

Mount Vernon Avenue Overhead Replacement Project

Pedestrian and Vehicular Detour Analysis Report FINAL

CIP Contract No.SS04-012

Prepared for
The City of San Bernardino



January 2018

Table of Contents

1.	Introduction and Background	1
2.	Project Description	1
3.	Methodology	4
3.1.	Data Collection.....	4
3.2.	Volume Development	5
3.3.	Analysis Methodology	8
3.3.1.	Intersection Level of Service Analysis.....	8
3.3.2.	Level of Service Standard.....	9
4.	Existing Conditions.....	10
4.1.	Existing Roadway System	10
4.2.	Existing Intersection Level of Service Analysis.....	11
4.3.	Existing Transit Facilities.....	12
4.4.	Existing Pedestrian Facilities.....	12
4.5.	Existing Bicycle Facilities.....	12
5.	Year 2021 Project Construction Conditions	13
5.1.	Year 2021 Without Detour Conditions.....	13
5.1.1.	Intersection Level of Service Analysis.....	13
5.2.	Year 2021 With Detour Conditions	16
5.2.1.	Intersection Level of Service Analysis.....	16
6.	Short Term Detour Improvements and Traffic Management Strategies.....	20
6.1.	Intersection Improvements	20
6.2.	Public Information and Awareness Campaign.....	21
7.	Conclusions	21
8.	List of References	22

Appendices

- Appendix A Existing Traffic Counts
- Appendix B Level of Service Worksheets

List of Figures

Figure 1: Study Area	3
Figure 2: Existing Lane Geometry.....	6
Figure 3: Existing (2017) Peak Hour PCE Traffic Volumes.....	7
Figure 4: Year 2021 Without Detour Peak Hour PCE Traffic Volumes.....	14
Figure 5: Detour Routes.....	17
Figure 6: Year 2021 With Detour Peak Hour PCE Traffic Volumes.....	18

List of Tables

Table 1: Mt. Vernon Avenue Vehicle Classification Counts.....	4
Table 2: Levels of Service for Signalized Intersections	8
Table 3: Existing (2017) Conditions Intersection Level of Service.....	11
Table 4: Year 2021 Without Detour Intersection Level of Service	15
Table 5: Year 2021 With Detour Intersection Level of Service	19
Table 6: Year 2021 With Detour With Temporary Improvements Intersection LOS	21

1. Introduction and Background

The City of San Bernardino is proposing to replace the Mount Vernon Avenue Bridge, No. 54C-0066. The bridge, which was constructed in 1934, carries four traffic lanes (two in each direction), with raised sidewalks on each side. The lane widths and sidewalk widths are non-standard. The bridge has been rated by the California Division of Structure Maintenance & Investigations as structurally deficient and functionally obsolete. In 2004, Caltrans established the Sufficiency Rating for the bridge as 2.0 after cracks were found in the main steel girders supporting the bridge. The bridge was closed by the City of San Bernardino for 6 months while timber shoring supports were installed to carry loads in the vicinity of the cracks. The existing bridge will be replaced to improve seismic performance, provide standard vertical clearance over the rail tracks and comply with American Association of State Highway and Transportation Officials (AASHTO) roadway cross section standards. A separate report titled, "Mount Vernon Avenue Overhead Replacement Project Traffic/Circulation Study" (Traffic Analysis Report) which was recently approved by SBCTA provides the methodology and results of the traffic and circulation analysis for the reconstruction of the Mount Vernon Avenue Bridge. Three study intersections were specifically evaluated in the traffic analysis report to support the environmental documentation of the project.

This report (Detour Analysis Report) complements the Traffic/Circulation Study (Traffic Analysis Report), encompasses a wider study area, and provides an analysis and recommendations related to the impacts of closing Mount Vernon Avenue and routing traffic through the detour route during construction of the bridge.

2. Project Description

The Mount Vernon Avenue Bridge carries Mount Vernon Avenue over the Burlington Northern Santa Fe (BNSF) Intermodal Yard. Mount Vernon Avenue is a major north/south arterial in western City of San Bernardino. The existing bridge has two travel lanes in each direction and sidewalks on both sides. The bridge provides the only arterial crossing over the BNSF rail lines between Rancho Avenue (approximately 1.1 miles to the west) and 5th Street (approximately 0.6 miles to the east), which provide north-south access in the area. The profile of the replacement bridge will be different from that of the existing bridge, necessitating the raising of the intersection of Mount Vernon Avenue and 2nd Street. Mount Vernon Avenue is proposed to be closed from 2019/2020 to 2022 while the bridge is replaced. For analysis purposes, this detour study evaluated Year 2021 conditions.

The following three study intersections were specifically evaluated in the focused traffic analysis report and to support the environmental documentation of the project:

- Mount Vernon Avenue/5th Street (signalized)
- Mount Vernon Avenue/2nd Street (signalized)
- Mount Vernon Avenue/Rialto Avenue (signalized)

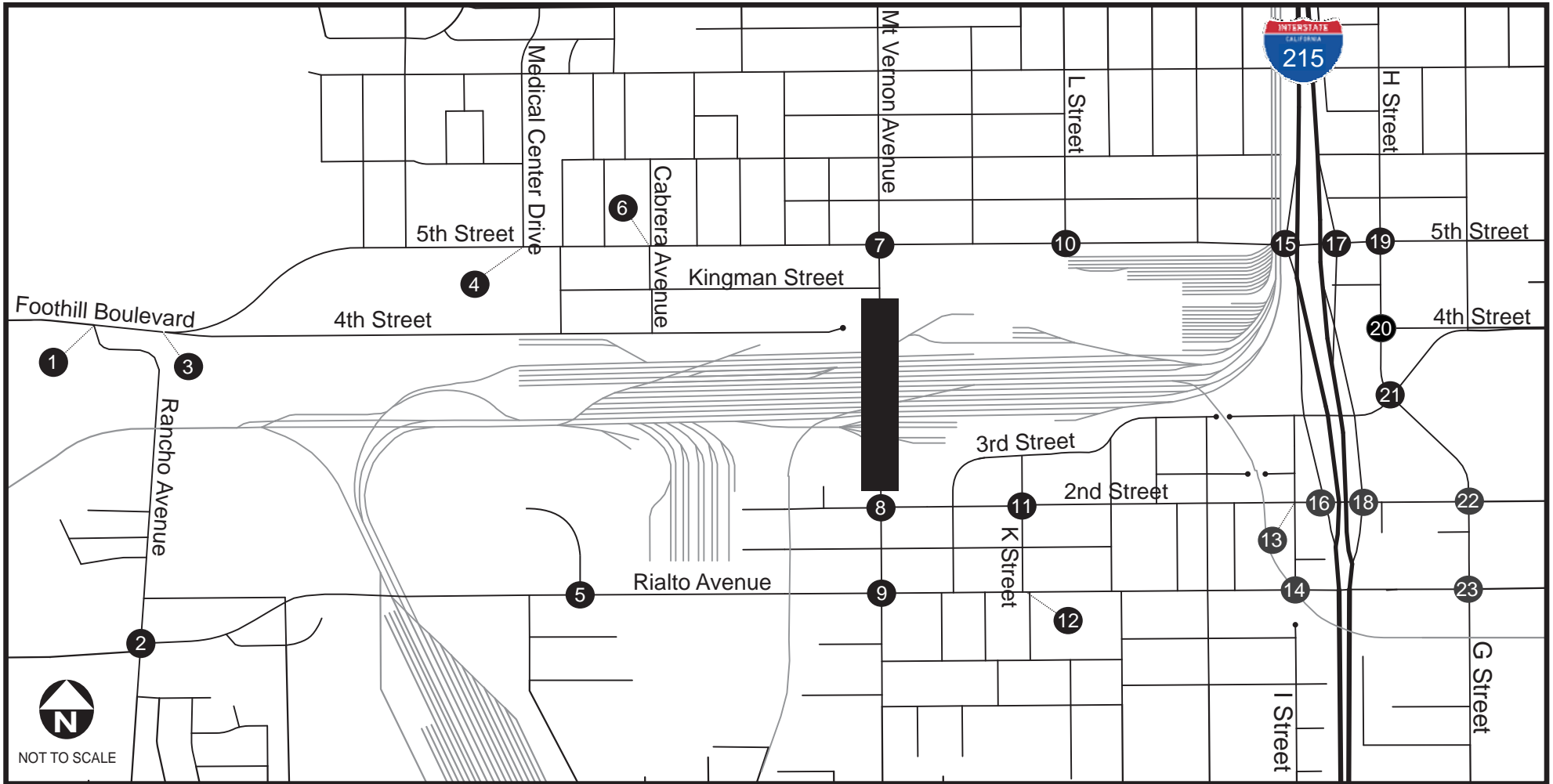
The aforementioned three study intersections described above are just part of the wider study area of this Detour Analysis Report, which evaluated an additional 20 detour study intersections shown below:

- Rancho Ave/Foothill Blvd
- Rancho Ave/Rialto Ave
- 4th St/Foothill Blvd (5th St)
- Medical Center Dr/5th St
- Santa Fe Way/Rialto Ave
- Cabrera Ave/5th St
- L St/5th St
- K St/2nd St
- K St/Rialto Ave
- I St/2nd St
- I St/Rialto Ave
- I-215 SB Ramps/5th St
- I-215 SB Ramps/2nd St
- I-215 NB Ramps/5th St
- I-215 NB Ramps/2nd St
- H St/5th St
- H St/4th St
- H St/3rd St
- G St/2nd St
- G St/Rialto Ave

The locations of the project site and detour study intersections are illustrated in Figure 1.

The following scenarios are evaluated as part of this detour study:

- Existing (2017) Conditions
- Year (2021) Without Detour Conditions
- Year (2021) With Detour Conditions



Legend

- # Traffic Study Intersections
- Study Roadway Segment

Figure 1

3. Methodology

This section details the methodologies for data collection, traffic projections, level of service analysis, queuing analysis, and roadway segment analysis.

3.1. Data Collection

Intersection turning movement counts, including heavy vehicle (truck-axle classification) counts were obtained during typical (weekday) AM/PM peak periods at the select study intersections. The initial batch of traffic counts (3 intersections) included in the traffic impact study was collected on Tuesday, May 9, 2017 and rest of the detour study locations (20 intersections) were collected on Tuesday, October 24, 2017, during the following peak periods:

- Weekday AM period: 7:00 AM – 9:00 AM
- Weekday PM period: 4:00 PM – 6:00 PM

The peak hour volume used in the analysis is the highest single hour of traffic during each of the peak periods. Peak hour traffic volumes at these intersections were converted to passenger car equivalent (PCE) volumes by applying a PCE factor of 1.5 for 2-axle trucks, 2.0 for 3-axle trucks, and 3.0 for trucks with 4 or more axles. As part of the traffic impact study, daily traffic volumes including typical AM/PM peak hour heavy vehicle (truck) classification counts on Mount Vernon Avenue between Kingman Street and 2nd Street were also collected on the same day as the turning movement counts. Table 1 summarizes the daily roadway segment traffic on Mount Vernon Avenue showing the breakdown of vehicle class totals and percent share of the daily traffic total.

Table 1: Mt. Vernon Avenue Vehicle Classification Counts

Vehicle Class	Count (% of Daily Total)
Class 1 - Motorcycles	15 (>1%)
Class 2 - Passenger Cars	12,182 (78%)
Class 3 - 2-Axle, 4-Tire Single Units	2,214 (14%)
Class 4 - Buses	35 (>1%)
Class 5 - 2-Axle, 6-Tire Single Units	2,092 (7%)
Class 6 - 3-Axle Single Units	44 (>1%)
Class 7 - \geq 4-Axle Single Units	-
Class 8 - \leq 4-Axle Single Trailers	-
Class 9 - 5-Axle Single Trailers	-
Class 10 - \geq 6-Axle Single Trailers	-
Class 11 - \leq 5-Axle Multi-Trailers	-
Class 12 - 6-Axle Multi-Trailers	-
Class 13 - \geq 7-Axle Multi-Trailers	-

Source: National Data Services, Mt Vernon Ave Bet. Kingman St & 2nd St Daily Classification Counts.

Existing lane geometry and peak hour PCE traffic volumes are shown in Figures 2 and 3, respectively. The detour study traffic counts are included in Appendix A.

3.2. Volume Development

For detour analysis purposes and due to the relatively short time frame (4 years) between existing (2017) and anticipated project construction (2021) conditions, the traffic volume forecasts for Year 2021 Project Detour conditions were developed using a conservative and simplified 1 percent per year growth assumption. This process provides a more streamlined approach as compared to the development of the design year (2040) volumes using the San Bernardino Transportation Analysis Model (SBTAM) base year 2012 and forecast year of 2040 model projections used in the traffic study report.

Consistent with the traffic study assumptions, the project once completed is not anticipated to shift traffic patterns within the study area along Mount Vernon Avenue, and the reconstruction of the bridge itself is not anticipated to induce traffic demand along Mount Vernon Avenue or any study area location. Therefore, the short duration detour traffic volumes are not anticipated to be permanent and will not require permanent mitigations measures if needed.

