left	6	0	0			
Volume Right	0	0	27			
cSH	971	1571	1700			
Volume to Capacity	0.01	0.00	0.02			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	8.7	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	8.7	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay		0.9				
Intersection Capacity Utilization		13.3%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis 7: 6th St & Driveway

Existing Plus Project PM Peak Hour
888 West Mission



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	17	29	15	0	0	12
Future Volume (Veh/h)	17	29	15	0	0	12
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	20	34	17	0	0	14
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		161				
pX, platoon unblocked						
vC, conflicting volume	17				91	17
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	17				91	17
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				100	99
cM capacity (veh/h)	1600				898	1062
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	54	17	14			
Volume Left	20	0	0			
Volume Right	0	0	14			
cSH	1600	1700	1062			
Volume to Capacity	0.01	0.01	0.01			
Queue Length 95th (ft)	1	0	1			
Control Delay (s)	2.8	0.0	8.4			
Lane LOS	A		A			
Approach Delay (s)	2.8	0.0	8.4			
Approach LOS			A			
Intersection Summary						
Average Delay		3.1				
Intersection Capacity Utilization		19.1%	ICU Level of Service	A		
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis 8: White Ave & Driveway

Existing Plus Project PM Peak Hour
888 West Mission

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	21	665	12	0	942
Future Volume (Veh/h)	0	21	665	12	0	942
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Hourly flow rate (vph)	0	21	672	12	0	952
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)			131			191
pX, platoon unblocked	0.78					
vC, conflicting volume	1154	342			684	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	629	342			684	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	97			100	
cM capacity (veh/h)	323	654			905	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	21	448	236	476	476	
Volume Left	0	0	0	0	0	
Volume Right	21	0	12	0	0	
cSH	654	1700	1700	1700	1700	
Volume to Capacity	0.03	0.26	0.14	0.28	0.28	
Queue Length 95th (ft)	2	0	0	0	0	
Control Delay (s)	10.7	0.0	0.0	0.0	0.0	
Lane LOS	B					
Approach Delay (s)	10.7	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			29.4%		ICU Level of Service	A
Analysis Period (min)			15			

Queues
2: White Ave & Mission Blvd

Existing Plus Project PM Peak Hour
888 West Mission

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	93	906	63	759	101	592	107	868
v/c Ratio	0.64	0.77	0.48	0.64	0.56	0.52	0.60	0.76
Control Delay	40.4	20.7	30.8	16.8	39.8	15.7	42.0	20.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.4	20.7	30.8	16.8	39.8	15.7	42.0	20.7
Queue Length 50th (ft)	25	132	16	101	33	77	35	127
Queue Length 95th (ft)	#90	#203	#62	153	#94	119	#101	#191
Internal Link Dist (ft)		1234		77		111		331
Turn Bay Length (ft)	75				65		75	
Base Capacity (vph)	162	1300	144	1299	179	1270	179	1269
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.70	0.44	0.58	0.56	0.47	0.60	0.68

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary

1: Hamilton Blvd & Mission Blvd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	725	65	45	1080	45	100	195	80	75	135	95
Future Volume (veh/h)	60	725	65	45	1080	45	100	195	80	75	135	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.96	1.00		0.97	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	67	815	63	51	1213	45	112	219	18	84	152	17
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	212	1649	127	317	1724	64	139	616	50	103	308	247
Arrive On Green	0.52	0.52	0.52	0.52	0.52	0.52	0.09	0.20	0.20	0.06	0.17	0.17
Sat Flow, veh/h	395	3160	244	564	3305	123	1594	3143	256	1594	1772	1424
Grp Volume(v), veh/h	67	434	444	51	617	641	112	116	121	84	152	17
Grp Sat Flow(s),veh/h/ln	395	1683	1721	564	1683	1744	1594	1683	1715	1594	1772	1424
Q Serve(g_s), s	9.6	10.3	10.3	4.0	17.2	17.2	4.3	3.7	3.8	3.2	4.8	0.6
Cycle Q Clear(g_c), s	26.8	10.3	10.3	14.3	17.2	17.2	4.3	3.7	3.8	3.2	4.8	0.6
Prop In Lane	1.00		0.14	1.00		0.07	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	212	878	898	317	878	910	139	330	336	103	308	247
V/C Ratio(X)	0.32	0.49	0.49	0.16	0.70	0.70	0.81	0.35	0.36	0.81	0.49	0.07
Avail Cap(c_a), veh/h	235	977	998	350	977	1012	193	505	514	177	514	413
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.3	9.6	9.6	14.2	11.2	11.2	27.8	21.5	21.6	28.6	23.2	21.4
Incr Delay (d2), s/veh	0.8	0.4	0.4	0.2	2.0	2.0	15.9	0.6	0.6	14.1	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	3.1	3.2	0.5	5.5	5.7	2.1	1.4	1.5	1.6	2.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.2	10.0	10.0	14.4	13.2	13.2	43.7	22.2	22.2	42.8	24.4	21.6
LnGrp LOS	C	A	A	B	B	B	D	C	C	D	C	C
Approach Vol, veh/h	945			1309			349			253		
Approach Delay, s/veh	10.9			13.3			29.1			30.3		
Approach LOS	B			B			C			C		
Timer - Assigned Phs	2			3			4			6		
Phs Duration (G+Y+Rc), s	36.9			8.5			16.7			36.9		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	36.0			6.9			18.6			36.0		
Max Q Clear Time (g_c+I1), s	28.8			5.2			5.8			19.2		
Green Ext Time (p_c), s	3.6			0.0			1.0			8.2		
Intersection Summary												
HCM 6th Ctrl Delay	15.9											
HCM 6th LOS	B											

HCM 6th Signalized Intersection Summary

2: White Ave & Mission Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	65	705	100	50	885	110	170	750	55	100	515	125	
Future Volume (veh/h)	65	705	100	50	885	110	170	750	55	100	515	125	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	1.00		0.98	1.00		0.95	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No			No			No			No			
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772	
Adj Flow Rate, veh/h	71	775	88	55	973	102	187	824	50	110	566	99	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	162	1170	133	215	1178	124	224	1008	61	136	731	127	
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.14	0.31	0.31	0.09	0.26	0.26	
Sat Flow, veh/h	470	3038	345	573	3060	321	1594	3219	195	1594	2841	495	
Grp Volume(v), veh/h	71	429	434	55	535	540	187	431	443	110	334	331	
Grp Sat Flow(s),veh/h/ln	470	1683	1699	573	1683	1697	1594	1683	1731	1594	1683	1653	
Q Serve(g_s), s	6.1	13.1	13.1	5.5	17.9	17.9	7.1	14.7	14.7	4.2	11.5	11.6	
Cycle Q Clear(g_c), s	24.0	13.1	13.1	18.6	17.9	17.9	7.1	14.7	14.7	4.2	11.5	11.6	
Prop In Lane	1.00		0.20	1.00		0.19	1.00		0.11	1.00		0.30	
Lane Grp Cap(c), veh/h	162	648	654	215	648	654	224	527	542	136	433	425	
V/C Ratio(X)	0.44	0.66	0.66	0.26	0.83	0.83	0.83	0.82	0.82	0.81	0.77	0.78	
Avail Cap(c_a), veh/h	162	648	654	215	648	654	243	592	608	143	486	477	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	29.2	15.8	15.8	23.5	17.3	17.3	26.1	19.8	19.8	28.0	21.4	21.5	
Incr Delay (d2), s/veh	1.9	2.5	2.5	0.6	8.6	8.6	20.1	8.0	7.8	27.5	6.7	7.1	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	1.1	4.8	4.9	0.7	7.5	7.5	3.7	6.2	6.4	2.5	4.9	4.9	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	31.0	18.3	18.3	24.1	25.9	25.8	46.2	27.7	27.5	55.5	28.2	28.6	
LnGrp LOS	C	B	B	C	C	C	D	C	C	E	C	C	
Approach Vol, veh/h		934		1130			1061			775			
Approach Delay, s/veh		19.3		25.8			30.9			32.2			
Approach LOS		B		C			C			C			
Timer - Assigned Phs		2		3		4		6		7		8	
Phs Duration (G+Y+Rc), s		28.5		9.8		24.0		28.5		13.3		20.5	
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5		4.5		4.5	
Max Green Setting (Gmax), s		24.0		5.6		21.9		24.0		9.5		18.0	
Max Q Clear Time (g_c+I1), s		26.0		6.2		16.7		20.6		9.1		13.6	
Green Ext Time (p_c), s		0.0		0.0		2.4		2.2		0.0		1.6	
Intersection Summary													
HCM 6th Ctrl Delay			26.9										
HCM 6th LOS			C										