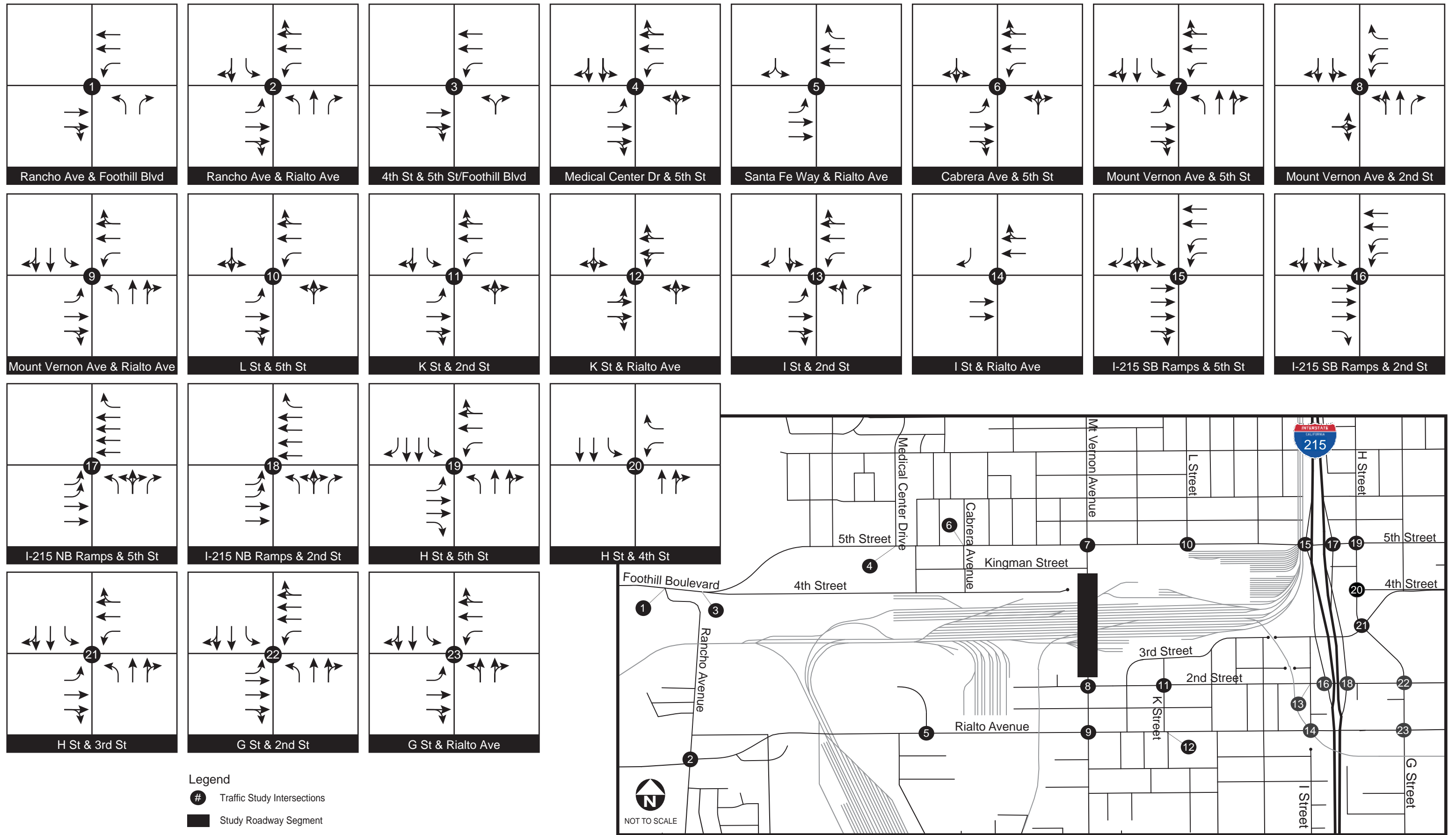


Figure 2

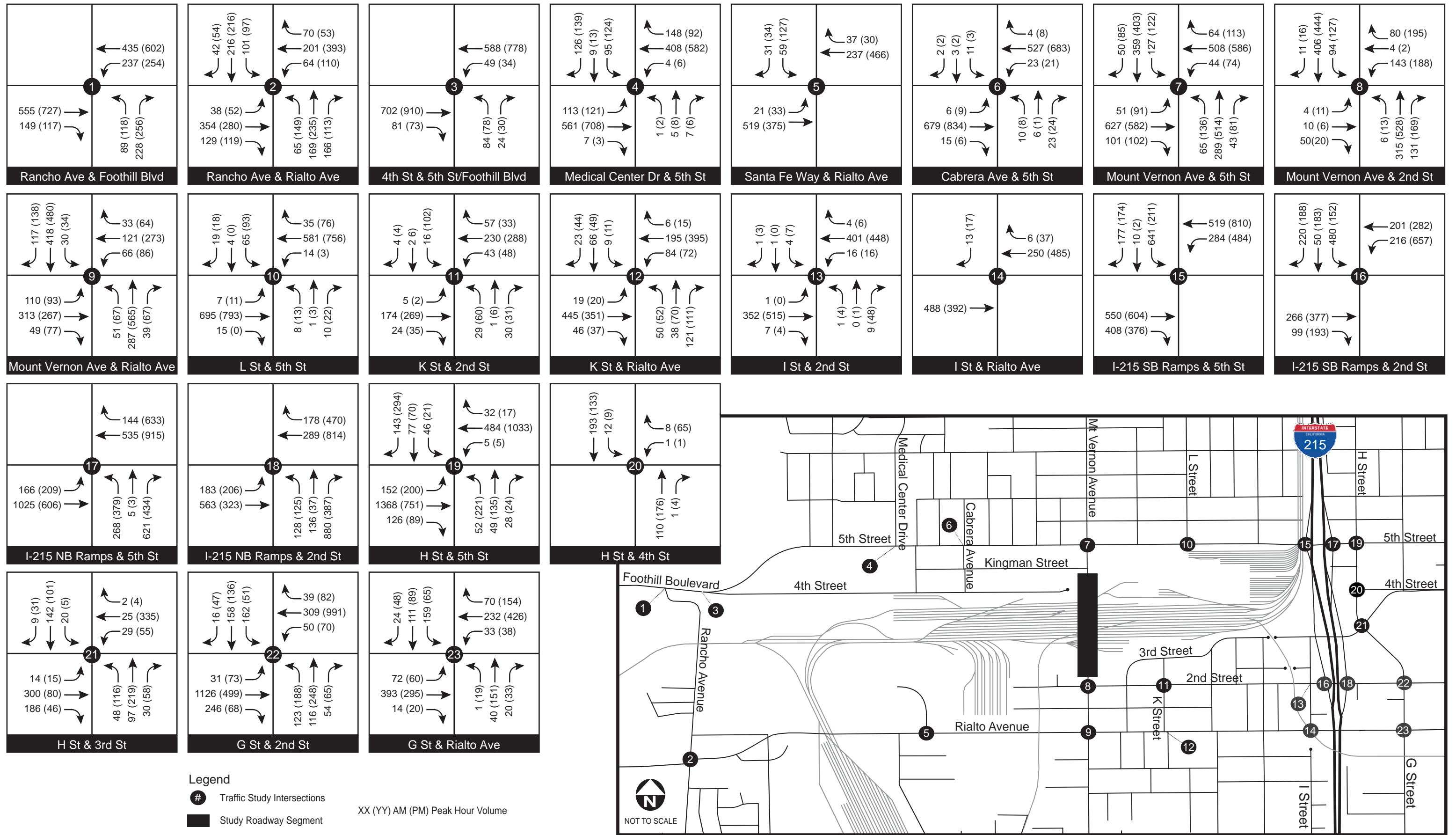


Figure 3

3.3. Analysis Methodology

3.3.1. Intersection Level of Service Analysis

This section presents the methodology used to perform the intersection level of service (LOS) analysis, consistent with the *City of San Bernardino Traffic Impact Study Guidelines (2004)* and the CMP (2016). The *City of San Bernardino Traffic Impact Study Guidelines (2004)* establishes LOS D as the acceptable LOS threshold for intersection operations. The methodology used to assess the operation of signalized intersections in San Bernardino County is the *Highway Capacity Manual (HCM 2010)* methodology. Under the HCM 2010 methodology, LOS thresholds are based on the average delay incurred by vehicles traveling through an intersection. Delay is dependent on a number of factors including the signal cycle length, the roadway capacity (number of travel lanes) provided on each intersection approach, and the traffic demand.

The LOS analysis is used to evaluate congestion and delay on streets and highways. The relative level of congestion is evaluated on a scale from A through F. Level of Service A indicates free-flow conditions with no delay. Level of Service F indicates breakdown of the system with very long delays. The relationship between the LOS and delay for signalized intersections are shown in Table 2.

Table 2: Levels of Service for Signalized Intersections

Level of Service	Signalized Intersection Control Delay (seconds)
A	0 -10
B	10 – 20
C	20 – 35
D	35 – 55
E	55 – 80
F	80 or more

Source: Highway Capacity Manual 2010

Note: Although it is not appropriate to assign a level of service to the intersection on the basis of *Critical Intersection Volume to Capacity Ratio [Xc]*, it is appropriate to evaluate the operational status of the intersection for quick estimation purposes. Exhibit 31-45 of *HCM 2010 Chapter 31/Signalized Intersections: Supplemental* expresses the intersection status as over-capacity when the Critical Intersection Volume to Capacity Ratio [Xc] is greater than 1.0.

The computer software program Synchro (version 9) was used to calculate the intersection delay and resulting LOS. Synchro is a traffic signal progression analysis software tool that is capable of performing intersection delay analyses using various methodologies, including the HCM 2010 method. The CMP requires specific assumptions regarding input values to the HCM methodology. These assumptions include the following:

- Saturation flow rate of 1,800 vehicles per hour per lane (vphpl) for through and right-turn lanes and 1,700 vphpl for left-turn lanes for existing and opening year conditions; and
- Two seconds lost time per phase.

3.3.2. Level of Service Standard

The study area intersections fall within the jurisdiction of the City of San Bernardino. The City's level of service standard is LOS D. Intersections operating at LOS E or LOS F are considered unsatisfactory.

4. Existing Conditions

This section presents an overview of the existing roadway system, transit network, and pedestrian/bicycle facilities within the study area.

4.1. Existing Roadway System

Key roadway facilities within the project study area are described below. The discussion presented here focuses on roadways that are approaches to the study intersections or roadways that are directly affected by the proposed project. The classification of the roadways is based on the *City of San Bernardino General Plan Circulation Element (2005)*.

- Rancho Avenue: Between Rialto Avenue and Foothill Boulevard, Rancho Avenue is a two-lane local collector with a wide two-way painted median. On-street parking is provided on some segments of the roadway.
- Mount Vernon Avenue: Between 5th Street and Rialto Avenue, Mount Vernon Avenue is a four-lane undivided major arterial. On-street parking is not permitted along Mount Vernon Avenue in the study area, and the posted speed limit is 25 mph approaching the bridge, otherwise the speed limit is 35 mph.
- Mount Vernon Avenue (Frontage Road): A short grade-separated segment functioning as a frontage road of Mount Vernon Avenue extends from 3rd Street to 2nd Street with one lane in each direction. This local frontage road intersects the Mount Vernon Avenue/2nd Street intersection as a 5th leg.
- H Street: Between 5th Street and 3rd Street, H Street is a four-lane arterial with a two-way left turn median. On-street parking is generally not permitted along H Avenue in the study area and the posted speed limit is 35 mph.
- G Street: Similar in cross-section with H Street, between 3rd Street and Rialto Avenue, G Street is a four-lane arterial with a two-way left turn median. On-street parking is generally not permitted along this segment of G Avenue in the study area and the posted speed limit is 35 mph. Additionally the segment of G Street between 3rd Street and 2nd Street provides for 2 lanes in each direction and divided with raised or painted medians. Limited on-street parking is provided in the southbound direction.
- 5th Street: 5th Street is a four lane major arterial that is divided by a two-way left-turn lane east of Mount Vernon Avenue and is undivided west of Mount Vernon Avenue. On-street parking is not permitted on 5th Street, and the speed limit is 35 mph.
- 2nd Street: East of Mount Vernon Avenue, 2nd Street is a four-lane major arterial that is divided by a two-way left-turn lane. West of Mount Vernon Avenue, 2nd Street is a two-lane local street providing access to a residential neighborhood. East of Mount Vernon Avenue, on-street parking is not permitted, and the posted speed limit is 35 mph. West of Mount Vernon Avenue, on-street parking is permitted on 2nd Street, and the speed limit is 25 mph for the residential neighborhood.

- Rialto Avenue: Rialto Avenue is a four lane undivided secondary arterial. On-street parking is permitted on Rialto Avenue, and the posted speed limit is 35 mph east of Mount Vernon Avenue and 45 mph west of Mount Vernon Avenue.

4.2. Existing Intersection Level of Service Analysis

A level of service analysis was conducted to evaluate existing intersection operations during the weekday AM and PM peak hours. Table 3 summarizes the Existing (2017) peak hour levels of service at study intersections. As shown in the table, all of the study intersections are currently operating at satisfactory levels of service during AM and PM peak hours, except for the Rancho Avenue/Foothill Boulevard intersection. Detailed LOS calculation worksheets are included in Appendix B.

Table 3: Existing (2017) Conditions Intersection Level of Service

	Intersections	Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay ¹	LOS	Delay ¹	LOS
1	Rancho Ave/Foothill Blvd	Unsignalized	68.6	F	203.3	F
2	Rancho Ave/Rialto Ave	Signalized	11.7	B	12.8	B
3	4th St/Foothill Blvd (5th St)	Signalized	9.6	A	8.7	A
4	Medical Center Dr/5th St	Signalized	16.6	B	18.6	B
5	Santa Fe Way/Rialto Ave	Signalized	10.9	B	12.6	B
6	Cabrera Ave/5th St	Signalized	11.9	B	11.4	B
7	Mount Vernon Ave/5th St	Signalized	18.6	B	23.7	C
8	Mount Vernon Ave/2nd St	Signalized	21.8	C	22.7	C
9	Mount Vernon Ave/Rialto Ave	Signalized	11.9	B	11.4	B
10	L St/5th St	Signalized	12.5	B	12.5	B
11	K St/2nd St	Signalized	9.6	A	12.0	B
12	K St/Rialto Ave	Signalized	19.9	B	19.0	B
13	I St/2nd St	Signalized	12.8	B	12.9	B
14	I St/Rialto Ave	Unsignalized	9.2	A	10.1	B
15	I-215 SB Ramps/5th St	Signalized	25.4	C	21.1	C
16	I-215 SB Ramps/2nd St	Signalized	15.9	B	19.2	B
17	I-215 NB Ramps/5th St	Signalized	17.1	B	40.4	D
18	I-215 NB Ramps/2nd St	Signalized	14.2	B	10.9	B
19	H St/5th St	Signalized	29.2	C	41.6	D
20	H St/4th St	Unsignalized	8.9	A	9.7	A
21	H St/3rd St	Signalized	22.3	C	17.6	B
22	G St/2nd St	Signalized	29.8	C	30.6	C
23	G St/Rialto Ave	Signalized	12.9	B	12.0	B

¹ Average control delay, in seconds per vehicle
 BOLD font indicates unsatisfactory operations

4.3. Existing Transit Facilities

Public transportation in the San Bernardino area is provided by Omnitrans, as the regional public transit operator for San Bernardino County. Omnitrans operates 14 local-fixed routes in the City of San Bernardino. The following weekday Omnitrans bus routes directly serve the study area:

- Route 1 (Colton – Del Rosa): Local fixed-route service that operates along Mount Vernon Avenue and 2nd Street in the study area with service provided every 15 minutes.
- Route 3 / 4 (West San Bernardino – Baseline – Highland): Local fixed-route service that provides service along Mount Vernon Avenue and 5th Street in the study area with service provided every 20 minutes.
- Route 14 (Fontana – Foothill – San Bernardino): Local fixed-route service that provides service along 5th Street in the study area with service provided every 15 minutes.

4.4. Existing Pedestrian Facilities

According to the *Pedestrian and Vehicular Detour Analysis (2004)*, 242 pedestrians and cyclists crossed the bridge on Monday, May 3, 2004, with the greatest number of trips, 26 trips, occurring between 4:00 and 5:00 p.m. The most recent pedestrian and bicycle counts conducted on May 9, 2017 showed that a total of 249 pedestrians and cyclists (177 pedestrians and 72 cyclists) crossed the bridge. On Mount Vernon Avenue, sidewalks are provided; however, on the bridge structure, the sidewalks are reduced to 3 feet 6 inches. Continuous sidewalks are provided on both sides of the street on 5th Street, 2nd Street, and Rialto Avenue. Striped crosswalks are provided on all four approaches for all study area intersections as well.

4.5. Existing Bicycle Facilities

Bicycle usage is encouraged within the City of San Bernardino; however, there are currently no striped or marked bicycle facilities within the study area. A Class II or III bicycle facility is planned on Mount Vernon Avenue in the study area as shown in the *City of San Bernardino Bicycle Facilities Master Plan (1994)*.

5. Year 2021 Project Construction Conditions

The bridge reconstruction activities are scheduled to commence in 2019 and continue towards the end of 2021. There would be no anticipated changes to the lane geometry of the study area intersections; therefore, the existing lane geometry was used for the without detour analysis at study area intersections.

5.1. Year 2021 Without Detour Conditions

5.1.1. Intersection Level of Service Analysis

Year 2021 Without Detour volumes were developed as described previously in Section 3.2, "Volume Development." The Year 2021 Without Detour intersection peak hour PCE volumes are shown in Figure 4.

An intersection level of service analysis was conducted to evaluate Year 2021 Without Detour project conditions during the weekday AM and PM peak hours. Table 4 summarizes the Year 2021 Without Detour level of service at the study area intersections. As shown in Table 4, all study area intersections would operate at acceptable levels of service, except for the Rancho Avenue/Foothill Boulevard intersection. The intersection would continue to operate at LOS F in both AM and PM peak hours. Detailed LOS calculation sheets are included in Appendix B.

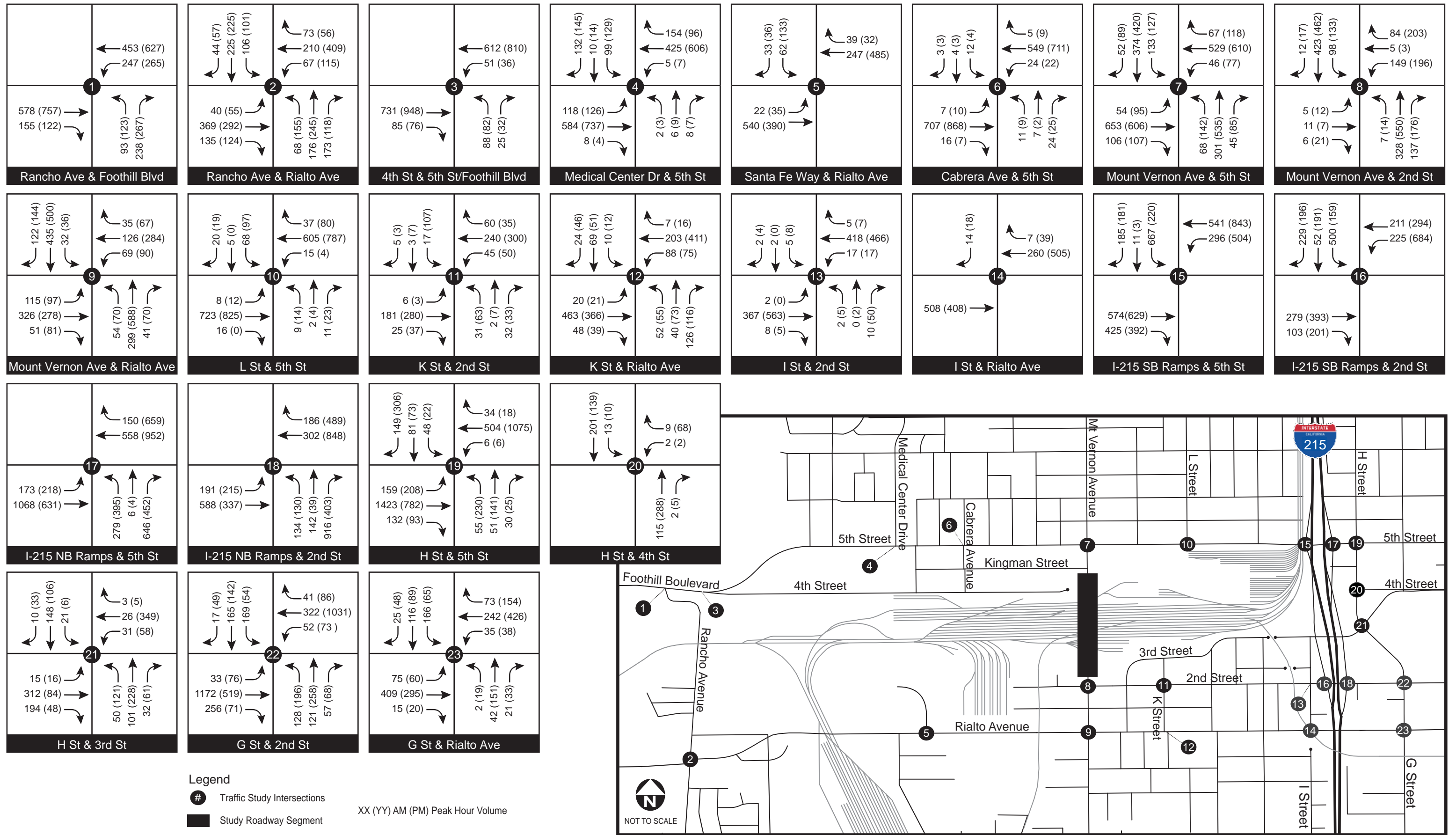


Figure 4

Table 4: Year 2021 Without Detour Intersection Level of Service

	Intersections	Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay ¹	LOS	Delay ¹	LOS
1	Rancho Ave/Foothill Blvd	Unsignalized	91.7	F	264.3	F
2	Rancho Ave/Rialto Ave	Signalized	11.9	B	13.0	B
3	4th St/Foothill Blvd (5th St)	Signalized	9.1	A	8.2	A
4	Medical Center Dr/5th St	Signalized	16.9	B	19.3	B
5	Santa Fe Way/Rialto Ave	Signalized	10.8	B	12.6	B
6	Cabrera Ave/5th St	Signalized	11.9	B	11.3	B
7	Mount Vernon Ave/5th St	Signalized	19.2	B	24.5	C
8	Mount Vernon Ave/2nd St	Signalized	22.1	C	23.2	C
9	Mount Vernon Ave/Rialto Ave	Signalized	11.6	B	11.7	B
10	L St/5th St	Signalized	12.5	B	12.0	B
11	K St/2nd St	Signalized	9.8	A	12.5	B
12	K St/Rialto Ave	Signalized	20.4	C	19.2	B
13	I St/2nd St	Signalized	12.8	B	13.0	B
14	I St/Rialto Ave	Unsignalized	9.2	A	10.2	B
15	I-215 SB Ramps/5th St	Signalized	27.6	C	23.3	C
16	I-215 SB Ramps/2nd St	Signalized	16.2	B	20.4	C
17	I-215 NB Ramps/5th St	Signalized	17.9	B	45.3	D
18	I-215 NB Ramps/2nd St	Signalized	14.6	B	11.1	B
19	H St/5th St	Signalized	33.6	C	43.7	D
20	H St/4th St	Unsignalized	9.0	A	9.9	A
21	H St/3rd St	Signalized	22.6	C	17.8	B
22	G St/2nd St	Signalized	32.8	C	33.2	C
23	G St/Rialto Ave	Signalized	13.0	B	12.0	B

¹ Average control delay, in seconds per vehicle
 BOLD font indicates unsatisfactory operations

5.2. Year 2021 With Detour Conditions

Consistent with the previous detour analysis, the majority of traffic would be detoured around the project site via Rialto Avenue, G and H Streets, and 5th Street. In addition, traffic using 2nd Street to access Mount Vernon Avenue will be detoured to Rialto Avenue. The detour analysis also assumed that some percentage of traffic would use an alternate north-south route via Rancho Avenue. Adequate way finding and detour signage will be placed to assist motorists through the detour route. Proposed detour routes are illustrated in Figure 5.

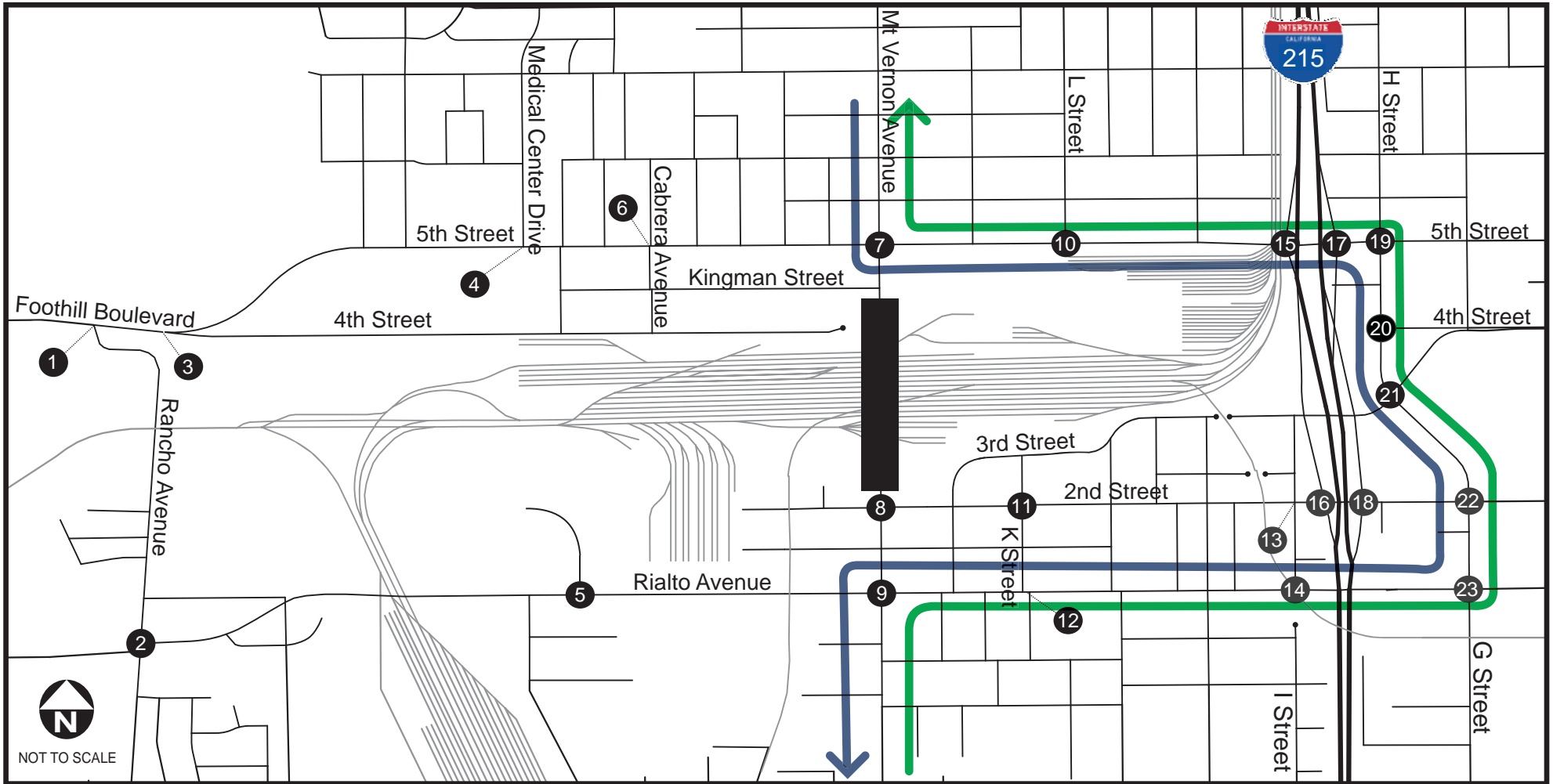
5.2.1. Intersection Level of Service Analysis

Year 2021 With Detour volumes were developed as described previously in Section 3.2, "Volume Development." The Year 2021 With Detour intersection peak hour PCE volumes are shown in Figure 6.

A level of service analysis was conducted to evaluate Year 2021 with Detour intersection operating conditions during the weekday AM and PM peak hours. Table 5 summarizes the results of the LOS analysis at the study area intersections with the implementation of the detour. As anticipated, there is an increase in average vehicle delay at the study intersections along the detour route. In addition, the following intersections are anticipated to operate at unsatisfactory levels of service:

- Rancho Avenue/Foothill Boulevard (AM and PM peak hours)
- Mount Vernon Avenue/5th Street (PM peak hour)
- Mount Vernon Avenue/Rialto Avenue (PM peak hour)
- H Street/5th Street (PM peak hour)
- G Street/Rialto Avenue (PM peak hour)

Detailed LOS calculation worksheets are included in Appendix B.



- Legend
- # Traffic Study Intersections
 - Study Roadway Segment
 - ↔ Proposed Detour Route
 - ↔ Proposed Detour Route

Figure 5

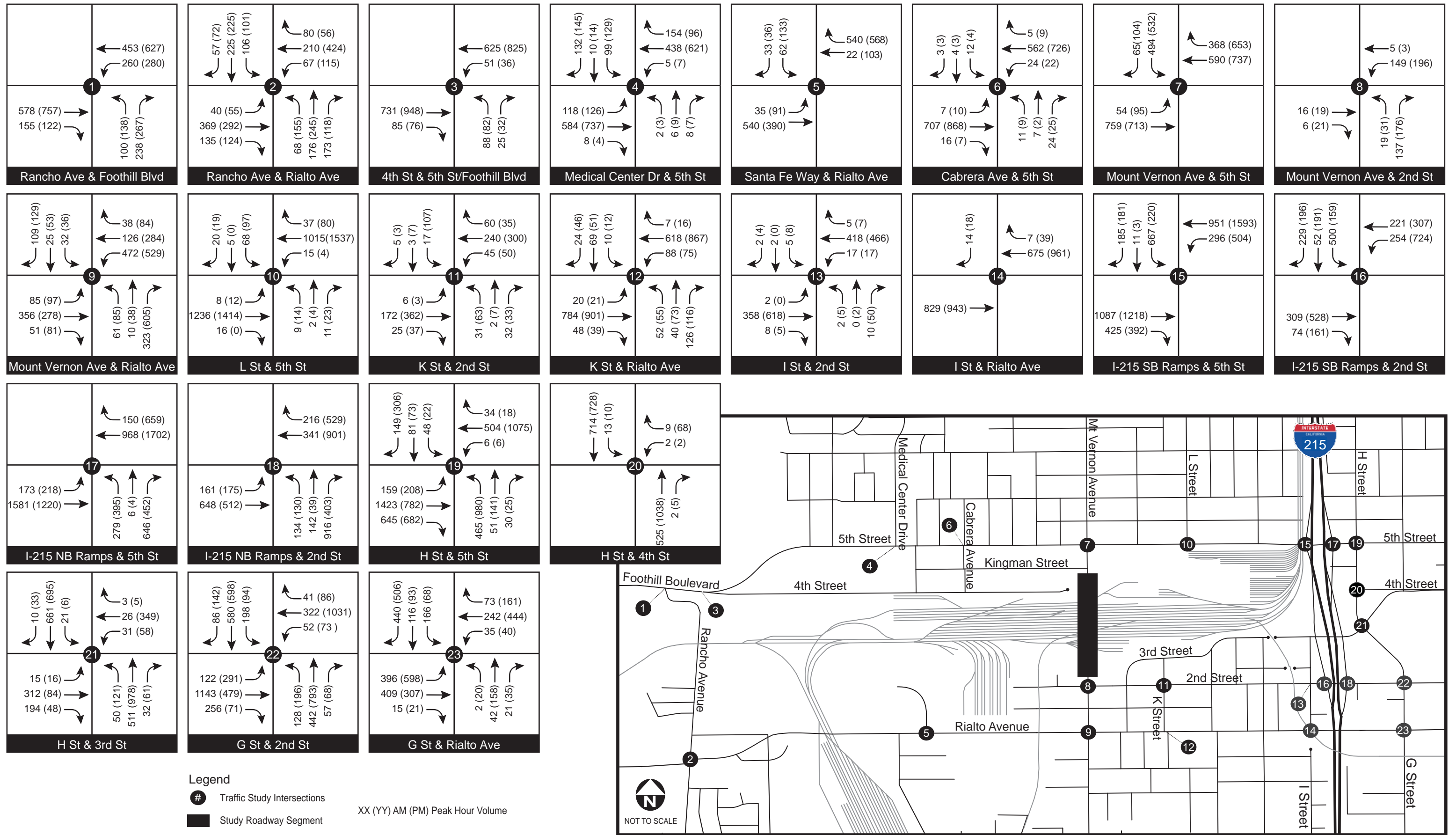


Figure 6

Table 5: Year 2021 With Detour Intersection Level of Service

	Intersections	Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay ¹	LOS	Delay ¹	LOS
1	Rancho Ave/Foothill Blvd	Unsignalized	122.3	F	364.3	F
2	Rancho Ave/Rialto Ave	Signalized	11.9	B	13.1	B
3	4th St/Foothill Blvd (5th St)	Signalized	9.1	A	8.2	A
4	Medical Center Dr/5th St	Signalized	17.1	B	9.6	B
5	Santa Fe Way/Rialto Ave	Signalized	10.8	B	12.6	B
6	Cabrera Ave/5th St	Signalized	11.9	B	11.4	B
7	Mount Vernon Ave/5th St	Signalized	24.8	C	58.1	E
8	Mount Vernon Ave/2nd St	Signalized	14.4	B	14.7	B
9	Mount Vernon Ave/Rialto Ave	Signalized	41.8	D	115.3	F
10	L St/5th St	Signalized	14.2	B	18.0	B
11	K St/2nd St	Signalized	9.7	A	13.8	B
12	K St/Rialto Ave	Signalized	22.2	C	21.8	C
13	I St/2nd St	Signalized	12.7	B	13.5	B
14	I St/Rialto Ave	Unsignalized	11.2	B	12.5	B
15	I-215 SB Ramps/5th St	Signalized	28.1	C	18.8	B
16	I-215 SB Ramps/2nd St	Signalized	16.3	B	20.9	C
17	I-215 NB Ramps/5th St	Signalized	25.0	C	45.9	D
18	I-215 NB Ramps/2nd St	Signalized	15.1	B	11.1	B
19	H St/5th St	Signalized	47.5	D	133.9	F
20	H St/4th St	Unsignalized	12.8	B	16.8	C
21	H St/3rd St	Signalized	25.9	C	21.2	C
22	G St/2nd St	Signalized	45.1	D	54.9	D
23	G St/Rialto Ave	Signalized	37.1	D	179.7	F

¹ Average control delay, in seconds per vehicle
 BOLD font indicates unsatisfactory operations

6. Short Term Detour Improvements and Traffic Management Strategies

The bridge reconstruction activities are scheduled to commence in 2019 and continue towards the end of 2021. There are no anticipated changes to the lane geometry of the study area intersections; therefore, the existing lane geometry was used for the without detour analysis at study area intersections.

6.1. Intersection Improvements

Due to the proposed redistribution in traffic, five of the 23 study intersections are anticipated to temporarily impacted and operate at unsatisfactory levels of service. The following temporary and short-term improvements were identified at these four intersections to improve traffic operations:

#7. Mount Vernon Avenue/5th Street

- Restripe westbound approach as a through lane and an exclusive right-turn lane

#9. Mount Vernon Avenue/Rialto Avenue

- Restripe northbound approach as a shared left-turn/through lane and two exclusive right-turn lanes

#19. H Street/5th Street

- Restripe northbound approach as two exclusive left-turn lanes and a shared through/right-turn lane

#22. G Street/Rialto Avenue

- Restripe eastbound approach as two exclusive left-turn lanes and a shared through/right-turn lane
- Change the phasing on eastbound and westbound approaches to split phasing

The fifth impacted intersection is #1 Rancho Avenue/Foothill Boulevard. It is a one-way stop controlled intersection in the northbound direction with east-west traffic free flowing and uncontrolled. It is currently operating at LOS F and is forecast to continue operating at LOS F during the year 2021 without detour conditions. With the redistribution of traffic due to the proposed closure of Mount Vernon Avenue, the delay at the intersection is anticipated to worsen. It is estimated that an additional 20 vehicles (7 northbound left-turns and 13 westbound left-turns) in the AM peak hour and additional 30 vehicles (15 northbound left-turns and 15 westbound left-turns) in the PM peak hour will utilize the intersection due to detours. The existing poor LOS F operating conditions at the intersection will temporarily exacerbate due to the added vehicles. There is no feasible temporary improvement to reduce this impact to a less than significant level. It is recommended that the City of San Bernardino evaluate the option of installing a traffic signal at the intersection after completing a thorough signal warrant analysis to improve operations. Since this intersection is not on the proposed detour route, traffic signal at this intersection may not be a direct impact of the project. However, if the proposed detour route changes in the future, then signalization of this intersection may become a project impact and any temporary improvements on Foothill Boulevard (SR 66) will need a Caltrans Encroachment Permit.

A level of service analysis was conducted at these intersections to evaluate the traffic operations for the year 2021 With Detour with temporary improvements. Table 6 summarizes the results of the analysis. The results show that the proposed temporary improvements would improve traffic operations. LOS calculation worksheets are included in Appendix B.

Table 6: Year 2021 With Detour With Temporary Improvements Intersection LOS

Intersections		Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay ¹	LOS	Delay ¹	LOS
2	Mount Vernon Ave/5th St	Signalized	26.7	C	50.1	D
3	Mount Vernon Ave/Rialto Ave	Signalized	24.7	C	30.9	C
4	H St/5th St	Signalized	38.3	D	53.5	D
5	G St/Rialto Ave	Signalized	38.4	D	47.6	D

¹ Average control delay, in seconds per vehicle

6.2. Public Information and Awareness Campaign

Managing short-term impacts during bridge construction is critical for the success of the proposed bridge improvement project. Prior to construction, a Traffic Management Plan or its equivalent will be developed which includes a comprehensive Public Information Element to proactively keep the public informed of project progress, closures, and to mitigate construction-related impacts. During the EIR/EIS phase of the project, public meetings and briefings will be conducted and held along with presentations of the project architectural renderings made available for public input within the project area. The project team will work closely together to ensure that public concerns are addressed. The Public Information team serves as a liaison between the public and the construction contractor.

7. Conclusions

The City of San Bernardino is proposing to replace the Mount Vernon Avenue Bridge, which has been rated by the California Division of Structure Maintenance / Investigations as structurally deficient and functionally obsolete. The existing bridge will be replaced to improve seismic performance, provide standard vertical clearance over the rail tracks and comply with American Association of State Highway and Transportation Officials (AASHTO) roadway cross section standards. The main purpose of the project is to address the safety concerns of a structurally deficient bridge.

The bridge reconstruction is scheduled to start in 2019 and end in 2021, and Mount Vernon Avenue will be closed between Kingman Street and 2nd Street during this period. Traffic is anticipated to use detour routes due to the closure of Mount Vernon Avenue. This study evaluates the potential traffic impacts at the study area intersections due to the traffic redistribution.

Under existing (2017) conditions, all intersections are currently operating at satisfactory levels of service except for the Rancho Avenue/Foothill Boulevard intersection. Under the year 2021 Without Detour conditions, all intersections are expected to continue to operate at satisfactory levels of service except for the Rancho Avenue/Foothill Boulevard intersection. Under the year 2021 With Detour conditions, five of the study intersections were anticipated to operate at LOS E or worse. They are:

- Rancho Avenue/Foothill Boulevard
- Mount Vernon Avenue/5th Street
- Mount Vernon Avenue/Rialto Avenue
- H Street/5th Street
- G Street/Rialto Avenue

Temporary intersection improvements were recommended to improve traffic operations at four of the five potentially impacted intersections. With the proposed improvements, these study intersections are anticipated to operate at satisfactory levels of service. No feasible improvements were identified to reduce the impacts at the Rancho Avenue/Foothill Boulevard intersection. It is recommended that the City evaluate the option of installing a traffic signal at this intersection to improve operations.

8. List of References

City of San Bernardino. 2005. General Plan Circulation Element.

City of San Bernardino. 2004. Traffic Impact Study Guidelines.

City of San Bernardino. 1994. Bicycle Facilities Master Plan.

LSA Associates Inc. 2004. Pedestrian and Vehicular Detour Analysis.

San Bernardino County. 2016. Congestion Management Program.

Transportation Research Board. 1982. National Cooperative Highway Research Program Report 255, Highway Traffic Data for Urbanized Area Project Planning and Design.