HCM 6th Signalized Intersection Summary

3: Park Ave & Mission Blvd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	600	170	50	945	30	70	175	65	25	135	40
Future Volume (veh/h)	80	600	170	50	945	30	70	175	65	25	135	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	0.99		0.99	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	89	667	135	56	1050	29	78	194	30	28	150	18
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	332	1487	301	416	1794	50	361	421	352	328	421	346
Arrive On Green	0.54	0.54	0.54	0.54	0.54	0.54	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	467	2771	560	605	3342	92	1080	1772	1483	1027	1772	1460
Grp Volume(v), veh/h	89	405	397	56	529	550	78	194	30	28	150	18
Grp Sat Flow(s),veh/h/ln	467	1683	1648	605	1683	1751	1080	1772	1483	1027	1772	1460
Q Serve(g_s), s	6.3	5.8	5.9	2.5	8.5	8.5	2.6	3.7	0.6	1.0	2.8	0.4
Cycle Q Clear(g_c), s	14.8	5.8	5.9	8.3	8.5	8.5	5.4	3.7	0.6	4.7	2.8	0.4
Prop In Lane	1.00		0.34	1.00		0.05	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	332	904	884	416	904	940	361	421	352	328	421	346
V/C Ratio(X)	0.27	0.45	0.45	0.13	0.59	0.59	0.22	0.46	0.09	0.09	0.36	0.05
Avail Cap(c_a), veh/h	410	1182	1157	517	1182	1230	592	800	670	548	800	659
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.2	5.6	5.6	8.2	6.2	6.2	14.9	13.0	11.8	15.0	12.7	11.7
Incr Delay (d2), s/veh	0.4	0.3	0.4	0.1	0.6	0.6	0.3	0.8	0.1	0.1	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.2	1.1	0.2	1.7	1.8	0.5	1.3	0.2	0.2	0.9	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.7	6.0	6.0	8.3	6.8	6.8	15.2	13.8	11.9	15.1	13.2	11.8
LnGrp LOS	B	A	A	A	A	A	B	B	B	B	B	B
Approach Vol, veh/h	891		1135				302		196			
Approach Delay, s/veh	6.6		6.9				14.0		13.3			
Approach LOS	A		A				B		B			
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	25.9		14.0		25.9		14.0					
Change Period (Y+Rc), s	4.5		4.5		4.5		4.5					
Max Green Setting (Gmax), s	28.0		18.0		28.0		18.0					
Max Q Clear Time (g_c+l1), s	16.8		7.4		10.5		6.7					
Green Ext Time (p_c), s	4.6		1.0		7.1		0.7					
Intersection Summary												
HCM 6th Ctrl Delay			8.1									
HCM 6th LOS			A									

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	450	120	80	830	115	130	550	95	60	415	80
Future Volume (veh/h)	120	450	120	80	830	115	130	550	95	60	415	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	145	542	108	96	1000	121	157	663	0	72	500	0
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	174	1133	225	120	1121	136	187	849	378	89	642	286
Arrive On Green	0.11	0.41	0.41	0.07	0.37	0.37	0.12	0.25	0.00	0.06	0.19	0.00
Sat Flow, veh/h	1594	2790	554	1594	3012	364	1594	3367	1502	1594	3367	1502
Grp Volume(v), veh/h	145	326	324	96	559	562	157	663	0	72	500	0
Grp Sat Flow(s),veh/h/ln	1594	1683	1660	1594	1683	1693	1594	1683	1502	1594	1683	1502
Q Serve(g_s), s	7.6	12.2	12.3	5.1	26.6	26.6	8.2	15.6	0.0	3.8	12.0	0.0
Cycle Q Clear(g_c), s	7.6	12.2	12.3	5.1	26.6	26.6	8.2	15.6	0.0	3.8	12.0	0.0
Prop In Lane	1.00		0.33	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	174	683	674	120	626	630	187	849	378	89	642	286
V/C Ratio(X)	0.83	0.48	0.48	0.80	0.89	0.89	0.84	0.78	0.00	0.81	0.78	0.00
Avail Cap(c_a), veh/h	178	683	674	217	669	673	196	865	386	125	715	319
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	37.2	18.7	18.7	38.8	25.2	25.2	36.9	29.7	0.0	39.8	32.8	0.0
Incr Delay (d2), s/veh	27.3	0.5	0.5	11.7	13.7	13.8	25.7	4.6	0.0	22.6	5.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	4.5	4.5	2.3	12.2	12.3	4.4	6.5	0.0	2.0	5.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.5	19.2	19.2	50.5	38.9	38.9	62.6	34.3	0.0	62.4	37.8	0.0
LnGrp LOS	E	B	B	D	D	D	E	C	A	E	D	A
Approach Vol, veh/h	795			1217			820			572		
Approach Delay, s/veh	27.5			39.8			39.7			40.9		
Approach LOS	C			D			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	39.1	9.3	26.0	13.8	36.2	14.5	20.8					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	31.8	6.7	21.9	9.5	33.9	10.5	18.1					
Max Q Clear Time (g_c+I1), s	14.3	5.8	17.6	9.6	28.6	10.2	14.0					
Green Ext Time (p_c), s	0.1	3.7	0.0	1.6	0.0	3.1	0.0	1.1				
Intersection Summary												
HCM 6th Ctrl Delay	37.1											
HCM 6th LOS	D											

Queues

2: White Ave & Mission Blvd

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	71	885	55	1094	187	884	110	703
v/c Ratio	0.67	0.71	0.47	0.87	0.76	0.72	0.71	0.77
Control Delay	53.1	20.0	32.3	27.6	48.5	21.9	56.9	26.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0
Total Delay	53.1	20.0	32.3	27.6	48.5	22.5	56.9	26.2
Queue Length 50th (ft)	23	147	16	201	72	158	43	123
Queue Length 95th (ft)	#88	210	#62	#320	#167	224	#118	181
Internal Link Dist (ft)		1234		263		242		331
Turn Bay Length (ft)	75		150		65		75	
Base Capacity (vph)	110	1302	121	1307	254	1238	155	991
Starvation Cap Reductn	0	0	0	0	0	101	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.68	0.45	0.84	0.74	0.78	0.71	0.71

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary

1: Hamilton Blvd & Mission Blvd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	875	70	45	725	60	50	115	40	70	225	105
Future Volume (veh/h)	80	875	70	45	725	60	50	115	40	70	225	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.96	1.00		0.98	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	83	911	64	47	755	52	52	120	9	73	234	22
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	316	1380	97	267	1380	95	85	628	47	106	375	306
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.05	0.20	0.20	0.07	0.21	0.21
Sat Flow, veh/h	602	3185	224	515	3186	219	1594	3171	235	1594	1772	1448
Grp Volume(v), veh/h	83	481	494	47	399	408	52	63	66	73	234	22
Grp Sat Flow(s),veh/h/ln	602	1683	1725	515	1683	1722	1594	1683	1723	1594	1772	1448
Q Serve(g_s), s	5.3	10.1	10.1	3.6	7.9	7.9	1.4	1.4	1.4	2.0	5.4	0.5
Cycle Q Clear(g_c), s	13.2	10.1	10.1	13.7	7.9	7.9	1.4	1.4	1.4	2.0	5.4	0.5
Prop In Lane	1.00		0.13	1.00		0.13	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	316	729	747	267	729	746	85	333	341	106	375	306
V/C Ratio(X)	0.26	0.66	0.66	0.18	0.55	0.55	0.61	0.19	0.19	0.69	0.62	0.07
Avail Cap(c_a), veh/h	370	881	903	314	881	902	178	678	694	182	718	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.3	10.1	10.1	15.5	9.4	9.4	20.7	14.9	14.9	20.4	16.0	14.1
Incr Delay (d2), s/veh	0.4	1.4	1.3	0.3	0.6	0.6	7.0	0.3	0.3	7.6	1.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.9	3.0	0.4	2.2	2.2	0.6	0.5	0.5	0.9	2.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.7	11.4	11.4	15.8	10.0	10.0	27.7	15.2	15.2	28.0	17.7	14.2
LnGrp LOS	B	B	B	B	B	B	C	B	B	C	B	B
Approach Vol, veh/h	1058				854				181			
Approach Delay, s/veh	11.7				10.4				18.8			
Approach LOS	B				B				B			
Timer - Assigned Phs	2			3		4		6		7		8
Phs Duration (G+Y+Rc), s	23.9			7.5		13.4		23.9		6.9		14.0
Change Period (Y+Rc), s	4.5			4.5		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s	23.4			5.1		18.0		23.4		5.0		18.1
Max Q Clear Time (g_c+l1), s	15.2			4.0		3.4		15.7		3.4		7.4
Green Ext Time (p_c), s	4.2			0.0		0.5		3.2		0.0		0.9
Intersection Summary												
HCM 6th Ctrl Delay	12.8											
HCM 6th LOS	B											

HCM 6th Signalized Intersection Summary

2: White Ave & Mission Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	805	100	65	655	115	95	550	40	110	790	80
Future Volume (veh/h)	95	805	100	65	655	115	95	550	40	110	790	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	1.00		0.94	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	96	813	85	66	662	92	96	556	31	111	798	68
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	254	1168	122	215	1122	156	118	953	53	137	959	82
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.07	0.29	0.29	0.09	0.31	0.31
Sat Flow, veh/h	631	3064	320	553	2945	409	1594	3242	180	1594	3133	267
Grp Volume(v), veh/h	96	447	451	66	378	376	96	288	299	111	429	437
Grp Sat Flow(s),veh/h/ln	631	1683	1701	553	1683	1670	1594	1683	1739	1594	1683	1717
Q Serve(g_s), s	8.1	12.6	12.6	6.4	10.1	10.2	3.4	8.2	8.3	3.9	13.4	13.4
Cycle Q Clear(g_c), s	18.2	12.6	12.6	19.1	10.1	10.2	3.4	8.2	8.3	3.9	13.4	13.4
Prop In Lane	1.00		0.19	1.00		0.24	1.00		0.10	1.00		0.16
Lane Grp Cap(c), veh/h	254	642	648	215	642	637	118	495	511	137	515	525
V/C Ratio(X)	0.38	0.70	0.70	0.31	0.59	0.59	0.82	0.58	0.58	0.81	0.83	0.83
Avail Cap(c_a), veh/h	259	653	660	219	653	648	155	540	558	184	570	581
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.2	14.7	14.7	22.7	13.9	14.0	25.8	17.0	17.0	25.4	18.2	18.2
Incr Delay (d2), s/veh	0.9	3.2	3.1	0.8	1.4	1.4	21.6	1.4	1.3	17.8	9.4	9.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	4.6	4.6	0.8	3.5	3.5	1.9	3.0	3.1	2.0	5.8	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.2	17.9	17.9	23.5	15.3	15.3	47.4	18.3	18.3	43.1	27.7	27.5
LnGrp LOS	C	B	B	C	B	B	D	B	B	D	C	C
Approach Vol, veh/h	994			820			683			977		
Approach Delay, s/veh	18.3			16.0			22.4			29.4		
Approach LOS	B			B			C			C		
Timer - Assigned Phs	2		3	4		6		7	8			
Phs Duration (G+Y+Rc), s	26.0		9.3	21.1		26.0		8.7	21.8			
Change Period (Y+Rc), s	4.5		4.5	4.5		4.5		4.5	4.5			
Max Green Setting (Gmax), s	21.9		6.5	18.1		21.9		5.5	19.1			
Max Q Clear Time (g_c+I1), s	20.2		5.9	10.3		21.1		5.4	15.4			
Green Ext Time (p_c), s	1.0		0.0	2.1		0.5		0.0	1.8			

Intersection Summary

HCM 6th Ctrl Delay	21.7
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary

3: Park Ave & Mission Blvd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	835	45	70	685	40	175	165	65	50	165	70
Future Volume (veh/h)	45	835	45	70	685	40	175	165	65	50	165	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.95	0.99		0.97	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	48	898	38	75	737	32	188	177	26	54	177	28
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	354	1483	63	303	1481	64	442	590	485	442	590	486
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	623	3284	139	533	3279	142	1041	1772	1456	1043	1772	1457
Grp Volume(v), veh/h	48	460	476	75	378	391	188	177	26	54	177	28
Grp Sat Flow(s),veh/h/ln	623	1683	1740	533	1683	1738	1041	1772	1456	1043	1772	1457
Q Serve(g_s), s	2.5	8.6	8.6	5.2	6.6	6.7	6.8	3.1	0.5	1.7	3.1	0.5
Cycle Q Clear(g_c), s	9.1	8.6	8.6	13.8	6.6	6.7	9.9	3.1	0.5	4.8	3.1	0.5
Prop In Lane	1.00		0.08	1.00		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	354	760	786	303	760	785	442	590	485	442	590	486
V/C Ratio(X)	0.14	0.61	0.61	0.25	0.50	0.50	0.43	0.30	0.05	0.12	0.30	0.06
Avail Cap(c_a), veh/h	416	926	957	355	926	956	543	763	627	544	763	627
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.3	8.7	8.7	13.9	8.1	8.1	14.0	10.3	9.5	12.1	10.3	9.5
Incr Delay (d2), s/veh	0.2	0.8	0.8	0.4	0.5	0.5	0.6	0.3	0.0	0.1	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.2	2.3	0.5	1.7	1.8	1.3	1.0	0.1	0.3	1.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.5	9.4	9.4	14.3	8.6	8.6	14.7	10.6	9.5	12.2	10.6	9.5
LnGrp LOS	B	A	A	B	A	A	B	B	A	B	B	A
Approach Vol, veh/h	984				844		391				259	
Approach Delay, s/veh	9.5				9.1		12.5				10.8	
Approach LOS	A				A		B				B	
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	23.4		18.4		23.4		18.4					
Change Period (Y+Rc), s	4.5		4.5		4.5		4.5					
Max Green Setting (Gmax), s	23.0		18.0		23.0		18.0					
Max Q Clear Time (g_c+I1), s	11.1		11.9		15.8		6.8					
Green Ext Time (p_c), s	4.9		1.0		3.1		0.9					
Intersection Summary												
HCM 6th Ctrl Delay			10.0									
HCM 6th LOS			A									

HCM 6th Signalized Intersection Summary

4: Garey Ave & Mission Blvd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	145	715	150	155	540	95	150	640	135	105	630	95
Future Volume (veh/h)	145	715	150	155	540	95	150	640	135	105	630	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	1.00		0.97	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	148	730	127	158	551	77	153	653	34	107	643	20
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	180	820	143	188	863	120	185	890	383	132	779	334
Arrive On Green	0.11	0.29	0.29	0.12	0.29	0.29	0.12	0.26	0.26	0.08	0.23	0.23
Sat Flow, veh/h	1594	2852	496	1594	2951	411	1594	3367	1450	1594	3367	1441
Grp Volume(v), veh/h	148	431	426	158	313	315	153	653	34	107	643	20
Grp Sat Flow(s),veh/h/ln	1594	1683	1665	1594	1683	1679	1594	1683	1450	1594	1683	1441
Q Serve(g_s), s	6.6	17.8	17.9	7.1	11.8	11.9	6.8	12.9	1.3	4.8	13.2	0.8
Cycle Q Clear(g_c), s	6.6	17.8	17.9	7.1	11.8	11.9	6.8	12.9	1.3	4.8	13.2	0.8
Prop In Lane	1.00		0.30	1.00		0.24	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	180	484	478	188	492	491	185	890	383	132	779	334
V/C Ratio(X)	0.82	0.89	0.89	0.84	0.64	0.64	0.83	0.73	0.09	0.81	0.82	0.06
Avail Cap(c_a), veh/h	221	506	501	188	492	491	186	890	383	175	832	356
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.6	24.8	24.9	31.4	22.4	22.4	31.5	24.4	20.2	32.8	26.6	21.8
Incr Delay (d2), s/veh	18.1	17.2	17.4	27.2	2.7	2.8	25.5	3.2	0.1	18.5	6.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	8.8	8.8	4.0	4.7	4.7	3.8	5.1	0.4	2.4	5.5	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.7	42.0	42.3	58.6	25.1	25.2	57.0	27.6	20.3	51.3	33.1	21.9
LnGrp LOS	D	D	D	E	C	C	E	C	C	D	C	C
Approach Vol, veh/h	1005			786			840			770		
Approach Delay, s/veh	43.3			31.9			32.7			35.3		
Approach LOS	D			C			C			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	31.1	25.4	10.5	23.8	12.7	25.8	12.9	21.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	21.9	21.9	8.0	18.5	10.1	20.4	8.5	18.0				
Max Q Clear Time (g_c+19, s)	19.9	19.9	6.8	14.9	8.6	13.9	8.8	15.2				
Green Ext Time (p_c), s	0.0	1.1	0.0	1.4	0.1	2.0	0.0	1.1				
Intersection Summary												
HCM 6th Ctrl Delay	36.2											
HCM 6th LOS	D											

Queues

2: White Ave & Mission Blvd

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	96	914	66	778	96	596	111	879
v/c Ratio	0.63	0.74	0.55	0.63	0.52	0.55	0.54	0.78
Control Delay	38.6	19.5	37.1	16.7	39.2	18.4	37.3	23.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.6	19.5	37.1	16.7	39.2	18.4	37.3	23.3
Queue Length 50th (ft)	28	141	18	111	34	91	39	146
Queue Length 95th (ft)	#95	204	#72	163	#93	137	#100	#237
Internal Link Dist (ft)		1234		263		242		331
Turn Bay Length (ft)	75		150		65		75	
Base Capacity (vph)	177	1426	139	1430	183	1196	213	1257
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.64	0.47	0.54	0.52	0.50	0.52	0.70