Appendix A: Existing Traffic Counts

National Data & Surveying Services

Intersection Turning Movement Count

Location: Rancho Ave & Foothill Blvd
 City: San Bernardino
 Control: 1-Way Stop (NB)

Project ID: 17-06163-001
 Date: 10/24/2017

Total

NS/EW Streets:	Rancho Ave				Rancho Ave				Foothill Blvd				Foothill Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	0 NT	1 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
7:00 AM	18	0	32	0	0	0	0	0	0	87	34	3	47	78	0	2	301
7:15 AM	17	0	61	0	0	0	0	0	0	122	30	0	46	89	0	0	365
7:30 AM	11	0	34	0	0	0	0	0	0	143	41	0	40	124	0	0	393
7:45 AM	24	0	44	0	0	0	0	0	0	141	37	0	40	104	0	0	390
8:00 AM	13	0	34	1	0	0	0	0	0	117	20	0	31	84	1	0	301
8:15 AM	13	0	24	0	0	0	0	0	0	137	19	0	35	95	0	0	323
8:30 AM	12	0	38	0	0	0	0	0	0	111	14	0	30	105	0	0	310
8:45 AM	13	0	27	0	0	0	0	0	0	98	22	0	29	114	0	0	303
TOTAL VOLUMES :	121	0	294	1	0	0	0	0	0	956	217	3	298	793	1	2	2686
APPROACH %'s :	29.09%	0.00%	70.67%	0.24%					0.00%	81.29%	18.45%	0.26%	27.24%	72.49%	0.09%	0.18%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	70	0	171	0	0	0	0	0	0	493	142	3	173	395	0	2	1449
PEAK HR FACTOR :	0.729	0.000	0.701	0.000	0.000	0.000	0.000	0.000	0.000	0.862	0.866	0.250	0.920	0.796	0.000	0.250	0.922
	0.772								0.867				0.869				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	0 NT	1 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
4:00 PM	16	0	36	0	0	0	0	0	0	159	25	0	46	156	0	0	438
4:15 PM	18	0	37	0	0	0	0	0	0	144	21	0	38	137	0	0	395
4:30 PM	18	0	52	0	0	0	0	0	0	152	28	0	59	137	0	0	446
4:45 PM	28	0	54	0	0	0	0	0	0	156	26	0	36	136	0	0	436
5:00 PM	27	0	56	0	0	0	0	0	0	158	42	0	51	152	0	0	486
5:15 PM	32	0	43	0	0	0	0	0	0	153	21	0	54	138	0	1	442
5:30 PM	29	0	53	0	0	0	0	0	0	185	25	0	39	138	0	0	469
5:45 PM	26	0	59	0	0	0	0	0	0	183	28	0	42	143	0	0	481
TOTAL VOLUMES :	194	0	390	0	0	0	0	0	0	1290	216	0	365	1137	0	1	3593
APPROACH %'s :	33.22%	0.00%	66.78%	0.00%					0.00%	85.66%	14.34%	0.00%	24.28%	75.65%	0.00%	0.07%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	114	0	211	0	0	0	0	0	0	679	116	0	186	571	0	1	1878
PEAK HR FACTOR :	0.891	0.000	0.894	0.000	0.000	0.000	0.000	0.000	0.000	0.918	0.690	0.000	0.861	0.939	0.000	0.250	0.966
	0.956								0.942				0.933				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Rancho Ave & Foothill Blvd
 City: San Bernardino
 Control: 1-Way Stop (NB)

Project ID: 17-06163-001
 Date: 10/24/2017

2axle

NS/EW Streets:	Rancho Ave				Rancho Ave				Foothill Blvd				Foothill Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	0 NT	1 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
7:00 AM	1	0	0	0	0	0	0	0	0	3	1	0	1	2	0	0	8
7:15 AM	0	0	2	0	0	0	0	0	0	4	1	0	0	2	0	0	9
7:30 AM	0	0	1	0	0	0	0	0	0	5	3	0	0	1	0	0	10
7:45 AM	1	0	0	0	0	0	0	0	0	4	1	0	0	2	0	0	8
8:00 AM	0	0	0	0	0	0	0	0	0	6	0	0	1	1	0	0	8
8:15 AM	0	0	0	0	0	0	0	0	0	5	1	0	0	2	0	0	8
8:30 AM	0	0	0	0	0	0	0	0	0	4	0	0	1	3	0	0	8
8:45 AM	0	0	0	0	0	0	0	0	0	3	0	0	2	3	0	0	8
TOTAL VOLUMES :	NL 2	NT 0	NR 3	NU 0	SL 0	ST 0	SR 0	SU 0	EL 0	ET 34	ER 7	EU 0	WL 5	WT 16	WR 0	WU 0	TOTAL 67
APPROACH %'s :	40.00%	0.00%	60.00%	0.00%					0.00%	82.93%	17.07%	0.00%	23.81%	76.19%	0.00%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	2	0	3	0	0	0	0	0	0	16	6	0	1	7	0	0	35
PEAK HR FACTOR :	0.500	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.800	0.500	0.000	0.250	0.875	0.000	0.000	0.875
	0.625								0.688				0.667				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	0 NT	1 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
4:00 PM	1	0	1	0	0	0	0	0	0	6	0	0	2	4	0	0	14
4:15 PM	1	0	0	0	0	0	0	0	0	5	1	0	0	0	0	0	7
4:30 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	2	0	0	5
4:45 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	4
5:00 PM	0	0	0	0	0	0	0	0	0	3	0	0	1	3	0	0	7
5:15 PM	0	0	0	0	0	0	0	0	0	3	0	0	1	3	0	0	7
5:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2
5:45 PM	0	0	1	0	0	0	0	0	0	3	0	0	0	1	0	0	5
TOTAL VOLUMES :	NL 2	NT 0	NR 2	NU 0	SL 0	ST 0	SR 0	SU 0	EL 0	ET 26	ER 1	EU 0	WL 4	WT 16	WR 0	WU 0	TOTAL 51
APPROACH %'s :	50.00%	0.00%	50.00%	0.00%					0.00%	96.30%	3.70%	0.00%	20.00%	80.00%	0.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	0	1	0	0	0	0	0	0	10	0	0	2	8	0	0	21
PEAK HR FACTOR :	0.00	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.833	0.000	0.000	0.500	0.667	0.000	0.000	0.750
	0.250								0.833				0.625				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Rancho Ave & Foothill Blvd
 City: San Bernardino
 Control: 1-Way Stop (NB)

Project ID: 17-06163-001
 Date: 10/24/2017

3axle

NS/EW Streets:	Rancho Ave				Rancho Ave				Foothill Blvd				Foothill Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	5	0	0	0	0	0	0	2	1	0	0	1	0	0	9
7:15 AM	0	0	10	0	0	0	0	0	0	2	1	0	7	0	0	0	20
7:30 AM	1	0	4	0	0	0	0	0	0	0	1	0	7	0	0	0	13
7:45 AM	1	0	4	0	0	0	0	0	0	3	1	0	5	1	0	0	15
8:00 AM	0	0	4	0	0	0	0	0	0	5	1	0	2	5	0	0	17
8:15 AM	0	0	5	0	0	0	0	0	0	2	3	0	3	1	0	0	14
8:30 AM	0	0	7	0	0	0	0	0	0	4	0	0	3	2	0	0	16
8:45 AM	0	0	7	0	0	0	0	0	0	3	1	0	6	1	0	0	18
TOTAL VOLUMES :	2	0	46	0	0	0	0	0	0	21	9	0	33	11	0	0	122
APPROACH %'s :	4.17%	0.00%	95.83%	0.00%					0.00%	70.00%	30.00%	0.00%	75.00%	25.00%	0.00%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	2	0	23	0	0	0	0	0	0	7	4	0	19	2	0	0	57
PEAK HR FACTOR :	0.500	0.000	0.575	0.000	0.000	0.000	0.000	0.000	0.000	0.583	1.000	0.000	0.679	0.500	0.000	0.000	0.713
	0.625								0.688				0.750				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	1	0	3	0	0	0	0	0	0	2	1	0	3	3	0	0	13
4:15 PM	0	0	3	0	0	0	0	0	0	5	0	0	3	1	0	0	12
4:30 PM	0	0	5	0	0	0	0	0	0	0	0	0	11	1	0	0	17
4:45 PM	0	0	5	0	0	0	0	0	0	1	2	0	7	4	0	0	19
5:00 PM	0	0	6	0	0	0	0	0	0	2	1	0	9	3	0	0	21
5:15 PM	1	0	2	0	0	0	0	0	0	0	0	0	5	3	0	0	11
5:30 PM	1	0	5	0	0	0	0	0	0	2	0	0	5	4	0	0	17
5:45 PM	0	0	5	0	0	0	0	0	0	3	0	0	3	1	0	0	12
TOTAL VOLUMES :	3	0	34	0	0	0	0	0	0	15	4	0	46	20	0	0	122
APPROACH %'s :	8.11%	0.00%	91.89%	0.00%					0.00%	78.95%	21.05%	0.00%	69.70%	30.30%	0.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	2	0	18	0	0	0	0	0	0	7	1	0	22	11	0	0	61
PEAK HR FACTOR :	0.50	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.583	0.250	0.000	0.611	0.688	0.000	0.000	0.726
	0.833								0.667				0.688				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Rancho Ave & Foothill Blvd
 City: San Bernardino
 Control: 1-Way Stop (NB)

Project ID: 17-06163-001
 Date: 10/24/2017

4axle

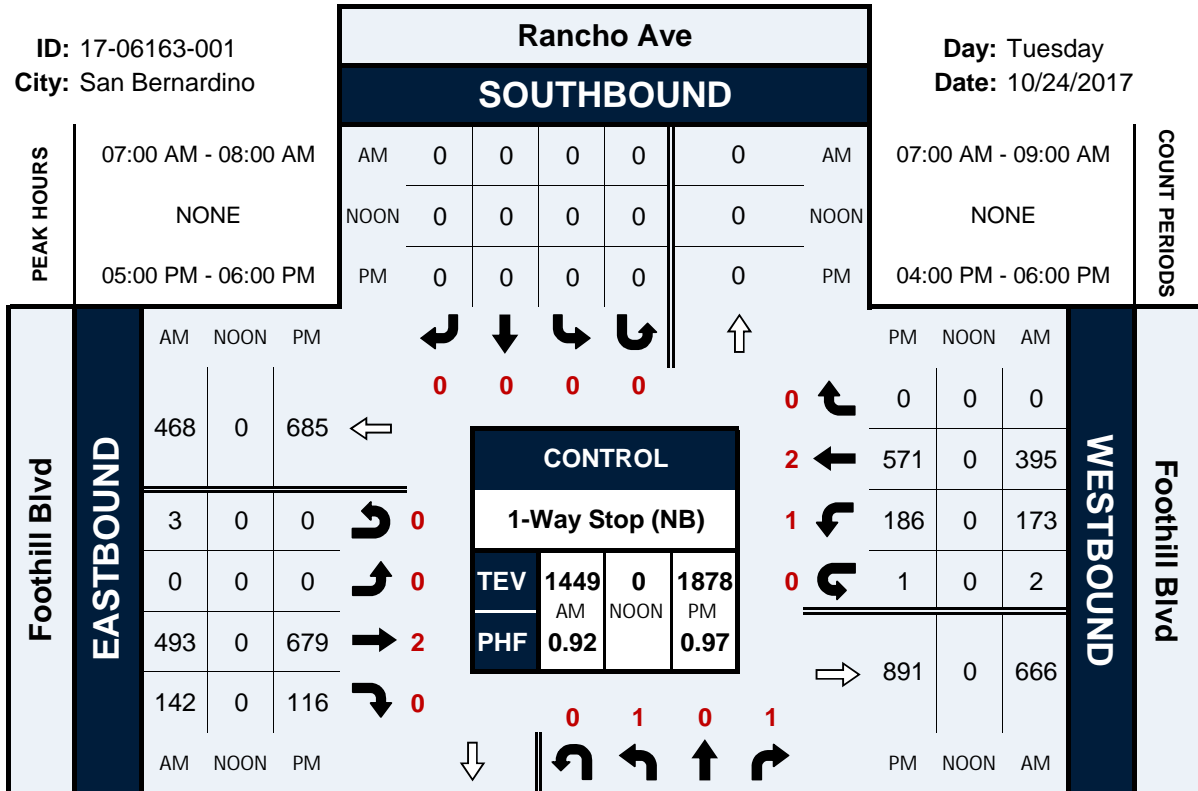
NS/EW Streets:	Rancho Ave				Rancho Ave				Foothill Blvd				Foothill Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0	1	0	0	0	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	4	0	7	0	0	0	0	0	0	0	0	0	8	2	0	0	21
7:15 AM	1	0	5	0	0	0	0	0	0	4	0	0	4	5	0	0	19
7:30 AM	2	0	2	0	0	0	0	0	0	3	0	0	5	6	0	0	18
7:45 AM	1	0	2	0	0	0	0	0	0	3	0	0	4	4	0	0	14
8:00 AM	1	0	7	0	0	0	0	0	0	4	0	0	5	6	0	0	23
8:15 AM	0	0	4	0	0	0	0	0	0	3	0	0	7	4	0	0	18
8:30 AM	0	0	1	0	0	0	0	0	0	9	0	0	5	7	0	0	22
8:45 AM	1	0	3	0	0	0	0	0	0	9	0	0	7	5	0	0	25
TOTAL VOLUMES :	10	0	31	0	0	0	0	0	0	35	0	0	45	39	0	0	160
APPROACH %'s :	24.39%	0.00%	75.61%	0.00%					0.00%	100.00%	0.00%	0.00%	53.57%	46.43%	0.00%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	8	0	16	0	0	0	0	0	0	10	0	0	21	17	0	0	72
PEAK HR FACTOR :	0.500	0.000	0.571	0.000	0.000	0.000	0.000	0.000	0.000	0.625	0.000	0.000	0.656	0.708	0.000	0.000	0.857
	0.545								0.625				0.864				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0	1	0	0	0	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	2	0	1	0	0	0	0	0	0	9	0	0	6	4	0	0	22
4:15 PM	0	0	3	0	0	0	0	0	0	10	0	0	6	2	0	0	21
4:30 PM	0	0	3	0	0	0	0	0	0	11	0	0	6	1	0	0	21
4:45 PM	1	0	2	0	0	0	0	0	0	11	1	0	2	2	0	0	19
5:00 PM	0	0	2	0	0	0	0	0	0	6	0	0	5	1	0	0	14
5:15 PM	0	0	3	0	0	0	0	0	0	4	0	0	7	3	0	0	17
5:30 PM	1	0	4	0	0	0	0	0	0	5	0	0	3	1	0	0	14
5:45 PM	0	0	4	0	0	0	0	0	0	3	0	0	7	3	0	0	17
TOTAL VOLUMES :	4	0	22	0	0	0	0	0	0	59	1	0	42	17	0	0	145
APPROACH %'s :	15.38%	0.00%	84.62%	0.00%					0.00%	98.33%	1.67%	0.00%	71.19%	28.81%	0.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	1	0	13	0	0	0	0	0	0	18	0	0	22	8	0	0	62
PEAK HR FACTOR :	0.25	0.000	0.813	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.786	0.667	0.000	0.000	0.912
	0.700								0.750				0.750				

Rancho Ave & Foothill Blvd

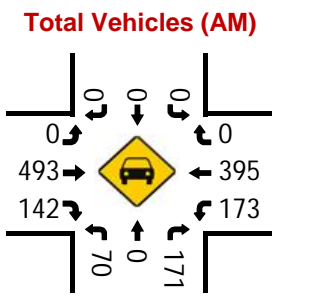
Peak Hour Turning Movement Count

ID: 17-06163-001
City: San Bernardino

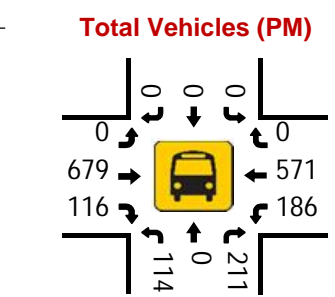
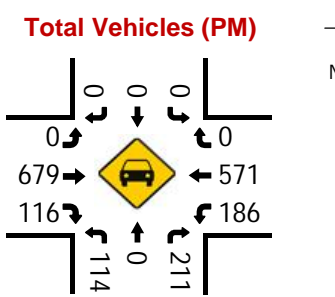
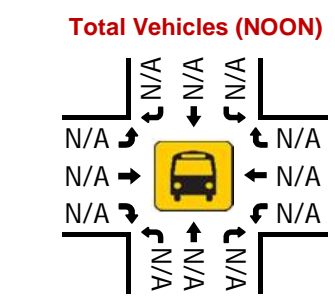
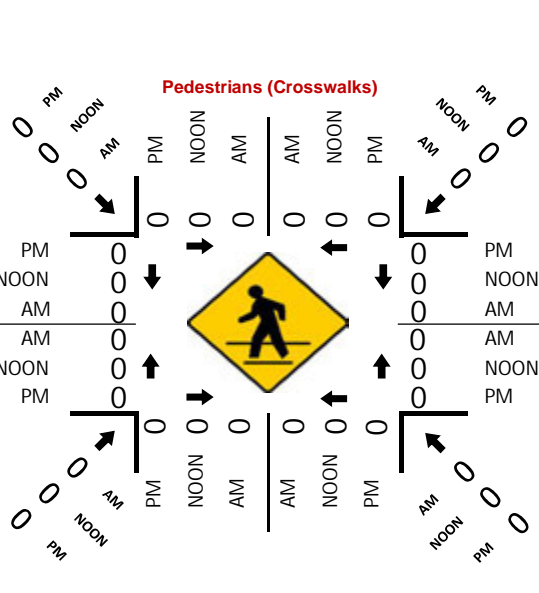
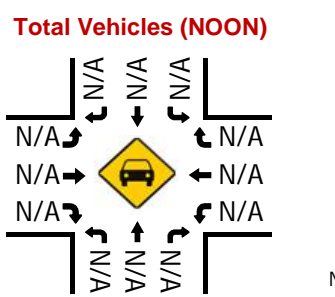
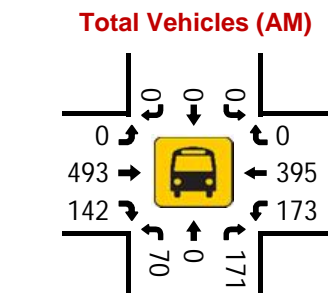
Day: Tuesday
Date: 10/24/2017



CONTROL		
1-Way Stop (NB)		
TEV	1449	0
	AM	NOON
PHF	0.92	0.97
	AM	PM



		Rancho Ave									
		NORTHBOUND									
PM NOON AM	PM	302	0	114	0	211	PM	07:00 AM - 09:00 AM			
	NOON	0	0	0	0	0	NOON	NONE			
	AM	315	0	70	0	171	AM	04:00 PM - 06:00 PM			
		0 1 0 1					0				
		AM NOON PM					PM NOON AM				