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary

1: Hamilton Blvd & Mission Blvd

Opening Year Plus Project AM Peak Hour
888 West Mission

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	730	65	47	1084	46	100	195	82	77	135	95
Future Volume (veh/h)	60	730	65	47	1084	46	100	195	82	77	135	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.96	1.00		0.97	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	67	820	63	53	1218	46	112	219	14	87	152	18
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	216	1674	129	321	1748	66	151	646	41	119	322	259
Arrive On Green	0.53	0.53	0.52	0.53	0.53	0.52	0.09	0.20	0.19	0.07	0.18	0.18
Sat Flow, veh/h	392	3162	243	562	3302	125	1594	3207	203	1594	1772	1427
Grp Volume(v), veh/h	67	437	446	53	620	644	112	114	119	87	152	18
Grp Sat Flow(s),veh/h/ln	392	1683	1721	562	1683	1743	1594	1683	1727	1594	1772	1427
Q Serve(g_s), s	9.5	10.2	10.2	4.1	17.0	17.0	4.2	3.6	3.6	3.3	4.7	0.6
Cycle Q Clear(g_c), s	26.5	10.2	10.2	14.3	17.0	17.0	4.2	3.6	3.6	3.3	4.7	0.6
Prop In Lane	1.00		0.14	1.00		0.07	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	216	891	911	321	891	923	151	339	348	119	322	259
V/C Ratio(X)	0.31	0.49	0.49	0.16	0.70	0.70	0.74	0.34	0.34	0.73	0.47	0.07
Avail Cap(c_a), veh/h	240	995	1017	356	995	1030	206	521	534	191	531	427
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.7	9.2	9.3	13.8	10.8	10.9	27.2	21.1	21.2	28.0	22.6	20.9
Incr Delay (d2), s/veh	0.8	0.4	0.4	0.2	1.9	1.8	9.1	0.6	0.6	8.2	1.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	3.0	3.1	0.5	5.3	5.5	1.9	1.4	1.4	1.4	1.9	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.5	9.6	9.7	14.0	12.7	12.7	36.3	21.7	21.8	36.2	23.7	21.1
LnGrp LOS	C	A	A	B	B	B	D	C	C	D	C	C
Approach Vol, veh/h		950			1317			345			257	
Approach Delay, s/veh		10.5			12.7			26.5			27.7	
Approach LOS		B			B			C			C	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		36.7	8.6	16.4		36.7	9.8	15.2				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		36.0	6.9	18.6		36.0	7.5	18.0				
Max Q Clear Time (g_c+l1), s		28.5	5.3	5.6		19.0	6.2	6.7				
Green Ext Time (p_c), s		3.7	0.0	0.9		8.4	0.0	0.6				
Intersection Summary												
HCM 6th Ctrl Delay			15.0									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary

2: White Ave & Mission Blvd

Opening Year Plus Project AM Peak Hour
888 West Mission



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	714	100	50	885	110	177	757	55	100	523	125
Future Volume (veh/h)	65	714	100	50	885	110	177	757	55	100	523	125
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	71	785	88	55	973	102	195	832	50	110	575	100
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	165	1188	133	216	1197	125	244	1049	63	147	755	131
Arrive On Green	0.39	0.39	0.38	0.39	0.39	0.38	0.15	0.33	0.32	0.09	0.27	0.26
Sat Flow, veh/h	470	3042	341	567	3066	321	1594	3221	194	1594	2844	493
Grp Volume(v), veh/h	71	434	439	55	534	541	195	435	447	110	339	336
Grp Sat Flow(s),veh/h/ln	470	1683	1700	567	1683	1704	1594	1683	1732	1594	1683	1654
Q Serve(g_s), s	6.7	13.3	13.3	5.5	17.8	17.8	7.4	14.7	14.7	4.2	11.6	11.7
Cycle Q Clear(g_c), s	24.5	13.3	13.3	18.9	17.8	17.8	7.4	14.7	14.7	4.2	11.6	11.7
Prop In Lane	1.00		0.20	1.00		0.19	1.00		0.11	1.00		0.30
Lane Grp Cap(c), veh/h	165	657	664	216	657	665	244	548	564	147	447	439
V/C Ratio(X)	0.43	0.66	0.66	0.25	0.81	0.81	0.80	0.79	0.79	0.75	0.76	0.76
Avail Cap(c_a), veh/h	165	657	664	216	657	665	254	601	618	155	496	488
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.0	15.7	15.8	23.5	17.1	17.1	25.6	19.2	19.3	27.8	21.2	21.3
Incr Delay (d2), s/veh	1.8	2.5	2.4	0.6	7.7	7.6	15.9	6.6	6.5	17.0	6.1	6.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	4.9	4.9	0.7	7.3	7.4	3.7	6.1	6.2	2.2	4.9	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.8	18.2	18.2	24.1	24.8	24.7	41.6	25.9	25.7	44.7	27.3	27.7
LnGrp LOS	C	B	B	C	C	C	D	C	C	D	C	C
Approach Vol, veh/h	944		1130			1077			785			
Approach Delay, s/veh	19.1		24.7			28.7			29.9			
Approach LOS	B		C			C			C			
Timer - Assigned Phs	2		3		4		6		7		8	
Phs Duration (G+Y+Rc), s	28.5		9.8		24.4		28.5		13.6		20.6	
Change Period (Y+Rc), s	4.5		4.5		4.5		4.5		4.5		4.5	
Max Green Setting (Gmax), s	24.0		5.6		21.9		24.0		9.5		18.0	
Max Q Clear Time (g_c+l1), s	26.5		6.2		16.7		20.9		9.4		13.7	
Green Ext Time (p_c), s	0.0		0.0		2.4		2.0		0.0		1.6	
Intersection Summary												
HCM 6th Ctrl Delay			25.5									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary

3: Park Ave & Mission Blvd

Opening Year Plus Project AM Peak Hour
888 West Mission



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	611	170	50	960	30	70	175	65	25	135	40
Future Volume (veh/h)	80	611	170	50	960	30	70	175	65	25	135	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	0.99		0.99	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	89	679	136	56	1067	29	78	194	6	28	150	4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	339	1559	312	426	1878	51	365	431	361	333	431	355
Arrive On Green	0.56	0.56	0.55	0.56	0.56	0.55	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	459	2777	556	598	3344	91	1094	1772	1483	1050	1772	1460
Grp Volume(v), veh/h	89	411	404	56	537	559	78	194	6	28	150	4
Grp Sat Flow(s),veh/h/ln	459	1683	1649	598	1683	1751	1094	1772	1483	1050	1772	1460
Q Serve(g_s), s	6.3	5.8	5.9	2.5	8.4	8.4	2.6	3.8	0.1	1.0	2.9	0.1
Cycle Q Clear(g_c), s	14.8	5.8	5.9	8.3	8.4	8.4	5.5	3.8	0.1	4.8	2.9	0.1
Prop In Lane	1.00		0.34	1.00		0.05	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	339	945	926	426	945	984	365	431	361	333	431	355
V/C Ratio(X)	0.26	0.44	0.44	0.13	0.57	0.57	0.21	0.45	0.02	0.08	0.35	0.01
Avail Cap(c_a), veh/h	456	1374	1346	578	1374	1430	592	799	669	551	799	658
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.6	5.2	5.3	7.7	5.8	5.8	15.1	13.2	11.8	15.2	12.8	11.8
Incr Delay (d2), s/veh	0.4	0.3	0.3	0.1	0.5	0.5	0.3	0.7	0.0	0.1	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.1	1.1	0.2	1.6	1.7	0.6	1.3	0.0	0.2	1.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.0	5.5	5.6	7.8	6.3	6.3	15.4	13.9	11.8	15.3	13.3	11.8
LnGrp LOS	B	A	A	A	A	A	B	B	B	B	B	B
Approach Vol, veh/h	904			1152			278			182		
Approach Delay, s/veh	6.1			6.4			14.3			13.6		
Approach LOS	A			A			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	27.0			14.0			27.0			14.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	33.0			18.0			33.0			18.0		
Max Q Clear Time (g_c+l1), s	16.8			7.5			10.4			6.8		
Green Ext Time (p_c), s	5.8			1.0			8.1			0.6		

Intersection Summary

HCM 6th Ctrl Delay	7.7
HCM 6th LOS	A

HCM 6th Signalized Intersection Summary

4: Garey Ave & Mission Blvd

Opening Year Plus Project AM Peak Hour
888 West Mission



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	456	123	80	838	115	134	550	95	60	415	83
Future Volume (veh/h)	122	456	123	80	838	115	134	550	95	60	415	83
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	147	549	111	96	1010	121	161	663	0	72	500	0
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	184	1148	231	128	1139	136	199	872	389	98	658	294
Arrive On Green	0.12	0.41	0.41	0.08	0.38	0.37	0.12	0.26	0.00	0.06	0.20	0.00
Sat Flow, veh/h	1594	2782	560	1594	3016	361	1594	3367	1502	1594	3367	1502
Grp Volume(v), veh/h	147	331	329	96	563	568	161	663	0	72	500	0
Grp Sat Flow(s),veh/h/ln	1594	1683	1659	1594	1683	1694	1594	1683	1502	1594	1683	1502
Q Serve(g_s), s	7.7	12.3	12.5	5.1	26.9	26.9	8.4	15.6	0.0	3.8	12.0	0.0
Cycle Q Clear(g_c), s	7.7	12.3	12.5	5.1	26.9	26.9	8.4	15.6	0.0	3.8	12.0	0.0
Prop In Lane	1.00		0.34	1.00		0.21	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	184	695	684	128	636	639	199	872	389	98	658	294
V/C Ratio(X)	0.80	0.48	0.48	0.75	0.89	0.89	0.81	0.76	0.00	0.74	0.76	0.00
Avail Cap(c_a), veh/h	186	695	684	225	675	679	204	879	392	134	730	326
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	37.0	18.4	18.5	38.6	25.0	25.0	36.5	29.3	0.0	39.6	32.6	0.0
Incr Delay (d2), s/veh	21.1	0.5	0.5	8.4	13.1	13.1	20.6	3.9	0.0	12.7	4.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	4.6	4.6	2.2	12.2	12.4	4.3	6.4	0.0	1.8	5.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.0	18.9	19.0	47.0	38.0	38.1	57.1	33.2	0.0	52.3	36.8	0.0
LnGrp LOS	E	B	B	D	D	D	E	C	A	D	D	A
Approach Vol, veh/h	807			1227			824			572		
Approach Delay, s/veh	26.1			38.8			37.9			38.8		
Approach LOS	C			D			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	39.4	9.3	26.2	13.9	36.4	14.7	20.8					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	31.8	6.7	21.9	9.5	33.9	10.5	18.1					
Max Q Clear Time (g_c+17), s	14.5	5.8	17.6	9.7	28.9	10.4	14.0					
Green Ext Time (p_c), s	0.1	3.7	0.0	1.6	0.0	3.0	0.0	1.1				

Intersection Summary

HCM 6th Ctrl Delay	35.6
HCM 6th LOS	D

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↱			↑↑↑↑		↱↑
Traffic Vol, veh/h	855	9	0	1040	0	8
Future Vol, veh/h	855	9	0	1040	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	60	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	950	10	0	1156	0	9
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	480
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	532
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	532
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		11.9	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	532	-	-	-		
HCM Lane V/C Ratio	0.017	-	-	-		
HCM Control Delay (s)	11.9	-	-	-		
HCM Lane LOS	B	-	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	-		

Intersection

Int Delay, s/veh 0.7

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations 

Traffic Vol, veh/h 3 0 0 10 10 15

Future Vol, veh/h 3 0 0 10 10 15

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length 0 - - - - -

Veh in Median Storage, # 0 - - 0 0 -

Grade, % 0 - - 0 0 -

Peak Hour Factor 60 60 60 60 60 60

Heavy Vehicles, % 2 2 2 2 2 2

Mvmt Flow 5 0 0 17 17 25

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 47 30 42 0 - 0

Stage 1 30 - - - - -

Stage 2 17 - - - - -

Critical Hdwy 6.42 6.22 4.12 - - -

Critical Hdwy Stg 1 5.42 - - - - -

Critical Hdwy Stg 2 5.42 - - - - -

Follow-up Hdwy 3.518 3.318 2.218 - - -

Pot Cap-1 Maneuver 963 1044 1567 - - -

Stage 1 993 - - - - -

Stage 2 1006 - - - - -

Platoon blocked, % - - -

Mov Cap-1 Maneuver 963 1044 1567 - - -

Mov Cap-2 Maneuver 963 - - - - -

Stage 1 993 - - - - -

Stage 2 1006 - - - - -

Approach EB NB SB

HCM Control Delay, s 8.8 0 0

HCM LOS A

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h) 1567 - 963 - -

HCM Lane V/C Ratio - - 0.005 - -

HCM Control Delay (s) 0 - 8.8 - -

HCM Lane LOS A - A - -

HCM 95th %tile Q(veh) 0 - 0 - -

Intersection

Int Delay, s/veh 2.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	15	20	0	0	9
Future Vol, veh/h	11	15	20	0	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	60	60	60	60	60	60
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	25	33	0	0	15

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	33	0	94
Stage 1	-	-	33
Stage 2	-	-	61
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1579	-	906
Stage 1	-	-	989
Stage 2	-	-	962
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1579	-	895
Mov Cap-2 Maneuver	-	-	895
Stage 1	-	-	977
Stage 2	-	-	962

Approach	EB	WB	SB
HCM Control Delay, s	3.1	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1579	-	-	-	1041
HCM Lane V/C Ratio	0.012	-	-	-	0.014
HCM Control Delay (s)	7.3	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	14	975	8	0	668
Future Vol, veh/h	0	14	975	8	0	668
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	15	1071	9	0	734
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	540	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	486	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	486	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	12.6	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT			
Capacity (veh/h)	-	-	486	-		
HCM Lane V/C Ratio	-	-	0.032	-		
HCM Control Delay (s)	-	-	12.6	-		
HCM Lane LOS	-	-	B	-		
HCM 95th %tile Q(veh)	-	-	0.1	-		

HCM Unsignalized Intersection Capacity Analysis

5: Driveway & Mission Blvd

Opening Year Plus Project AM Peak Hour

888 West Mission

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑↑		↑
Traffic Volume (veh/h)	855	9	0	1040	0	8
Future Volume (Veh/h)	855	9	0	1040	0	8
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	950	10	0	1156	0	9
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (ft)	157			1177		
pX, platoon unblocked			0.78		0.78	0.78
vC, conflicting volume			960		1340	480
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			374		863	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			918		228	842
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	633	327	385	385	385	9
Volume Left	0	0	0	0	0	0
Volume Right	0	10	0	0	0	9
cSH	1700	1700	1700	1700	1700	842
Volume to Capacity	0.37	0.19	0.23	0.23	0.23	0.01
Queue Length 95th (ft)	0	0	0	0	0	1
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	9.3
Lane LOS						A
Approach Delay (s)	0.0		0.0			9.3
Approach LOS						A
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			33.9%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis 6: Cypress St & Driveway

Opening Year Plus Project AM Peak Hour

888 West Mission

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	3	0	0	10	10	15
Future Volume (Veh/h)	3	0	0	10	10	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.60	0.60	0.60	0.60	0.60	0.60
Hourly flow rate (vph)	5	0	0	17	17	25
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	46	30	42			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	46	30	42			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	100			
cM capacity (veh/h)	963	1045	1567			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	5	17	42			
Volume Left	5	0	0			
Volume Right	0	0	25			
cSH	963	1567	1700			
Volume to Capacity	0.01	0.00	0.02			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	8.8	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	8.8	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			0.7			
Intersection Capacity Utilization		13.3%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

7: 6th St & Driveway

Opening Year Plus Project AM Peak Hour

888 West Mission



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Volume (veh/h)	11	15	20	0	0	9
Future Volume (Veh/h)	11	15	20	0	0	9
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.60	0.60	0.60	0.60	0.60	0.60
Hourly flow rate (vph)	18	25	33	0	0	15
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (ft)		161				
pX, platoon unblocked						
vC, conflicting volume	33				94	33
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	33				94	33
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				100	99
cM capacity (veh/h)	1579				895	1041
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	43	33	15			
Volume Left	18	0	0			
Volume Right	0	0	15			
cSH	1579	1700	1041			
Volume to Capacity	0.01	0.02	0.01			
Queue Length 95th (ft)	1	0	1			
Control Delay (s)	3.1	0.0	8.5			
Lane LOS	A		A			
Approach Delay (s)	3.1	0.0	8.5			
Approach LOS			A			
Intersection Summary						
Average Delay			2.9			
Intersection Capacity Utilization			18.1%	ICU Level of Service	A	
Analysis Period (min)			15			

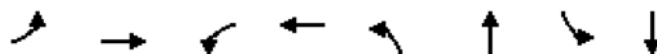
HCM Unsignalized Intersection Capacity Analysis 8: White Ave & Driveway

Opening Year Plus Project AM Peak Hour
888 West Mission

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	14	975	8	0	668
Future Volume (Veh/h)	0	14	975	8	0	668
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	15	1071	9	0	734
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)			131			191
pX, platoon unblocked	0.83					
vC, conflicting volume	1442	540			1080	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1114	540			1080	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	97			100	
cM capacity (veh/h)	167	486			641	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	15	714	366	367	367	
Volume Left	0	0	0	0	0	
Volume Right	15	0	9	0	0	
cSH	486	1700	1700	1700	1700	
Volume to Capacity	0.03	0.42	0.22	0.22	0.22	
Queue Length 95th (ft)	2	0	0	0	0	
Control Delay (s)	12.6	0.0	0.0	0.0	0.0	
Lane LOS	B					
Approach Delay (s)	12.6	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			37.2%		ICU Level of Service	A
Analysis Period (min)			15			

Queues
2: White Ave & Mission Blvd

Opening Year Plus Project AM Peak Hour
888 West Mission



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	71	895	55	1094	195	892	110	712
v/c Ratio	0.68	0.71	0.49	0.87	0.79	0.72	0.71	0.78
Control Delay	53.4	20.2	33.9	27.8	51.3	22.1	57.3	26.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0
Total Delay	53.4	20.2	33.9	27.8	51.3	22.7	57.3	26.7
Queue Length 50th (ft)	23	150	16	201	76	160	43	125
Queue Length 95th (ft)	#88	213	#63	#320	#176	227	#118	184
Internal Link Dist (ft)		1234		77		111		331
Turn Bay Length (ft)	75				65		75	
Base Capacity (vph)	109	1301	117	1301	252	1241	154	986
Starvation Cap Reductn	0	0	0	0	0	100	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.69	0.47	0.84	0.77	0.78	0.71	0.72