National Data & Surveying Services

Intersection Turning Movement Count

Location: Rancho Ave & Rialto Ave
 City: San Bernardino
 Control: Signalized

Project ID: 17-06163-002
 Date: 10/24/2017

Total

NS/EW Streets:	Rancho Ave				Rancho Ave				Rialto Ave				Rialto Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	1 NT	1 NR	0 NU	1 SL	1 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
7:00 AM	12	24	30	0	15	53	8	0	7	52	32	0	16	43	22	0	314
7:15 AM	14	45	34	0	18	52	12	0	11	73	27	0	15	43	12	0	356
7:30 AM	16	34	51	0	27	38	9	0	6	81	31	0	11	54	13	0	371
7:45 AM	15	43	30	0	28	45	8	0	9	101	22	0	14	34	14	0	363
8:00 AM	16	29	13	0	17	30	4	0	8	66	19	0	14	39	15	0	270
8:15 AM	20	20	21	0	11	32	5	0	3	61	27	0	11	42	12	0	265
8:30 AM	19	30	18	0	16	27	5	0	8	46	21	0	6	38	13	0	247
8:45 AM	21	27	16	0	19	28	4	0	3	43	17	0	10	36	11	0	235
TOTAL VOLUMES :	133	252	213	0	151	305	55	0	55	523	196	0	97	329	112	0	2421
APPROACH %'s :	22.24%	42.14%	35.62%	0.00%	29.55%	59.69%	10.76%	0.00%	7.11%	67.57%	25.32%	0.00%	18.03%	61.15%	20.82%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	57	146	145	0	88	188	37	0	33	307	112	0	56	174	61	0	1404
PEAK HR FACTOR :	0.891	0.811	0.711	0.000	0.786	0.887	0.771	0.000	0.750	0.760	0.875	0.000	0.875	0.806	0.693	0.000	0.946
	0.861				0.954				0.856				0.898				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	1 NT	1 NR	0 NU	1 SL	1 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
4:00 PM	21	32	22	0	21	46	7	0	5	68	27	0	26	96	14	0	385
4:15 PM	31	42	19	0	8	48	12	0	2	48	22	0	21	75	13	0	341
4:30 PM	37	48	21	0	26	49	12	0	8	57	24	0	30	86	13	0	411
4:45 PM	28	61	20	0	19	37	9	0	8	54	22	0	30	70	14	0	372
5:00 PM	38	51	29	0	34	60	7	0	19	61	31	0	28	98	12	0	468
5:15 PM	43	49	29	0	22	44	19	0	13	68	16	0	25	97	12	0	437
5:30 PM	24	58	26	0	15	41	12	0	7	73	30	0	27	76	13	0	402
5:45 PM	30	55	18	0	16	51	11	0	8	52	31	0	19	85	11	0	387
TOTAL VOLUMES :	252	396	184	0	161	376	89	0	70	481	203	0	206	683	102	0	3203
APPROACH %'s :	30.29%	47.60%	22.12%	0.00%	25.72%	60.06%	14.22%	0.00%	9.28%	63.79%	26.92%	0.00%	20.79%	68.92%	10.29%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	135	213	102	0	87	196	49	0	47	254	108	0	99	356	48	0	1694
PEAK HR FACTOR :	0.785	0.918	0.879	0.000	0.640	0.817	0.645	0.000	0.618	0.870	0.871	0.000	0.884	0.908	0.923	0.000	0.905
	0.930				0.822				0.921				0.911				

National Data & Surveying Services

Intersection Turning Movement Count

Location: 4th St & 5th St (Foothill Blvd)
 City: San Bernardino
 Control: Signalized

Project ID: 17-06163-003
 Date: 10/24/2017

Total

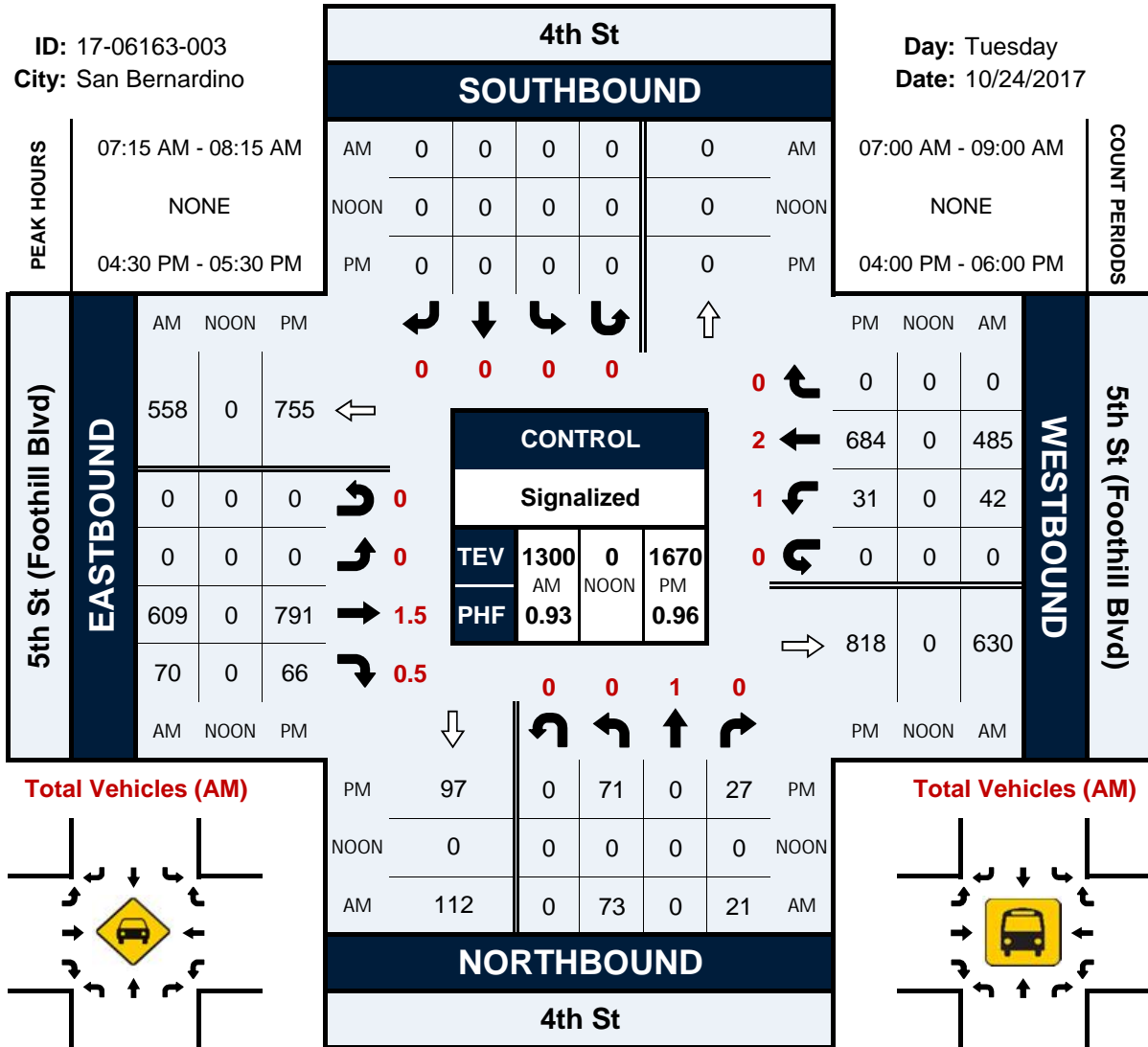
NS/EW Streets:	4th St				4th St				5th St (Foothill Blvd)				5th St (Foothill Blvd)				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	10	0	4	0	0	0	0	0	0	108	13	0	8	110	0	0	253
7:15 AM	16	0	2	0	0	0	0	0	0	162	19	0	9	116	0	0	324
7:30 AM	21	0	3	0	0	0	0	0	0	156	11	0	14	143	0	0	348
7:45 AM	16	0	7	0	0	0	0	0	0	164	18	0	10	124	0	0	339
8:00 AM	20	0	9	0	0	0	0	0	0	127	22	0	9	102	0	0	289
8:15 AM	31	0	1	0	0	0	0	0	0	150	24	0	16	96	0	0	318
8:30 AM	29	0	4	0	0	0	0	0	0	131	30	0	14	103	0	0	311
8:45 AM	36	0	11	0	0	0	0	0	0	101	23	0	8	117	0	0	296
TOTAL VOLUMES :	179	0	41	0	0	0	0	0	0	1099	160	0	88	911	0	0	2478
APPROACH %'s :	81.36%	0.00%	18.64%	0.00%					0.00%	87.29%	12.71%	0.00%	8.81%	91.19%	0.00%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	73	0	21	0	0	0	0	0	0	609	70	0	42	485	0	0	1300
PEAK HR FACTOR :	0.869	0.000	0.583	0.000	0.000	0.000	0.000	0.000	0.000	0.928	0.795	0.000	0.750	0.848	0.000	0.000	0.934
	0.810								0.933				0.839				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	17	0	8	0	0	0	0	0	0	173	19	0	12	178	0	0	407
4:15 PM	20	0	11	0	0	0	0	0	0	195	12	0	7	166	0	0	411
4:30 PM	16	0	3	0	0	0	0	0	0	189	20	0	5	173	0	0	406
4:45 PM	13	0	4	0	0	0	0	0	0	198	18	0	12	158	0	0	403
5:00 PM	23	0	12	0	0	0	0	0	0	190	14	0	6	181	0	0	426
5:15 PM	19	0	8	0	0	0	0	0	0	214	14	0	8	172	0	0	435
5:30 PM	16	0	2	0	0	0	0	0	0	195	17	0	9	163	0	0	402
5:45 PM	26	0	6	0	0	0	0	0	0	188	19	0	5	157	0	0	401
TOTAL VOLUMES :	150	0	54	0	0	0	0	0	0	1542	133	0	64	1348	0	0	3291
APPROACH %'s :	73.53%	0.00%	26.47%	0.00%					0.00%	92.06%	7.94%	0.00%	4.53%	95.47%	0.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	71	0	27	0	0	0	0	0	0	791	66	0	31	684	0	0	1670
PEAK HR FACTOR :	0.772	0.000	0.563	0.000	0.000	0.000	0.000	0.000	0.000	0.924	0.825	0.000	0.646	0.945	0.000	0.000	0.960
	0.700								0.940				0.956				

4th St & 5th St (Foothill Blvd)

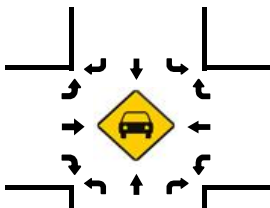
Peak Hour Turning Movement Count

ID: 17-06163-003
City: San Bernardino

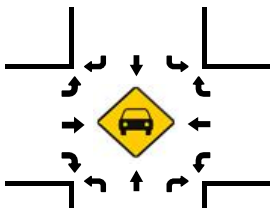
Day: Tuesday
Date: 10/24/2017



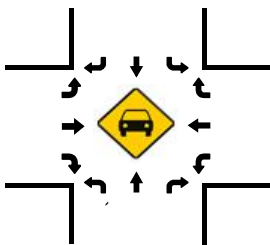
Total Vehicles (AM)



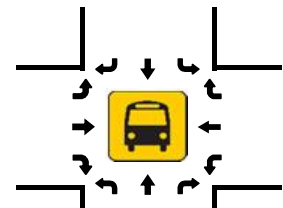
Total Vehicles (NOON)



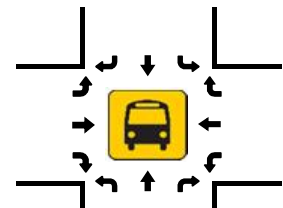
Total Vehicles (PM)



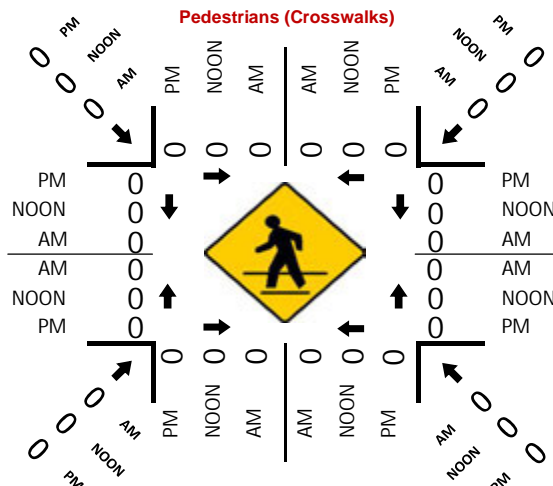
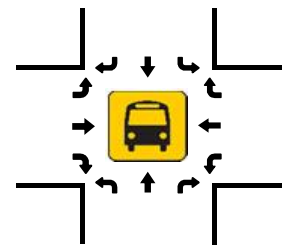
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Medical Center Dr & 5th St
 City: San Bernardino
 Control: Signalized

Project ID: 17-06163-004
 Date: 10/24/2017

Total

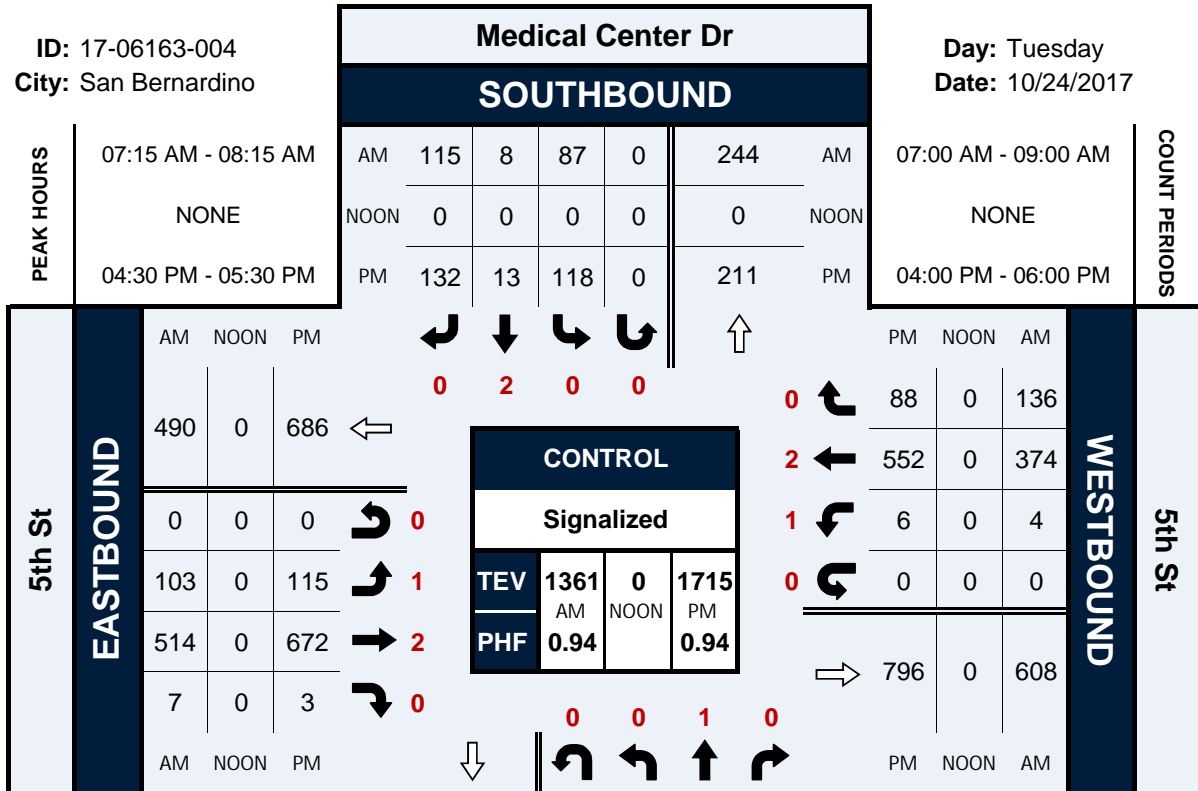
NS/EW Streets:	Medical Center Dr				Medical Center Dr				5th St				5th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	2	0	16	1	41	0	18	92	1	0	2	73	42	0	288
7:15 AM	0	0	0	0	29	0	36	0	25	132	0	0	0	71	49	0	342
7:30 AM	0	0	0	0	29	1	21	0	28	128	1	0	0	113	35	0	356
7:45 AM	0	2	3	0	18	4	30	0	36	134	2	0	3	101	30	0	363
8:00 AM	1	3	4	0	11	3	28	0	14	120	4	0	1	89	22	0	300
8:15 AM	0	1	2	0	14	2	20	0	30	127	0	0	2	89	16	0	303
8:30 AM	0	2	7	0	29	5	22	0	21	101	0	0	3	96	24	0	310
8:45 AM	0	2	1	0	29	3	21	0	14	91	0	0	0	98	10	0	269
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	1	10	19	0	175	19	219	0	186	925	8	0	11	730	228	0	2531
APPROACH %'s :	3.33%	33.33%	63.33%	0.00%	42.37%	4.60%	53.03%	0.00%	16.62%	82.66%	0.71%	0.00%	1.14%	75.34%	23.53%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	1	5	7	0	87	8	115	0	103	514	7	0	4	374	136	0	1361
PEAK HR FACTOR :	0.250	0.417	0.438	0.000	0.750	0.500	0.799	0.000	0.715	0.959	0.438	0.000	0.333	0.827	0.694	0.000	0.937
	0.406				0.808				0.907				0.868				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	1	6	0	41	2	31	0	24	144	3	0	2	138	23	0	415
4:15 PM	4	0	2	0	20	0	25	0	42	151	2	0	0	130	32	0	408
4:30 PM	1	2	1	0	16	4	45	0	21	161	0	0	1	130	23	0	405
4:45 PM	0	1	3	0	26	2	24	0	27	166	0	0	0	125	23	0	397
5:00 PM	1	2	1	0	49	1	33	0	28	156	2	0	3	155	26	0	457
5:15 PM	0	3	1	0	27	6	30	0	39	189	1	0	2	142	16	0	456
5:30 PM	0	1	5	0	15	0	26	0	35	140	0	0	2	130	20	0	374
5:45 PM	0	1	3	0	20	1	23	0	35	148	0	0	0	125	16	0	372
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	6	11	22	0	214	16	237	0	251	1255	8	0	10	1075	179	0	3284
APPROACH %'s :	15.38%	28.21%	56.41%	0.00%	45.82%	3.43%	50.75%	0.00%	16.58%	82.89%	0.53%	0.00%	0.79%	85.05%	14.16%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	2	8	6	0	118	13	132	0	115	672	3	0	6	552	88	0	1715
PEAK HR FACTOR :	0.500	0.667	0.500	0.000	0.602	0.542	0.733	0.000	0.737	0.889	0.375	0.000	0.500	0.890	0.846	0.000	0.938
	1.000				0.792				0.862				0.878				

Medical Center Dr & 5th St

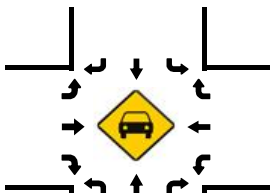
Peak Hour Turning Movement Count

ID: 17-06163-004
City: San Bernardino

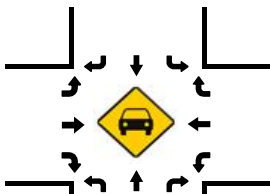
Day: Tuesday
Date: 10/24/2017



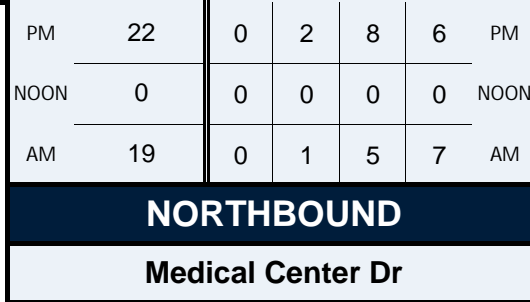
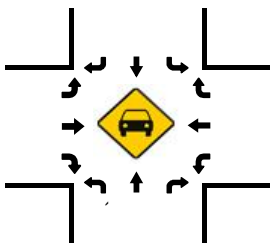
Total Vehicles (AM)



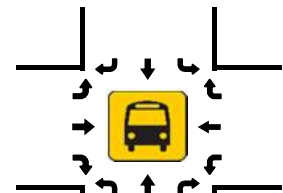
Total Vehicles (NOON)



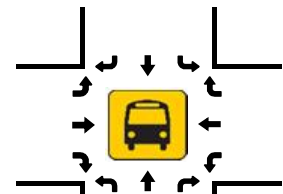
Total Vehicles (PM)



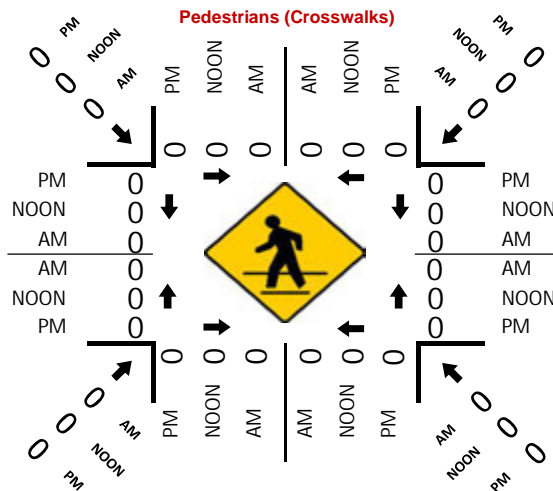
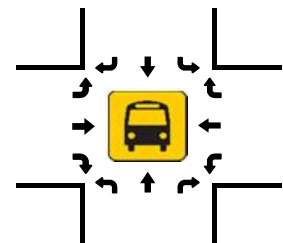
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Santa Fe Way Private & Rialto Ave
 City: San Bernardino
 Control: Signalized

Project ID: 17-06163-005
 Date: 10/24/2017

Total

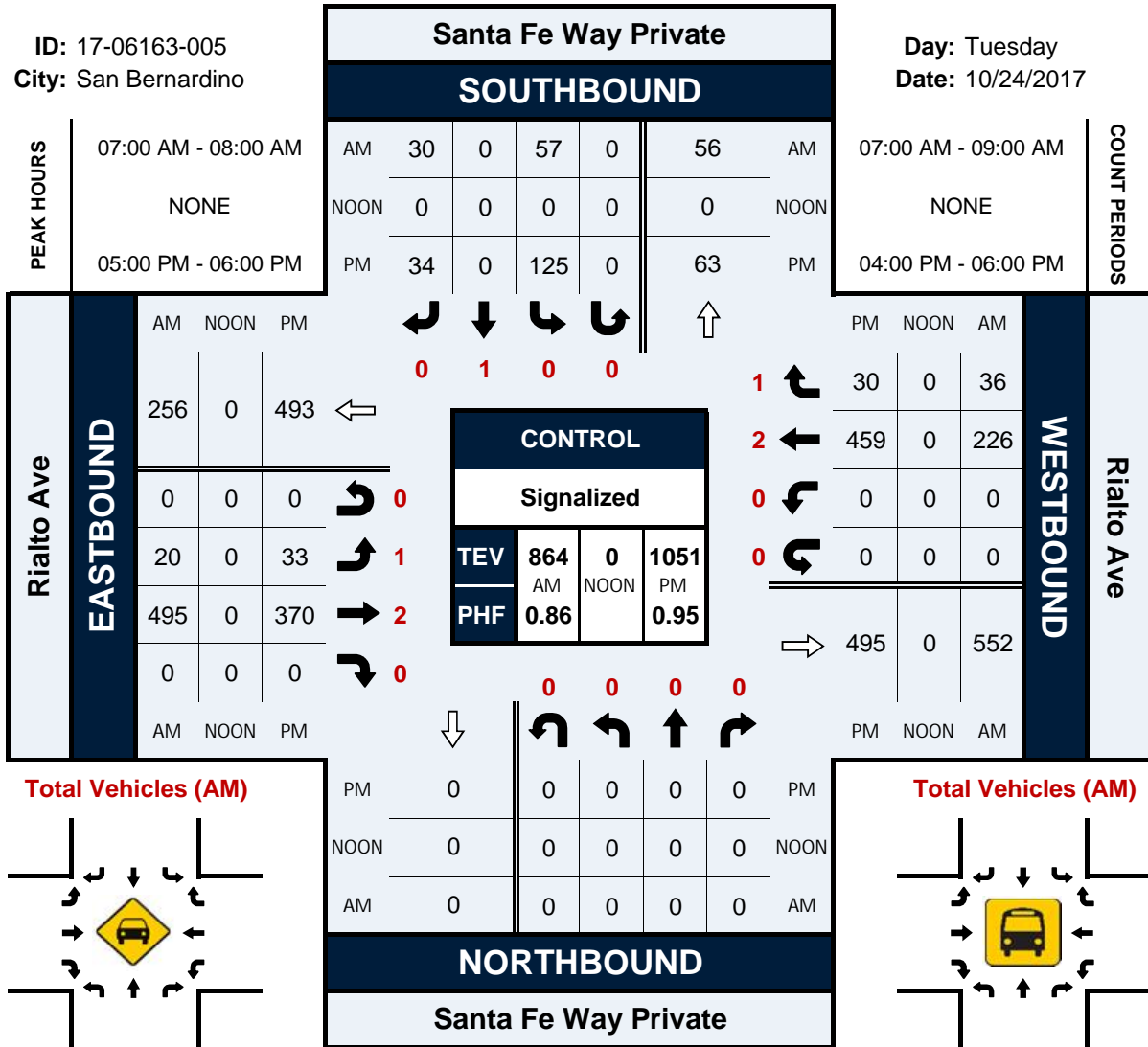
NS/EW Streets:	Santa Fe Way Private				Santa Fe Way Private				Rialto Ave				Rialto Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	0	0	0	0	1	0	0	1	2	0	0	0	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	0	0	14	0	12	0	5	96	0	0	0	57	10	0	194
7:15 AM	0	0	0	0	9	0	7	0	6	104	0	0	0	55	7	0	188
7:30 AM	0	0	0	0	22	0	9	0	4	147	0	0	0	58	11	0	251
7:45 AM	0	0	0	0	12	0	2	0	5	148	0	0	0	56	8	0	231
8:00 AM	0	0	0	0	9	0	5	0	2	86	0	0	0	56	11	1	170
8:15 AM	0	0	0	0	5	0	5	0	3	85	0	0	0	48	15	0	161
8:30 AM	0	0	0	0	14	0	4	0	4	65	0	0	0	42	13	0	142
8:45 AM	0	0	0	0	17	0	5	0	4	66	0	0	0	54	15	0	161
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	102	0	49	0	33	797	0	0	0	426	90	1	1498
					67.55%	0.00%	32.45%	0.00%	3.98%	96.02%	0.00%	0.00%	0.00%	82.40%	17.41%	0.19%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	0	0	0	0	57	0	30	0	20	495	0	0	0	226	36	0	864
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.648	0.000	0.625	0.000	0.833	0.836	0.000	0.000	0.000	0.974	0.818	0.000	0.861
					0.702				0.842				0.949				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	0	0	0	0	1	0	0	1	2	0	0	0	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	0	0	0	6	0	6	0	5	88	0	0	0	112	8	0	225
4:15 PM	0	0	0	0	21	0	8	0	3	69	0	0	0	97	11	0	209
4:30 PM	0	0	0	0	24	0	4	0	7	83	0	0	0	136	7	0	261
4:45 PM	0	0	0	0	23	0	3	0	12	75	0	0	0	88	15	0	216
5:00 PM	0	0	0	0	19	0	5	0	16	97	0	0	0	133	6	0	276
5:15 PM	0	0	0	0	39	0	10	0	8	100	0	0	0	114	5	0	276
5:30 PM	0	0	0	0	29	0	10	0	3	98	0	0	0	108	7	0	255
5:45 PM	0	0	0	0	38	0	9	0	6	75	0	0	0	104	12	0	244
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	199	0	55	0	60	685	0	0	0	892	71	0	1962
					78.35%	0.00%	21.65%	0.00%	8.05%	91.95%	0.00%	0.00%	0.00%	92.63%	7.37%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	125	0	34	0	33	370	0	0	0	459	30	0	1051
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.801	0.000	0.850	0.000	0.516	0.925	0.000	0.000	0.000	0.863	0.625	0.000	0.952
					0.811				0.892				0.879				

Santa Fe Way Private & Rialto Ave

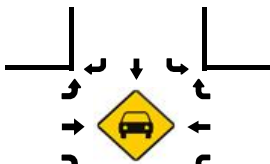
Peak Hour Turning Movement Count

ID: 17-06163-005
City: San Bernardino

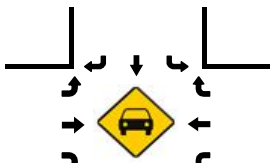
Day: Tuesday
Date: 10/24/2017



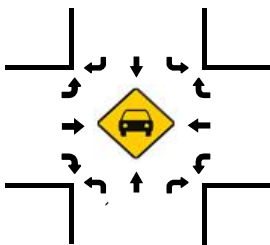
Total Vehicles (AM)



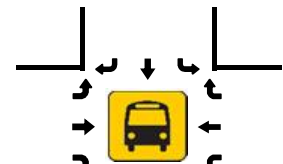
Total Vehicles (NOON)



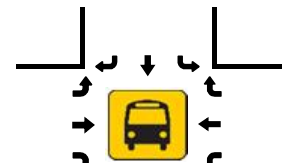
Total Vehicles (PM)



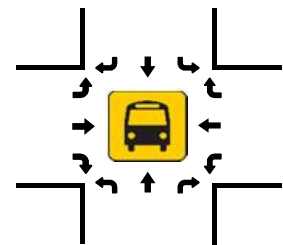
Total Vehicles (AM)



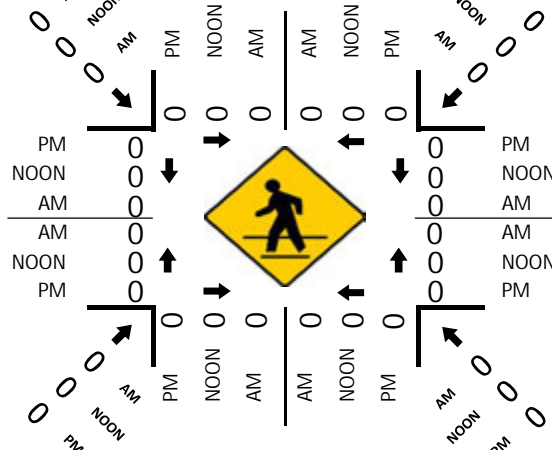
Total Vehicles (NOON)



Total Vehicles (PM)



Pedestrians (Crosswalks)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Cabrera Ave & 5th St
 City: San Bernardino
 Control: Signalized

Project ID: 17-06163-006
 Date: 10/24/2017

Total

NS/EW Streets:	Cabrera Ave				Cabrera Ave				5th St				5th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	2	0	0	1	2	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	6	1	2	0	2	0	1	0	2	108	1	0	5	88	0	0	216
7:15 AM	7	0	4	0	1	0	1	0	0	158	6	0	7	125	0	0	309
7:30 AM	1	0	7	0	6	0	0	0	2	167	6	0	7	129	1	0	326
7:45 AM	1	3	7	0	3	2	0	0	4	161	0	0	0	121	0	0	302
8:00 AM	0	3	4	0	0	1	1	0	0	135	2	0	8	108	3	0	265
8:15 AM	1	8	3	0	2	4	3	0	5	138	3	0	4	114	2	0	287
8:30 AM	0	2	6	0	4	1	2	0	4	144	4	0	9	136	7	0	319
8:45 AM	1	0	8	0	4	2	0	0	2	112	2	0	6	113	3	0	253
TOTAL VOLUMES :	17	17	41	0	22	10	8	0	19	1123	24	0	46	934	16	0	2277
APPROACH %'s :	22.67%	22.67%	54.67%	0.00%	55.00%	25.00%	20.00%	0.00%	1.63%	96.31%	2.06%	0.00%	4.62%	93.78%	1.61%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	9	6	22	0	10	3	2	0	6	621	14	0	22	483	4	0	1202
PEAK HR FACTOR :	0.321	0.500	0.786	0.000	0.417	0.375	0.500	0.000	0.375	0.930	0.583	0.000	0.688	0.936	0.333	0.000	0.922
	0.841				0.625				0.916				0.929				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	2	0	0	1	2	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	3	0	10	0	4	1	1	0	1	172	0	0	1	153	3	0	349
4:15 PM	0	0	9	0	2	2	0	0	2	142	0	0	5	158	3	0	323
4:30 PM	4	0	10	0	1	1	1	0	1	176	2	0	9	160	1	0	366
4:45 PM	3	1	3	0	0	1	2	0	2	170	1	0	6	140	2	0	331
5:00 PM	2	0	4	0	0	0	0	0	3	213	0	0	4	164	0	0	390
5:15 PM	0	1	4	0	1	1	1	0	4	182	1	0	8	172	5	0	380
5:30 PM	3	0	6	0	2	1	1	0	0	198	1	0	4	147	0	0	363
5:45 PM	3	0	9	0	0	0	0	0	2	198	4	0	4	164	3	0	387
TOTAL VOLUMES :	18	2	55	0	10	7	6	0	15	1451	9	0	41	1258	17	0	2889
APPROACH %'s :	24.00%	2.67%	73.33%	0.00%	43.48%	30.43%	26.09%	0.00%	1.02%	98.37%	0.61%	0.00%	3.12%	95.59%	1.29%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	8	1	23	0	3	2	2	0	9	791	6	0	20	647	8	0	1520
PEAK HR FACTOR :	0.667	0.250	0.639	0.000	0.375	0.500	0.500	0.000	0.563	0.928	0.375	0.000	0.625	0.940	0.400	0.000	0.974
	0.667				0.438				0.933				0.912				

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-6081-001

Day: Tuesday

City: San Bernardino

TOTALS

Date: 5/9/2017

AM

NS/EW Streets:	Mt Vernon Ave			Mt Vernon Ave			5th St			5th St			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	
	1	2	0	1	2	0	1	2	0	1	2	0	
7:00 AM	22	87	12	30	60	11	8	117	21	7	97	15	487
7:15 AM	16	65	8	29	98	12	14	147	32	9	118	9	557
7:30 AM	13	58	10	40	102	11	14	129	27	15	112	15	546
7:45 AM	14	77	12	26	97	12	14	123	21	13	112	21	542
8:00 AM	10	59	14	30	64	14	12	134	20	3	83	28	471
8:15 AM	22	58	7	40	70	12	18	101	17	8	77	32	462
8:30 AM	12	58	8	49	73	11	10	117	19	17	90	26	490
8:45 AM	10	69	9	42	78	15	20	104	16	11	105	21	500
TOTAL VOLUMES :	119	531	80	286	642	98	110	972	173	83	794	167	4055
APPROACH %'s :	16.30%	72.74%	10.96%	27.88%	62.57%	9.55%	8.76%	77.45%	13.78%	7.95%	76.05%	16.00%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	65	287	42	125	357	46	50	516	101	44	439	60	2132
PEAK HR FACTOR :	0.814			0.863			0.864			0.930			0.957

UTURNS			
NB	SB	EB	WB
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
1	0	0	0
0	0	0	0
TOTAL	TOTAL	TOTAL	TOTAL
1	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-6081-001

City: San Bernardino

TOTALS

PM

Day: Tuesday

Date: 5/9/2017

NS/EW Streets:	Mt Vernon Ave			Mt Vernon Ave			5th St			5th St			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	2	0	1	2	0	1	2	0	1	2	0	
4:00 PM	22	115	14	37	87	14	13	129	20	15	151	31	648
4:15 PM	27	88	21	37	88	18	20	139	16	16	132	31	633
4:30 PM	24	88	17	22	73	15	23	112	21	28	148	27	598
4:45 PM	29	119	25	23	90	14	24	130	23	22	138	28	665
5:00 PM	35	120	25	33	107	15	17	134	32	16	121	31	686
5:15 PM	35	124	20	24	78	19	20	141	26	17	145	28	677
5:30 PM	35	130	17	37	113	23	23	131	22	20	126	27	704
5:45 PM	31	140	18	25	104	27	28	100	22	21	134	24	674
TOTAL VOLUMES :	238	924	157	238	740	145	168	1016	182	155	1095	227	5285
APPROACH %'s :	18.04%	70.05%	11.90%	21.19%	65.89%	12.91%	12.30%	74.38%	13.32%	10.49%	74.14%	15.37%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	136	514	80	119	402	84	88	506	102	74	526	110	2741
PEAK HR FACTOR :	0.966			0.874			0.930			0.934			0.973

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:
National Data & Surveying Services

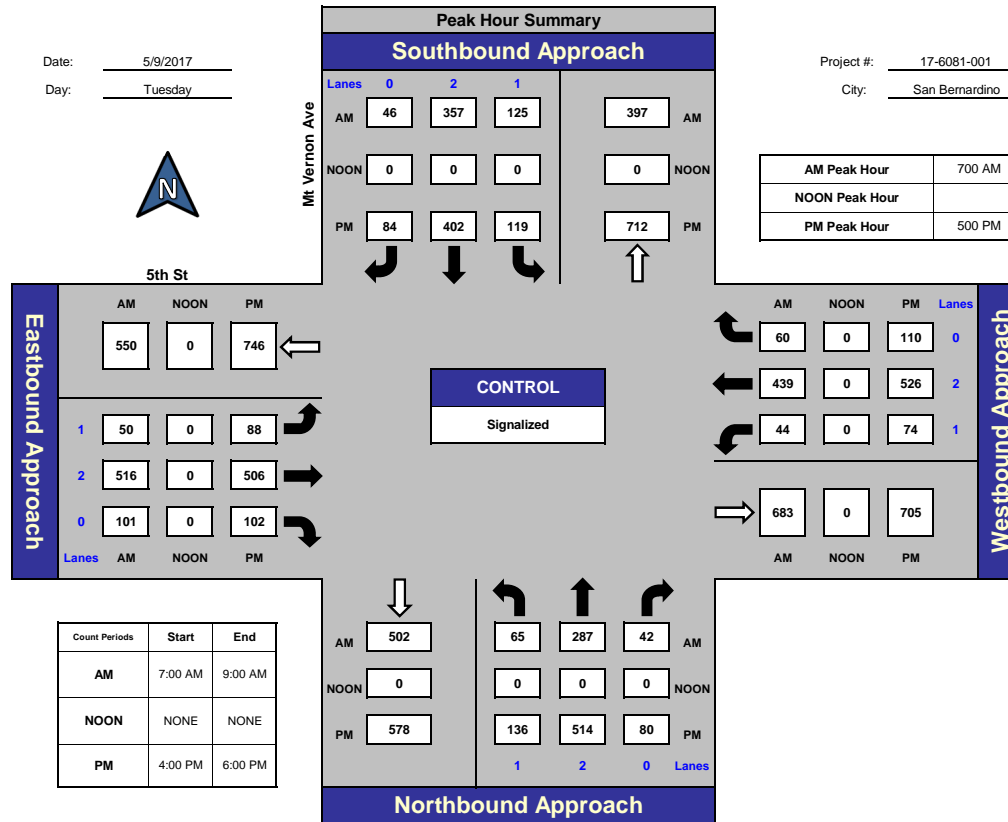
Mt Vernon Ave and 5th St, San Bernardino