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary

1: Hamilton Blvd & Mission Blvd

Opening Year Plus Project PM Peak Hour
888 West Mission

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	882	70	48	731	62	50	115	43	73	225	105
Future Volume (veh/h)	80	882	70	48	731	62	50	115	43	73	225	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.96	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	83	919	64	50	761	55	52	120	10	76	234	22
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	322	1418	99	274	1412	102	103	649	53	127	393	321
Arrive On Green	0.44	0.44	0.43	0.44	0.44	0.43	0.06	0.21	0.20	0.08	0.22	0.22
Sat Flow, veh/h	597	3187	222	511	3174	229	1594	3143	259	1594	1772	1449
Grp Volume(v), veh/h	83	485	498	50	403	413	52	64	66	76	234	22
Grp Sat Flow(s),veh/h/ln	597	1683	1726	511	1683	1720	1594	1683	1719	1594	1772	1449
Q Serve(g_s), s	5.3	10.0	10.0	3.8	7.8	7.8	1.4	1.4	1.4	2.1	5.3	0.5
Cycle Q Clear(g_c), s	13.1	10.0	10.0	13.8	7.8	7.8	1.4	1.4	1.4	2.1	5.3	0.5
Prop In Lane	1.00		0.13	1.00		0.13	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	322	749	768	274	749	765	103	348	355	127	393	321
V/C Ratio(X)	0.26	0.65	0.65	0.18	0.54	0.54	0.51	0.18	0.19	0.60	0.60	0.07
Avail Cap(c_a), veh/h	377	902	925	320	902	922	197	698	713	200	739	605
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.8	9.7	9.7	15.1	9.0	9.1	20.2	14.6	14.6	19.8	15.6	13.7
Incr Delay (d2), s/veh	0.4	1.2	1.2	0.3	0.6	0.6	3.8	0.3	0.3	4.5	1.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.8	2.9	0.4	2.1	2.2	0.6	0.5	0.5	0.8	1.9	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.2	10.9	10.9	15.4	9.6	9.7	24.0	14.8	14.9	24.3	17.0	13.8
LnGrp LOS	B	B	B	B	A	A	C	B	B	C	B	B
Approach Vol, veh/h	1066			866			182			332		
Approach Delay, s/veh	11.1			10.0			17.5			18.5		
Approach LOS	B			A			B			B		
Timer - Assigned Phs	2		3	4		6	7	8				
Phs Duration (G+Y+Rc), s	23.8		7.5	13.2		23.8	6.9	13.9				
Change Period (Y+Rc), s	4.5		4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s	23.4		5.1	18.0		23.4	5.0	18.1				
Max Q Clear Time (g_c+I1), s	15.1		4.1	3.4		15.8	3.4	7.3				
Green Ext Time (p_c), s	4.2		0.0	0.5		3.3	0.0	0.9				
Intersection Summary												
HCM 6th Ctrl Delay	12.2											
HCM 6th LOS	B											

HCM 6th Signalized Intersection Summary

2: White Ave & Mission Blvd

Opening Year Plus Project PM Peak Hour
888 West Mission



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	812	106	65	655	115	106	560	40	110	803	80
Future Volume (veh/h)	95	812	106	65	655	115	106	560	40	110	803	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	96	820	90	66	662	92	107	566	31	111	811	68
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	258	1180	130	214	1144	159	145	1005	55	150	982	82
Arrive On Green	0.39	0.39	0.38	0.39	0.39	0.38	0.09	0.31	0.30	0.09	0.31	0.30
Sat Flow, veh/h	633	3047	334	547	2955	410	1594	3245	177	1594	3138	263
Grp Volume(v), veh/h	96	453	457	66	377	377	107	293	304	111	435	444
Grp Sat Flow(s), veh/h/ln	633	1683	1698	547	1683	1681	1594	1683	1740	1594	1683	1717
Q Serve(g_s), s	8.1	13.0	13.0	6.6	10.2	10.2	3.8	8.4	8.4	3.9	13.8	13.8
Cycle Q Clear(g_c), s	18.3	13.0	13.0	19.6	10.2	10.2	3.8	8.4	8.4	3.9	13.8	13.8
Prop In Lane	1.00		0.20	1.00		0.24	1.00		0.10	1.00		0.15
Lane Grp Cap(c), veh/h	258	652	658	214	652	651	145	521	539	150	527	538
V/C Ratio(X)	0.37	0.69	0.69	0.31	0.58	0.58	0.74	0.56	0.56	0.74	0.83	0.83
Avail Cap(c_a), veh/h	259	656	662	215	656	655	166	545	563	194	574	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.2	14.8	14.8	23.0	13.9	14.0	25.5	16.6	16.6	25.3	18.3	18.3
Incr Delay (d2), s/veh	0.9	3.2	3.1	0.8	1.2	1.3	13.9	1.2	1.2	10.3	9.0	8.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	4.7	4.8	0.8	3.5	3.5	1.9	3.0	3.1	1.8	5.9	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.0	17.9	17.9	23.8	15.1	15.2	39.4	17.8	17.8	35.7	27.3	27.2
LnGrp LOS	C	B	B	C	B	B	D	B	B	D	C	C
Approach Vol, veh/h	1006			820			704			990		
Approach Delay, s/veh	18.3			15.9			21.1			28.2		
Approach LOS	B			B			C			C		
Timer - Assigned Phs	2			3			4			6		
Phs Duration (G+Y+Rc), s	26.3			9.4			21.8			26.3		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	21.9			6.5			18.1			21.9		
Max Q Clear Time (g_c+I1), s	20.3			5.9			10.4			21.6		
Green Ext Time (p_c), s	1.0			0.0			2.1			0.2		

Intersection Summary

HCM 6th Ctrl Delay	21.1
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary

3: Park Ave & Mission Blvd

Opening Year Plus Project PM Peak Hour
888 West Mission



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↱		↰	↰↱		↰	↱	↰↱	↰	↱	↰↱
Traffic Volume (veh/h)	45	854	45	70	708	40	175	165	65	50	165	70
Future Volume (veh/h)	45	854	45	70	708	40	175	165	65	50	165	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	0.99		0.97	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	48	918	40	75	761	33	188	177	15	54	177	16
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	361	1574	69	310	1574	68	442	597	491	442	597	491
Arrive On Green	0.48	0.48	0.47	0.48	0.48	0.47	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	609	3280	143	523	3280	142	1052	1772	1457	1053	1772	1458
Grp Volume(v), veh/h	48	471	487	75	390	404	188	177	15	54	177	16
Grp Sat Flow(s),veh/h/ln	609	1683	1739	523	1683	1739	1052	1772	1457	1053	1772	1458
Q Serve(g_s), s	2.5	8.8	8.8	5.3	6.9	6.9	7.0	3.2	0.3	1.7	3.2	0.3
Cycle Q Clear(g_c), s	9.4	8.8	8.8	14.1	6.9	6.9	10.2	3.2	0.3	4.9	3.2	0.3
Prop In Lane	1.00		0.08	1.00		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	361	808	835	310	808	834	442	597	491	442	597	491
V/C Ratio(X)	0.13	0.58	0.58	0.24	0.48	0.48	0.43	0.30	0.03	0.12	0.30	0.03
Avail Cap(c_a), veh/h	460	1080	1116	395	1080	1116	546	772	634	546	772	635
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.9	8.2	8.2	13.3	7.7	7.7	14.4	10.7	9.7	12.5	10.7	9.7
Incr Delay (d2), s/veh	0.2	0.7	0.6	0.4	0.4	0.4	0.6	0.3	0.0	0.1	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.2	2.3	0.5	1.7	1.8	1.4	1.0	0.1	0.3	1.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.0	8.9	8.9	13.7	8.1	8.1	15.1	10.9	9.7	12.6	10.9	9.7
LnGrp LOS	B	A	A	B	A	A	B	B	A	B	B	A
Approach Vol, veh/h	1006			869			380			247		
Approach Delay, s/veh	9.0			8.6			12.9			11.2		
Approach LOS	A			A			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	24.9			18.7			24.9			18.7		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	27.5			18.5			27.5			18.5		
Max Q Clear Time (g_c+I1), s	11.4			12.2			16.1			6.9		
Green Ext Time (p_c), s	5.9			1.0			4.3			0.9		

Intersection Summary

HCM 6th Ctrl Delay	9.7
HCM 6th LOS	A

HCM 6th Signalized Intersection Summary

4: Garey Ave & Mission Blvd

Opening Year Plus Project PM Peak Hour
888 West Mission



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	149	725	155	155	552	95	156	640	135	105	630	100
Future Volume (veh/h)	149	725	155	155	552	95	156	640	135	105	630	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.96	1.00		0.97	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1673	1772	1772	1673	1772	1772	1673	1772	1772	1673	1772	1772
Adj Flow Rate, veh/h	152	740	131	158	563	78	159	653	34	107	643	21
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	194	840	149	199	881	122	196	913	394	143	799	342
Arrive On Green	0.12	0.30	0.29	0.12	0.30	0.29	0.12	0.27	0.27	0.09	0.24	0.24
Sat Flow, veh/h	1594	2843	503	1594	2955	408	1594	3367	1451	1594	3367	1442
Grp Volume(v), veh/h	152	438	433	158	320	321	159	653	34	107	643	21
Grp Sat Flow(s),veh/h/ln	1594	1683	1663	1594	1683	1679	1594	1683	1451	1594	1683	1442
Q Serve(g_s), s	6.8	18.1	18.1	7.0	12.0	12.1	7.1	12.8	1.3	4.8	13.1	0.8
Cycle Q Clear(g_c), s	6.8	18.1	18.1	7.0	12.0	12.1	7.1	12.8	1.3	4.8	13.1	0.8
Prop In Lane	1.00		0.30	1.00		0.24	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	194	497	491	199	502	501	196	913	394	143	799	342
V/C Ratio(X)	0.78	0.88	0.88	0.80	0.64	0.64	0.81	0.72	0.09	0.75	0.80	0.06
Avail Cap(c_a), veh/h	231	517	510	199	502	501	196	913	394	186	853	366
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.1	24.5	24.6	31.0	22.2	22.3	31.2	24.1	19.9	32.4	26.2	21.5
Incr Delay (d2), s/veh	13.5	15.7	16.0	19.7	2.7	2.8	21.7	2.7	0.1	11.6	5.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	8.8	8.7	3.6	4.8	4.8	3.7	5.0	0.4	2.2	5.4	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.6	40.2	40.5	50.7	24.9	25.0	52.9	26.7	19.9	44.0	31.6	21.6
LnGrp LOS	D	D	D	D	C	C	D	C	B	D	C	C
Approach Vol, veh/h	1023			799			846			771		
Approach Delay, s/veh	41.0			30.1			31.4			33.0		
Approach LOS	D			C			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	31.1	25.6	10.5	23.8	12.9	25.8	13.0	21.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	21.9	21.9	8.0	18.5	10.1	20.4	8.5	18.0				
Max Q Clear Time (g_c+I), s	20.1	20.1	6.8	14.8	8.8	14.1	9.1	15.1				
Green Ext Time (p_c), s	0.0	1.0	0.0	1.5	0.0	2.0	0.0	1.1				

Intersection Summary

HCM 6th Ctrl Delay	34.3
HCM 6th LOS	C

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↱			↑↑↑↑		↱↑
Traffic Vol, veh/h	955	7	0	915	0	14
Future Vol, veh/h	955	7	0	915	0	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	60	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1016	7	0	973	0	15
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	512
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	507
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	507
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		12.3	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	507	-	-	-		
HCM Lane V/C Ratio	0.029	-	-	-		
HCM Control Delay (s)	12.3	-	-	-		
HCM Lane LOS	B	-	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	-		

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	0	0	15	15	9
Future Vol, veh/h	5	0	0	15	15	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	0	0	17	17	10
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	39	22	27	0	-	0
Stage 1	22	-	-	-	-	-
Stage 2	17	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	973	1055	1587	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	1006	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	973	1055	1587	-	-	-
Mov Cap-2 Maneuver	973	-	-	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	1006	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.7	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1587	-	973	-	-	
HCM Lane V/C Ratio	-	-	0.006	-	-	
HCM Control Delay (s)	0	-	8.7	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Intersection						
Int Delay, s/veh	2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	30	20	0	0	12
Future Vol, veh/h	4	30	20	0	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	35	23	0	0	14
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	23	0	-	0	68	23
Stage 1	-	-	-	-	23	-
Stage 2	-	-	-	-	45	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1592	-	-	-	937	1054
Stage 1	-	-	-	-	1000	-
Stage 2	-	-	-	-	977	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1592	-	-	-	934	1054
Mov Cap-2 Maneuver	-	-	-	-	934	-
Stage 1	-	-	-	-	997	-
Stage 2	-	-	-	-	977	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.9	0		8.5		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1592	-	-	-	-	1054
HCM Lane V/C Ratio	0.003	-	-	-	-	0.013
HCM Control Delay (s)	7.3	0	-	-	-	8.5
HCM Lane LOS	A	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-	0

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			↕
Traffic Vol, veh/h	0	21	680	12	0	950
Future Vol, veh/h	0	21	680	12	0	950
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	21	687	12	0	960
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	-	350	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	646	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	646	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	10.8	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT			
Capacity (veh/h)	-	-	646	-		
HCM Lane V/C Ratio	-	-	0.033	-		
HCM Control Delay (s)	-	-	10.8	-		
HCM Lane LOS	-	-	B	-		
HCM 95th %tile Q(veh)	-	-	0.1	-		

HCM Unsignalized Intersection Capacity Analysis 5: Driveway & Mission Blvd

Opening Year Plus Project PM Peak Hour
888 West Mission

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑↑		↗
Traffic Volume (veh/h)	955	7	0	915	0	14
Future Volume (Veh/h)	955	7	0	915	0	14
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	1016	7	0	973	0	15
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (ft)	157			1177		
pX, platoon unblocked			0.76		0.76	0.76
vC, conflicting volume			1023		1344	512
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			413		833	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	98
cM capacity (veh/h)			873		235	829
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	677	346	324	324	324	15
Volume Left	0	0	0	0	0	0
Volume Right	0	7	0	0	0	15
cSH	1700	1700	1700	1700	1700	829
Volume to Capacity	0.40	0.20	0.19	0.19	0.19	0.02
Queue Length 95th (ft)	0	0	0	0	0	1
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	9.4
Lane LOS						A
Approach Delay (s)	0.0		0.0			9.4
Approach LOS						A
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			36.6%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis 6: Cypress St & Driveway

Opening Year Plus Project PM Peak Hour
888 West Mission

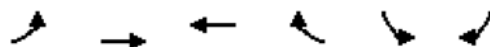
						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	0	0	15	15	9
Future Volume (Veh/h)	5	0	0	15	15	9
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	6	0	0	17	17	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	39	22	27			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	39	22	27			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	100			
cM capacity (veh/h)	973	1055	1587			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	6	17	27			
Volume Left	6	0	0			
Volume Right	0	0	10			
cSH	973	1587	1700			
Volume to Capacity	0.01	0.00	0.02			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	8.7	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	8.7	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay		1.0				
Intersection Capacity Utilization		13.3%		ICU Level of Service	A	
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis

7: 6th St & Driveway

Opening Year Plus Project PM Peak Hour

888 West Mission



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	4	30	20	0	0	12
Future Volume (Veh/h)	4	30	20	0	0	12
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	5	35	23	0	0	14
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		161				
pX, platoon unblocked						
vC, conflicting volume	23				68	23
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	23				68	23
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	99
cM capacity (veh/h)	1592				934	1054
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	40	23	14			
Volume Left	5	0	0			
Volume Right	0	0	14			
cSH	1592	1700	1054			
Volume to Capacity	0.00	0.01	0.01			
Queue Length 95th (ft)	0	0	1			
Control Delay (s)	0.9	0.0	8.5			
Lane LOS	A		A			
Approach Delay (s)	0.9	0.0	8.5			
Approach LOS			A			
Intersection Summary						
Average Delay			2.0			
Intersection Capacity Utilization			14.9%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis 8: White Ave & Driveway

Opening Year Plus Project PM Peak Hour
888 West Mission

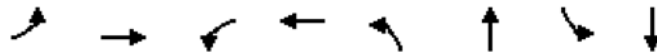
						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	21	680	12	0	950
Future Volume (Veh/h)	0	21	680	12	0	950
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99
Hourly flow rate (vph)	0	21	687	12	0	960
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)			131			191
pX, platoon unblocked	0.77					
vC, conflicting volume	1173	350			699	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	627	350			699	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	97			100	
cM capacity (veh/h)	320	647			893	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	21	458	241	480	480	
Volume Left	0	0	0	0	0	
Volume Right	21	0	12	0	0	
cSH	647	1700	1700	1700	1700	
Volume to Capacity	0.03	0.27	0.14	0.28	0.28	
Queue Length 95th (ft)	3	0	0	0	0	
Control Delay (s)	10.8	0.0	0.0	0.0	0.0	
Lane LOS	B					
Approach Delay (s)	10.8	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			29.6%		ICU Level of Service	A
Analysis Period (min)			15			

Queues

2: White Ave & Mission Blvd

Opening Year Plus Project PM Peak Hour

888 West Mission



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	96	927	66	778	107	606	111	892
v/c Ratio	0.63	0.75	0.55	0.63	0.59	0.56	0.54	0.79
Control Delay	38.9	19.6	36.6	16.7	42.9	18.6	37.4	23.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.9	19.6	36.6	16.7	42.9	18.6	37.4	23.8
Queue Length 50th (ft)	28	144	18	111	38	93	39	150
Queue Length 95th (ft)	#96	208	#72	163	#106	140	#100	#244
Internal Link Dist (ft)		1234		77		111		331
Turn Bay Length (ft)	75				65		75	
Base Capacity (vph)	175	1424	139	1423	182	1190	212	1251
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.65	0.47	0.55	0.59	0.51	0.52	0.71

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

APPENDIX C: TRAFFIC SIGNAL WARRANT ANALYSIS SHEETS





Major Street	Mission Boulevard
Minor Street	Project Driveway

Project	888 W. Mission Traffic Study
Scenario	Existing + Project
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	9
Through	0	0	837	1,015
Right	8	0	5	0
Total	8	0	842	1,024

Major Street Direction

	North/South
X	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	12
Approach with Worst Case Delay	WB
Total Vehicles on Approach	1,024

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	Peak Hour Volume on Minor Approach (vph)	Peak Hour Entering Volume Served (vph)
Existing + Project	3.4	8	1,874
Limiting Value	4	100	800
Condition Satisfied?	Not Met	Not Met	Met
Warrant Met	<u>NO</u>		



Major Street Mission Boulevard
 Minor Street Project Driveway

Project 888 W. Mission Traffic Study
 Scenario Existing + Project
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	14
Through	0	0	933	894
Right	14	0	7	0
Total	14	0	940	908