Date: 5/9/2017

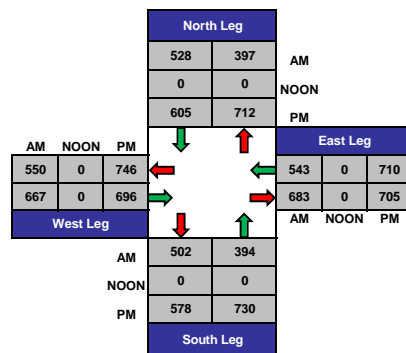
Day: Tuesday

Project #: 17-6081-001

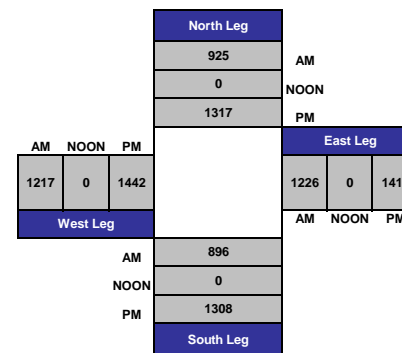
City: San Bernardino



Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-6081-001

Day: Tuesday

City: San Bernardino

Cars

Date: 5/9/2017

AM

NS/EW Streets:	Mt Vernon Ave			Mt Vernon Ave			5th St			5th St			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	2	0	1	2	0	1	2	0	1	2	0	
7:00 AM	22	86	12	29	60	10	8	100	21	7	86	14	455
7:15 AM	16	65	7	28	97	12	13	121	32	9	104	7	511
7:30 AM	13	58	10	40	100	10	14	119	27	15	98	13	517
7:45 AM	14	75	12	25	97	12	13	107	21	13	98	19	506
8:00 AM	10	59	14	27	64	13	11	117	20	3	74	28	440
8:15 AM	22	57	6	33	70	10	16	88	17	8	64	28	419
8:30 AM	11	58	8	46	73	11	9	100	19	17	78	25	455
8:45 AM	10	69	9	40	77	13	20	87	16	11	94	19	465
TOTAL VOLUMES :	118	527	78	268	638	91	104	839	173	83	696	153	3768
APPROACH %'s :	16.32%	72.89%	10.79%	26.88%	63.99%	9.13%	9.32%	75.18%	15.50%	8.91%	74.68%	16.42%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	65	284	41	122	354	44	48	447	101	44	386	53	1989
PEAK HR FACTOR :	0.813		0.867			0.898			0.929			0.962	

UTURNS			
NB	SB	EB	WB
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	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-6081-001

City: San Bernardino

Cars

PM

Day: Tuesday

Date: 5/9/2017

NS/EW Streets:	Mt Vernon Ave			Mt Vernon Ave			5th St			5th St			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	2	0	1	2	0	1	2	0	1	2	0	
4:00 PM	22	113	13	35	87	14	13	117	20	15	137	30	616
4:15 PM	27	88	21	35	84	18	20	114	16	16	116	28	583
4:30 PM	24	87	17	21	73	14	23	104	21	27	125	26	562
4:45 PM	29	118	25	23	90	14	24	112	23	22	127	27	634
5:00 PM	35	120	24	31	106	15	16	118	32	16	111	31	655
5:15 PM	35	124	20	23	78	19	20	129	26	17	134	25	650
5:30 PM	35	130	17	35	112	22	23	114	22	20	119	27	676
5:45 PM	31	140	18	24	104	27	26	96	22	21	125	22	656
TOTAL VOLUMES :	238	920	155	227	734	143	165	904	182	154	994	216	5032
APPROACH %'s :	18.13%	70.07%	11.81%	20.56%	66.49%	12.95%	13.19%	72.26%	14.55%	11.29%	72.87%	15.84%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	136	514	79	113	400	83	85	457	102	74	489	105	2637
PEAK HR FACTOR :	0.964			0.882			0.920			0.949			0.975

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-6081-001

City: San Bernardino

2 Axle Trucks

Day: Tuesday

Date: 5/9/2017

AM

NS/EW Streets:	Mt Vernon Ave			Mt Vernon Ave			5th St			5th St			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	2	0	1	2	0	1	2	0	1	2	0	
7:00 AM	0	1	0	1	0	0	0	2	0	0	2	1	7
7:15 AM	0	0	1	1	1	0	1	3	0	0	3	2	12
7:30 AM	0	0	0	0	2	0	0	5	0	0	2	2	11
7:45 AM	0	2	0	1	0	0	1	5	0	0	5	2	16
8:00 AM	0	0	0	3	0	1	1	5	0	0	0	0	10
8:15 AM	0	1	1	7	0	2	2	4	0	0	3	4	24
8:30 AM	1	0	0	3	0	0	1	3	0	0	5	1	14
8:45 AM	0	0	0	2	1	1	0	4	0	0	2	2	12
TOTAL VOLUMES :	1	4	2	18	4	4	6	31	0	0	22	14	106
APPROACH %'s :	14.29%	57.14%	28.57%	69.23%	15.38%	15.38%	16.22%	83.78%	0.00%	0.00%	61.11%	38.89%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	0	3	1	3	3	0	2	15	0	0	12	7	46
PEAK HR FACTOR :	0.500			0.750			0.708			0.679			0.962

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-6081-001

Day: Tuesday

City: San Bernardino

2 Axle Trucks

Date: 5/9/2017

PM

NS/EW Streets:	Mt Vernon Ave			Mt Vernon Ave			5th St			5th St			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	2	0	1	2	0	1	2	0	1	2	0	
4:00 PM	0	2	1	2	0	0	0	1	0	0	2	1	9
4:15 PM	0	0	0	2	4	0	0	3	0	0	3	3	15
4:30 PM	0	1	0	1	0	1	0	2	0	0	2	1	8
4:45 PM	0	1	0	0	0	0	0	3	0	0	1	1	6
5:00 PM	0	0	1	2	1	0	0	2	0	0	2	0	8
5:15 PM	0	0	0	1	0	0	0	2	0	0	2	3	8
5:30 PM	0	0	0	2	1	0	0	4	0	0	2	0	9
5:45 PM	0	0	0	1	0	0	1	0	0	0	1	2	5
TOTAL VOLUMES :	0	4	2	11	6	1	1	17	0	0	15	11	68
APPROACH %'s :	0.00%	66.67%	33.33%	61.11%	33.33%	5.56%	5.56%	94.44%	0.00%	0.00%	57.69%	42.31%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	1	6	2	0	1	8	0	0	7	5	30
PEAK HR FACTOR :	0.250			0.667			0.563			0.600			0.975

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-6081-001

City: San Bernardino

3 Axle Trucks

Day: Tuesday

Date: 5/9/2017

AM

NS/EW Streets:	Mt Vernon Ave			Mt Vernon Ave			5th St			5th St			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	2	0	1	2	0	1	2	0	1	2	0	
7:00 AM	0	0	0	0	0	0	0	0	0	0	5	0	5
7:15 AM	0	0	0	0	0	0	0	2	0	0	6	0	8
7:30 AM	0	0	0	0	0	0	0	0	0	0	6	0	6
7:45 AM	0	0	0	0	0	0	0	3	0	0	2	0	5
8:00 AM	0	0	0	0	0	0	0	1	0	0	4	0	5
8:15 AM	0	0	0	0	0	0	0	2	0	0	5	0	7
8:30 AM	0	0	0	0	0	0	0	5	0	0	2	0	7
8:45 AM	0	0	0	0	0	1	0	7	0	0	1	0	9
TOTAL VOLUMES :	0	0	0	0	0	1	0	20	0	0	31	0	52
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	5	0	0	19	0	24
PEAK HR FACTOR :	0.000			0.000			0.417			0.792			0.962

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-6081-001

Day: Tuesday

City: San Bernardino

3 Axle Trucks

Date: 5/9/2017

PM

NS/EW Streets:	Mt Vernon Ave			Mt Vernon Ave			5th St			5th St			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	2	0	1	2	0	1	2	0	1	2	0	
4:00 PM	0	0	0	0	0	0	0	3	0	0	1	0	4
4:15 PM	0	0	0	0	0	0	0	12	0	0	1	0	13
4:30 PM	0	0	0	0	0	0	0	0	0	1	4	0	5
4:45 PM	0	0	0	0	0	0	0	7	0	0	3	0	10
5:00 PM	0	0	0	0	0	0	1	3	0	0	3	0	7
5:15 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
5:30 PM	0	0	0	0	0	1	0	3	0	0	1	0	5
5:45 PM	0	0	0	0	0	0	1	2	0	0	0	0	3
TOTAL VOLUMES :	0	0	0	0	0	1	2	32	0	1	13	0	49
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	5.88%	94.12%	0.00%	7.14%	92.86%	0.00%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	1	2	10	0	0	4	0	17
PEAK HR FACTOR :	0.000			0.250			0.750			0.333			0.975

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-6081-001

City: San Bernardino

4 Axle+ Trucks

Day: Tuesday

Date: 5/9/2017

NS/EW Streets:	AM												TOTAL
	Mt Vernon Ave			Mt Vernon Ave			5th St			5th St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
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	
7:00 AM	0	0	0	0	0	1	0	15	0	0	4	0	20
7:15 AM	0	0	0	0	0	0	0	21	0	0	5	0	26
7:30 AM	0	0	0	0	0	1	0	5	0	0	6	0	12
7:45 AM	0	0	0	0	0	0	0	8	0	0	7	0	15
8:00 AM	0	0	0	0	0	0	0	11	0	0	5	0	16
8:15 AM	0	0	0	0	0	0	0	7	0	0	5	0	12
8:30 AM	0	0	0	0	0	0	0	9	0	0	5	0	14
8:45 AM	0	0	0	0	0	0	0	6	0	0	8	0	14
TOTAL VOLUMES :	0	0	0	0	0	2	0	82	0	0	45	0	129
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	100.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	2	0	49	0	0	22	0	73
PEAK HR FACTOR :	0.000			0.500			0.583			0.786			0.962

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-6081-001

City: San Bernardino

4 Axle+ Trucks

PM

Day: Tuesday

Date: 5/9/2017

NS/EW Streets:	Mt Vernon Ave			Mt Vernon Ave			5th St			5th St			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	2	0	1	2	0	1	2	0	1	2	0	
4:00 PM	0	0	0	0	0	0	0	8	0	0	11	0	19
4:15 PM	0	0	0	0	0	0	0	10	0	0	12	0	22
4:30 PM	0	0	0	0	0	0	0	6	0	0	17	0	23
4:45 PM	0	0	0	0	0	0	0	8	0	0	7	0	15
5:00 PM	0	0	0	0	0	0	0	11	0	0	5	0	16
5:15 PM	0	0	0	0	0	0	0	8	0	0	9	0	17
5:30 PM	0	0	0	0	0	0	0	10	0	0	4	0	14
5:45 PM	0	0	0	0	0	0	0	2	0	0	8	0	10
TOTAL VOLUMES :	0	0	0	0	0	0	0	63	0	0	73	0	136
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	31	0	0	26	0	57
PEAK HR FACTOR :	0.000			0.000			0.705			0.722			0.975

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-6081-002

City: San Bernardino

TOTALS

AM

Day: Tuesday

Date: 5/9/2017

NS/EW Streets:	Mt Vernon Ave			Mt Vernon Ave			2nd St			2nd St			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1.5	0.5	0	2	0	0	1	0	1.5	0	0.5	
7:00 AM	2	93	22	17	56	1	2	4	0	19	1	22	239
7:15 AM	1	72	20	34	114	3	2	3	4	28	1	18	300
7:30 AM	1	65	23	22	109	3	0	3	0	38	2	17	283
7:45 AM	2	84	31	21	125	4	0	0	1	35	0	22	325
8:00 AM	4	68	28	16	66	2	2	2	4	22	2	12	228
8:15 AM	0	63	25	17	69	4	1	3	5	25	0	19	231
8:30 AM	0	62	27	27	83	0	0	3	3	29	1	17	252
8:45 AM	1	64	29	23	73	2	1	2	2	32	2	18	249
TOTAL VOLUMES :	11	571	205	177	695	19	8	20	19	228	9	145	2107
APPROACH %'s :	1.40%	72.55%	26.05%	19.87%	78.00%	2.13%	17.02%	42.55%	40.43%	59.69%	2.36%	37.96%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	6	314	96	94	404	11	4	10	5	120	4	79	1147
PEAK HR FACTOR :	0.889			0.843			0.528			0.890			0.882

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-6081-002

City: San Bernardino

TOTALS

PM

Day: Tuesday

Date: 5/9/2017

NS/EW Streets:	Mt Vernon Ave			Mt Vernon Ave			2nd St			2nd St			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1.5	0.5	0	2	0	0	1	0	1.5	0	0.5	
4:00 PM	1	115	37	35	99	2	1	3	2	44	3	35	377
4:15 PM	3	114	41	23	92	4	2	5	3	46	5	29	367
4:30 PM	1	92	45	29	84	2	0	3	0	50	2	42	350
4:45 PM	6	137	53	38	89	0	1	2	5	43	0	44	418
5:00 PM	1	123	41	30	105	5	1	3	4	54	0	48	415
5:15 PM	5	127	38	32	93	2	3	0	8	43	1	51	403
5:30 PM	5	143	36	32	125	5	2	1	4	40	1	49	443
5:45 PM	2	135	46	33	120	3	5	2	4	34	0	46	430
TOTAL VOLUMES :	24	986	337	252	807	23	15	19	30	354	12	344	3203
APPROACH %'s :	1.78%	73.20%	25.02%	23.29%	74.58%	2.13%	23.44%	29.69%	46.88%	49.86%	1.69%	48.45%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	13	528	161	127	443	15	11	6	20	171	2	194	1691
PEAK HR FACTOR :	0.954			0.903			0.841			0.900			0.954

UTURNS			
NB	SB	EB	WB
0			0
0			1
0			0
0			1
0			0
0			0
1			0
0			0
NB	SB	EB	WB
1	0	0	2

CONTROL : Signalized

Intersection Turning Movement

Prepared by:
National Data & Surveying Services

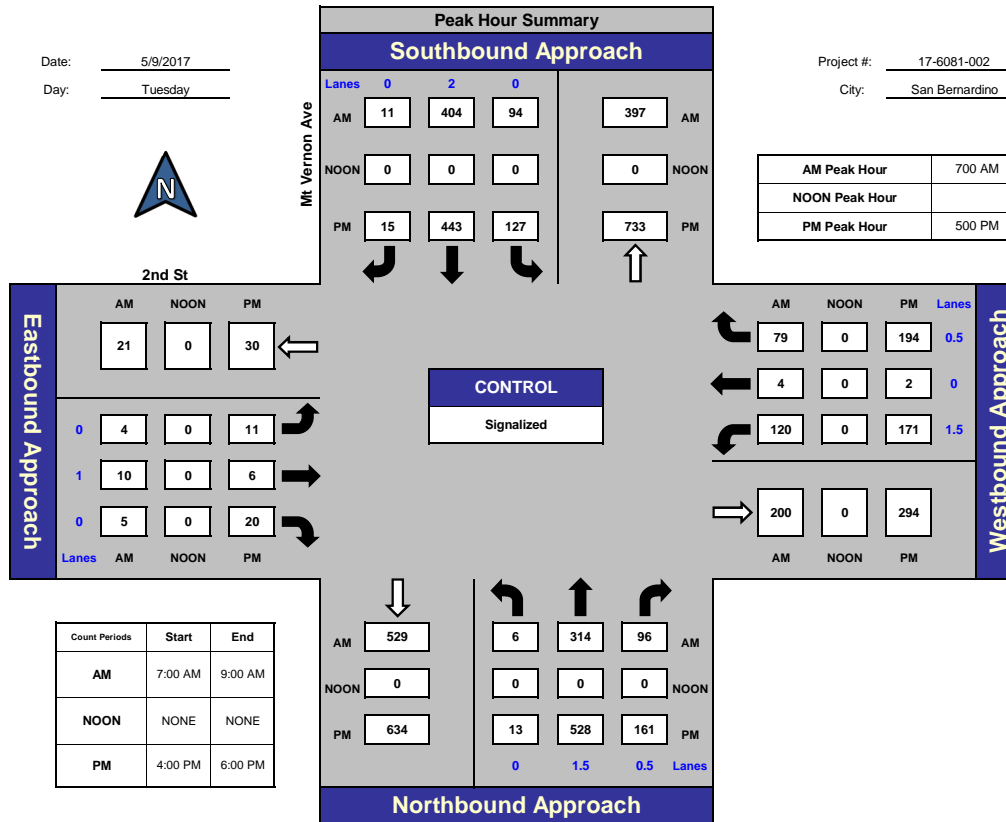
Mt Vernon Ave and 2nd St, San Bernardino