Major Street Direction

	North/South
X	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	12
Approach with Worst Case Delay	EB
Total Vehicles on Approach	940

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	Peak Hour Volume on Minor Approach (vph)	Peak Hour Entering Volume Served (vph)
Existing + Project	3.1	14	1,862
Limiting Value	4	100	800
Condition Satisfied?	Not Met	Not Met	Met
Warrant Met	NO		



Major Street	Mission Boulevard
Minor Street	Project Driveway

Project	888 W. Mission Traffic Study
Scenario	Opening Year + Project
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	9
Through	0	0	855	1,040
Right	8	0	5	0
Total	8	0	860	1,049

Major Street Direction

	North/South
X	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	12
Approach with Worst Case Delay	WB
Total Vehicles on Approach	860

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	Peak Hour Volume on Minor Approach (vph)	Peak Hour Entering Volume Served (vph)
Opening Year + Project	2.9	8	1,917
Limiting Value	4	100	800
Condition Satisfied?	Not Met	Not Met	Met
Warrant Met	<u>NO</u>		



Major Street Mission Boulevard
 Minor Street Project Driveway

Project 888 W. Mission Traffic Study
 Scenario Opening Year + Project
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	0	14
Through	0	0	955	915
Right	14	0	7	0
Total	14	0	962	929

Major Street Direction

	North/South
X	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	12
Approach with Worst Case Delay	EB
Total Vehicles on Approach	962

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	Peak Hour Volume on Minor Approach (vph)	Peak Hour Entering Volume Served (vph)
Opening Year + Project	3.2	14	1,905
Limiting Value	4	100	800
Condition Satisfied?	Not Met	Not Met	Met
Warrant Met	<u>NO</u>		



Major Street Cypress Street
 Minor Street Project Driveway

Project 888 W. Mission Traffic Study
 Scenario Exisiting + Project
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	3	0
Through	6	6	0	0
Right	0	6	0	0
Total	6	12	3	0

Major Street Direction

X	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	9
Approach with Worst Case Delay	SB
Total Vehicles on Approach	12

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	Peak Hour Volume on Minor Approach (vph)	Peak Hour Entering Volume Served (vph)
Exisiting + Project	0	3	21
Limiting Value	4	100	800
Condition Satisfied?	Not Met	Not Met	Not Met
Warrant Met	<u>NO</u>		



Major Street Cypress Street
 Minor Street Project Driveway

Project 888 W. Mission Traffic Study
 Scenario Exisiting + Project
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	5	0
Through	13	10	0	0
Right	0	9	0	0
Total	13	19	5	0

Major Street Direction

X	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	9
Approach with Worst Case Delay	SB
Total Vehicles on Approach	19

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	Peak Hour Volume on Minor Approach (vph)	Peak Hour Entering Volume Served (vph)
Exisiting + Project	0	5	37
Limiting Value	4	100	800
Condition Satisfied?	Not Met	Not Met	Not Met
Warrant Met	<u>NO</u>		



Major Street Cypress Street
 Minor Street Project Driveway

Project 888 W. Mission Traffic Study
 Scenario Opening Year + Project
 Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	3	0
Through	10	10	0	0
Right	0	6	0	0
Total	10	16	3	0

Major Street Direction

X	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	9
Approach with Worst Case Delay	SB
Total Vehicles on Approach	16

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	Peak Hour Volume on Minor Approach (vph)	Peak Hour Entering Volume Served (vph)
Opening Year + Project	0	3	29
Limiting Value	4	100	800
Condition Satisfied?	Not Met	Not Met	Not Met
Warrant Met	<u>NO</u>		



Major Street Cypress Street
 Minor Street Project Driveway

Project 888 W. Mission Traffic Study
 Scenario Opening Year + Project
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	5	0
Through	15	15	0	0
Right	0	9	0	0
Total	15	24	5	0

Major Street Direction

X	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	9
Approach with Worst Case Delay	SB
Total Vehicles on Approach	24

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	Peak Hour Volume on Minor Approach (vph)	Peak Hour Entering Volume Served (vph)
Opening Year + Project	0.1	5	44
Limiting Value	4	100	800
Condition Satisfied?	Not Met	Not Met	Not Met
Warrant Met	<u>NO</u>		



Major Street 6th Street
Minor Street Project Driveway

Project 888 W. Mission Traffic Study
Scenario Existing + Project
Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	3	0
Through	0	0	11	17
Right	0	9	0	0
Total	0	9	14	17

Major Street Direction

	North/South
X	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	9
Approach with Worst Case Delay	WB
Total Vehicles on Approach	17

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	Peak Hour Volume on Minor Approach (vph)	Peak Hour Entering Volume Served (vph)
Existing + Project	0	9	40
Limiting Value	4	100	800
Condition Satisfied?	Not Met	Not Met	Not Met
Warrant Met	<u>NO</u>		



Major Street 6th Street
 Minor Street Project Driveway

Project 888 W. Mission Traffic Study
 Scenario Existing + Project
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	4	0
Through	0	0	29	15
Right	0	12	0	0
Total	0	12	33	15

Major Street Direction

	North/South
X	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	8
Approach with Worst Case Delay	EB
Total Vehicles on Approach	33

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	Peak Hour Volume on Minor Approach (vph)	Peak Hour Entering Volume Served (vph)
Existing + Project	0.1	12	60
Limiting Value	4	100	800
Condition Satisfied?	Not Met	Not Met	Not Met
Warrant Met	<u>NO</u>		



Major Street 6th Street
Minor Street Project Driveway

Project 888 W. Mission Traffic Study
Scenario Opening Year + Project
Peak Hour AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	3	0
Through	0	0	15	20
Right	0	9	0	0
Total	0	9	18	20

Major Street Direction

	North/South
X	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	9
Approach with Worst Case Delay	WB
Total Vehicles on Approach	20

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	Peak Hour Volume on Minor Approach (vph)	Peak Hour Entering Volume Served (vph)
Opening Year + Project	0.1	9	47
Limiting Value	4	100	800
Condition Satisfied?	Not Met	Not Met	Not Met
Warrant Met	NO		



Major Street 6th Street
 Minor Street Project Driveway

Project 888 W. Mission Traffic Study
 Scenario Opening Year + Project
 Peak Hour PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	0	4	0
Through	0	0	30	20
Right	0	12	0	0
Total	0	12	34	20

Major Street Direction

	North/South
X	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	9
Approach with Worst Case Delay	EB
Total Vehicles on Approach	34

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	Peak Hour Volume on Minor Approach (vph)	Peak Hour Entering Volume Served (vph)
Opening Year + Project	0.1	12	66
Limiting Value	4	100	800
Condition Satisfied?	Not Met	Not Met	Not Met
Warrant Met	<u>NO</u>		



Major Street	White Avenue
Minor Street	Project Driveway

Project	888 W. Mission Traffic Study
Scenario	Existing + Project
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	12	0	0
Through	953	644	0	0
Right	8	0	0	14
Total	961	656	0	14

Major Street Direction

X	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	13
Approach with Worst Case Delay	NB
Total Vehicles on Approach	961

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	Peak Hour Volume on Minor Approach (vph)	Peak Hour Entering Volume Served (vph)
Existing + Project	3.5	14	1,631
Limiting Value	4	100	800
Condition Satisfied?	Not Met	Not Met	Met
Warrant Met	<u>NO</u>		



Major Street	White Avenue
Minor Street	Project Driveway

Project	888 W. Mission Traffic Study
Scenario	Existing + Project
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	19	0	0
Through	665	929	0	0
Right	12	0	0	21
Total	677	948	0	21

Major Street Direction

X	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	11
Approach with Worst Case Delay	SB
Total Vehicles on Approach	948

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	Peak Hour Volume on Minor Approach (vph)	Peak Hour Entering Volume Served (vph)
Existing + Project	2.9	21	1,646
Limiting Value	4	100	800
Condition Satisfied?	Not Met	Not Met	Met
Warrant Met	<u>NO</u>		



Major Street	White Avenue
Minor Street	Project Driveway

Project	888 W. Mission Traffic Study
Scenario	Opening Year + Proposed Project
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	12	0	0
Through	975	660	0	0
Right	8	0	0	14
Total	983	672	0	14

Major Street Direction

X	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	13
Approach with Worst Case Delay	NB
Total Vehicles on Approach	983

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	Peak Hour Volume on Minor Approach (vph)	Peak Hour Entering Volume Served (vph)
Opening Year + Proposed Project	3.5	14	1,669
Limiting Value	4	100	800
Condition Satisfied?	Not Met	Not Met	Met
Warrant Met	<u>NO</u>		



Major Street	White Avenue
Minor Street	Project Driveway

Project	888 W. Mission Traffic Study
Scenario	Opening Year + Project
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	0	19	0	0
Through	680	950	0	0
Right	12	0	0	21
Total	692	969	0	21

Major Street Direction

X	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	11
Approach with Worst Case Delay	SB
Total Vehicles on Approach	969

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	Peak Hour Volume on Minor Approach (vph)	Peak Hour Entering Volume Served (vph)
Opening Year + Project	3	21	1,682
Limiting Value	4	100	800
Condition Satisfied?	Not Met	Not Met	Met
Warrant Met	<u>NO</u>		