Date: 5/9/2017

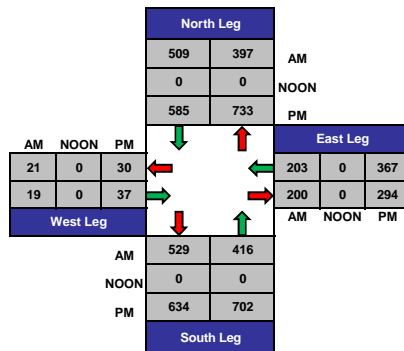
Day: Tuesday

Project #: 17-6081-002

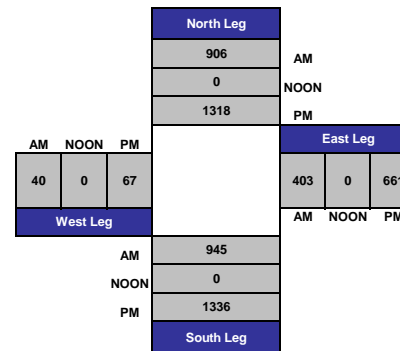
City: San Bernardino



Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-6081-002

City: San Bernardino

Cars

AM

Day: Tuesday

Date: 5/9/2017

NS/EW Streets:	Mt Vernon Ave			Mt Vernon Ave			2nd St			2nd St			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1.5	0.5	0	2	0	0	1	0	1.5	0	0.5	
7:00 AM	2	92	16	17	55	1	2	4	0	16	1	22	228
7:15 AM	1	72	14	34	114	3	2	3	4	23	1	17	288
7:30 AM	1	65	20	22	107	3	0	3	0	36	2	17	276
7:45 AM	2	83	22	21	124	4	0	0	1	29	0	21	307
8:00 AM	4	68	24	16	66	2	2	2	3	18	2	12	219
8:15 AM	0	63	19	17	69	4	0	3	5	22	0	18	220
8:30 AM	0	62	19	27	83	0	0	3	3	24	1	16	238
8:45 AM	1	64	24	23	72	2	1	2	2	30	2	18	241
TOTAL VOLUMES :	11	569	158	177	690	19	7	20	18	198	9	141	2017
APPROACH %'s :	1.49%	77.10%	21.41%	19.98%	77.88%	2.14%	15.56%	44.44%	40.00%	56.90%	2.59%	40.52%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	6	312	72	94	400	11	4	10	5	104	4	77	1099
PEAK HR FACTOR :	0.886		0.836			0.528			0.841			0.895	

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-6081-002

City: San Bernardino

Cars

PM

Day: Tuesday

Date: 5/9/2017

NS/EW Streets:	Mt Vernon Ave			Mt Vernon Ave			2nd St			2nd St			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1.5	0.5	0	2	0	0	1	0	1.5	0	0.5	
4:00 PM	1	113	33	35	99	2	1	3	2	37	2	35	363
4:15 PM	3	113	38	22	89	4	2	4	3	41	5	29	353
4:30 PM	1	91	40	29	84	2	0	3	0	46	2	42	340
4:45 PM	6	137	50	38	88	0	0	2	5	40	0	44	410
5:00 PM	1	123	39	30	105	4	1	3	4	50	0	47	407
5:15 PM	5	127	37	32	93	2	3	0	8	39	1	51	398
5:30 PM	5	143	35	32	124	5	2	1	4	38	1	49	439
5:45 PM	2	135	42	33	120	3	5	2	4	31	0	46	423
TOTAL VOLUMES :	24	982	314	251	802	22	14	18	30	322	11	343	3133
APPROACH %'s :	1.82%	74.39%	23.79%	23.35%	74.60%	2.05%	22.58%	29.03%	48.39%	47.63%	1.63%	50.74%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	13	528	153	127	442	14	11	6	20	158	2	193	1667
PEAK HR FACTOR :	0.948		0.905			0.841			0.910			0.949	

UTURNS			
NB	SB	EB	WB
0			0
0			1
0			0
0			1
0			0
0			0
1			0
0			0
NB	SB	EB	WB
1	0	0	2

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-6081-002

City: San Bernardino

2 Axle Trucks

Day: Tuesday

Date: 5/9/2017

NS/EW Streets:	AM												TOTAL
	Mt Vernon Ave			Mt Vernon Ave			2nd St			2nd St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1.5	0.5	0	2	0	0	1	0	1.5	0	0.5	
7:00 AM	0	1	2	0	1	0	0	0	0	1	0	0	5
7:15 AM	0	0	1	0	0	0	0	0	0	1	0	1	3
7:30 AM	0	0	0	0	2	0	0	0	0	0	0	0	2
7:45 AM	0	1	6	0	1	0	0	0	0	2	0	1	11
8:00 AM	0	0	1	0	0	0	0	0	1	3	0	0	5
8:15 AM	0	0	2	0	0	0	1	0	0	2	0	1	6
8:30 AM	0	0	3	0	0	0	0	0	0	3	0	1	7
8:45 AM	0	0	1	0	1	0	0	0	0	2	0	0	4
TOTAL VOLUMES :	0	2	16	0	5	0	1	0	1	14	0	4	43
APPROACH %'s :	0.00%	11.11%	88.89%	0.00%	100.00%	0.00%	50.00%	0.00%	50.00%	77.78%	0.00%	22.22%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	0	2	9	0	4	0	0	0	0	4	0	2	21
PEAK HR FACTOR :	0.393			0.500			0.000			0.500			0.895

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-6081-002

Day: Tuesday

City: San Bernardino

2 Axle Trucks

Date: 5/9/2017

PM

NS/EW Streets:	Mt Vernon Ave			Mt Vernon Ave			2nd St			2nd St			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1.5	0.5	0	2	0	0	1	0	1.5	0	0.5	
4:00 PM	0	2	2	0	0	0	0	0	0	3	1	0	8
4:15 PM	0	1	3	1	3	0	0	1	0	1	0	0	10
4:30 PM	0	1	4	0	0	0	0	0	0	2	0	0	7
4:45 PM	0	0	1	0	0	0	1	0	0	1	0	0	3
5:00 PM	0	0	0	0	0	1	0	0	0	1	0	1	3
5:15 PM	0	0	1	0	0	0	0	0	0	1	0	0	2
5:30 PM	0	0	1	0	1	0	0	0	0	1	0	0	3
5:45 PM	0	0	2	0	0	0	0	0	0	2	0	0	4
TOTAL VOLUMES :	0	4	14	1	4	1	1	1	0	12	1	1	40
APPROACH %'s :	0.00%	22.22%	77.78%	16.67%	66.67%	16.67%	50.00%	50.00%	0.00%	85.71%	7.14%	7.14%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	4	0	1	1	0	0	0	5	0	1	12
PEAK HR FACTOR :	0.500			0.500			0.000			0.750			0.949

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-6081-002

City: San Bernardino

3 Axle Trucks

Day: Tuesday

Date: 5/9/2017

NS/EW Streets:	Mt Vernon Ave			Mt Vernon Ave			2nd St			2nd St			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1.5	0.5	0	2	0	0	1	0	1.5	0	0.5	
7:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	2	0	0	2
8:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	0	0	2	0	0	0	0	0	0	3	0	0	5
APPROACH %'s :	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	100.00%	0.00%	0.00%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	3	0	0	3
PEAK HR FACTOR :	0.000			0.000			0.000			0.375			0.895

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-6081-002

City: San Bernardino

3 Axle Trucks

Day: Tuesday

Date: 5/9/2017

PM

NS/EW Streets:	Mt Vernon Ave			Mt Vernon Ave			2nd St			2nd St			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
4:00 PM	0	0	1	0	0	0	0	0	0	1	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	1	0	0	0	0	0	0	1	0	0	2
4:45 PM	0	0	2	0	1	0	0	0	0	1	0	0	4
5:00 PM	0	0	1	0	0	0	0	0	0	1	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES :	0	0	6	0	1	0	0	0	0	5	0	0	12
APPROACH %'s :	0.00%	0.00%	100.00%	0.00%	100.00%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	100.00%	0.00%	0.00%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	2	0	0	0	0	0	0	2	0	0	4
PEAK HR FACTOR :	0.500		0.000			0.000			0.500			0.949	

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-6081-002

City: San Bernardino

4 Axle+ Trucks

Day: Tuesday

Date: 5/9/2017

NS/EW Streets:	AM												TOTAL
	Mt Vernon Ave			Mt Vernon Ave			2nd St			2nd St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1.5	0.5	0	2	0	0	1	0	1.5	0	0.5	
7:00 AM	0	0	4	0	0	0	0	0	0	1	0	0	5
7:15 AM	0	0	5	0	0	0	0	0	0	4	0	0	9
7:30 AM	0	0	3	0	0	0	0	0	0	2	0	0	5
7:45 AM	0	0	3	0	0	0	0	0	0	2	0	0	5
8:00 AM	0	0	2	0	0	0	0	0	0	1	0	0	3
8:15 AM	0	0	3	0	0	0	0	0	0	1	0	0	4
8:30 AM	0	0	5	0	0	0	0	0	0	2	0	0	7
8:45 AM	0	0	4	0	0	0	0	0	0	0	0	0	4
TOTAL VOLUMES :	0	0	29	0	0	0	0	0	0	13	0	0	42
APPROACH %'s :	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	100.00%	0.00%	0.00%	
PEAK HR START TIME :	700 AM												TOTAL
PEAK HR VOL :	0	0	15	0	0	0	0	0	0	9	0	0	24
PEAK HR FACTOR :	0.750		0.000			0.000			0.563			0.895	

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-6081-002

City: San Bernardino

4 Axle+ Trucks

Day: Tuesday

Date: 5/9/2017

PM

NS/EW Streets:	Mt Vernon Ave			Mt Vernon Ave			2nd St			2nd St			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1.5	0.5	0	2	0	0	1	0	1.5	0	0.5	
4:00 PM	0	0	1	0	0	0	0	0	0	3	0	0	4
4:15 PM	0	0	0	0	0	0	0	0	0	4	0	0	4
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
5:00 PM	0	0	1	0	0	0	0	0	0	2	0	0	3
5:15 PM	0	0	0	0	0	0	0	0	0	2	0	0	2
5:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
5:45 PM	0	0	1	0	0	0	0	0	0	1	0	0	2
TOTAL VOLUMES :	0	0	3	0	0	0	0	0	0	15	0	0	18
APPROACH %'s :	0.00%	0.00%	100.00%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	100.00%	0.00%	0.00%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	2	0	0	0	0	0	0	6	0	0	8
PEAK HR FACTOR :	0.500			0.000			0.000			0.750			0.949

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-6081-003

City: San Bernardino

TOTALS

AM

Day: Tuesday

Date: 5/9/2017

NS/EW Streets:	Mt Vernon Ave			Mt Vernon Ave			Rialto Ave			Rialto Ave			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	2	0	1	2	0	1	2	0	1	2	0	
7:00 AM	5	84	9	7	46	19	22	47	4	8	32	9	292
7:15 AM	9	62	5	10	107	22	17	87	7	9	26	9	370
7:30 AM	16	64	16	7	108	21	24	74	14	23	37	8	412
7:45 AM	11	90	11	5	125	33	26	86	19	21	30	5	462
8:00 AM	12	67	6	7	73	24	15	57	7	12	26	11	317
8:15 AM	7	78	8	11	80	21	19	53	7	16	20	1	321
8:30 AM	9	61	14	3	75	16	24	58	9	10	21	1	301
8:45 AM	15	68	6	4	91	26	22	56	9	12	23	7	339
TOTAL VOLUMES :	84	574	75	54	705	182	169	518	76	111	215	51	2814
APPROACH %'s :	11.46%	78.31%	10.23%	5.74%	74.92%	19.34%	22.15%	67.89%	9.96%	29.44%	57.03%	13.53%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	48	283	38	29	413	100	82	304	47	65	119	33	1561
PEAK HR FACTOR :	0.824			0.831			0.826			0.798			0.845

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-6081-003

City: San Bernardino

Day: Tuesday

Date: 5/9/2017

TOTALS

PM

NS/EW Streets:	Mt Vernon Ave			Mt Vernon Ave			Rialto Ave			Rialto Ave			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	2	0	1	2	0	1	2	0	1	2	0	
4:00 PM	14	123	11	8	101	37	32	60	10	20	66	17	499
4:15 PM	16	109	14	10	95	33	29	50	10	20	56	11	453
4:30 PM	16	99	21	7	94	38	29	61	14	25	70	10	484
4:45 PM	11	152	10	4	98	30	32	38	18	20	69	8	490
5:00 PM	15	139	21	13	127	29	25	61	18	19	77	24	568
5:15 PM	19	143	22	7	97	39	22	66	21	25	75	15	551
5:30 PM	22	138	9	9	119	31	19	78	16	19	70	12	542
5:45 PM	11	143	14	5	132	27	21	59	20	22	50	13	517
TOTAL VOLUMES :	124	1046	122	63	863	264	209	473	127	170	533	110	4104
APPROACH %'s :	9.60%	80.96%	9.44%	5.29%	72.52%	22.18%	25.83%	58.47%	15.70%	20.91%	65.56%	13.53%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	67	563	66	34	475	126	87	264	75	85	272	64	2178
PEAK HR FACTOR :	0.946			0.939			0.942			0.877			0.959

UTURNS			
NB	SB	EB	WB
	0		
	1		
	0		
	0		
	0		
	1		
	0		
NB	0	SB	2
		EB	0
		WB	0

CONTROL : Signalized

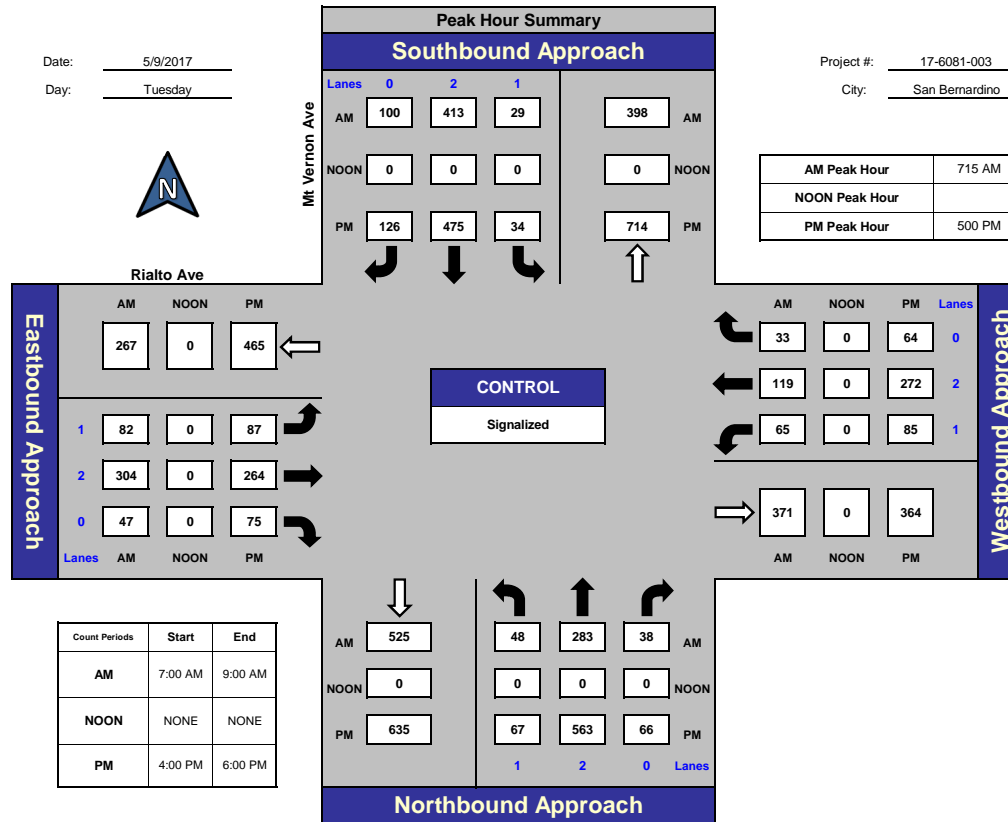
Intersection Turning Movement

Prepared by:
National Data & Surveying Services

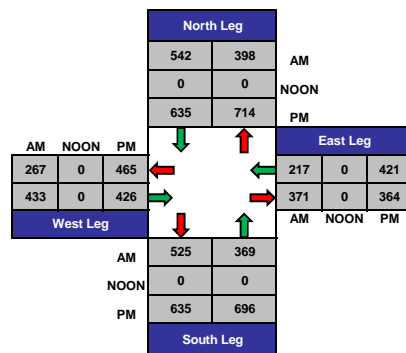
Mt Vernon Ave and Rialto Ave, San Bernardino

Date: 5/9/2017
Day: Tuesday

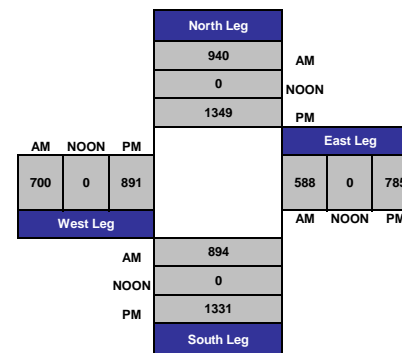
Project #: 17-6081-003
City: San Bernardino



Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-6081-003

City: San Bernardino

Cars

AM

Day: Tuesday

Date: 5/9/2017

NS/EW Streets:	Mt Vernon Ave			Mt Vernon Ave			Rialto Ave			Rialto Ave			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	2	0	1	2	0	1	2	0	1	2	0	
7:00 AM	5	81	9	7	45	17	18	46	4	8	31	9	280
7:15 AM	9	61	5	10	105	18	12	87	7	9	26	9	358
7:30 AM	15	64	16	7	106	19	21	72	13	23	36	8	400
7:45 AM	10	86	10	4	123	31	21	83	18	19	30	5	440
8:00 AM	11	64	6	6	72	22	12	55	7	12	26	11	304
8:15 AM	6	75	8	11	77	18	15	51	6	16	20	1	304
8:30 AM	7	59	13	3	72	14	19	57	7	10	20	1	282
8:45 AM	14	66	6	4	91	26	17	56	9	11	20	7	327
TOTAL VOLUMES :	77	556	73	52	691	165	135	507	71	108	209	51	2695
APPROACH %'s :	10.91%	78.75%	10.34%	5.73%	76.10%	18.17%	18.93%	71.11%	9.96%	29.35%	56.79%	13.86%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	45	275	37	27	406	90	66	297	45	63	118	33	1502
PEAK HR FACTOR :	0.842		0.828			0.836			0.799			0.853	

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-6081-003

Day: Tuesday

City: San Bernardino

Cars

Date: 5/9/2017

PM

NS/EW Streets:	Mt Vernon Ave			Mt Vernon Ave			Rialto Ave			Rialto Ave			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	2	0	1	2	0	1	2	0	1	2	0	
4:00 PM	14	119	11	8	100	32	30	59	10	20	66	17	486
4:15 PM	16	105	14	10	92	27	29	50	9	20	55	11	438
4:30 PM	16	97	21	7	93	36	24	59	14	25	69	10	471
4:45 PM	11	151	10	4	96	27	30	38	17	20	66	8	478
5:00 PM	15	138	20	13	126	26	23	59	18	18	76	24	556
5:15 PM	19	142	22	7	96	36	22	64	20	25	75	15	543
5:30 PM	22	137	9	9	118	30	19	78	16	18	70	12	538
5:45 PM	11	142	14	5	129	27	19	59	19	22	49	13	509
TOTAL VOLUMES :	124	1031	121	63	850	241	196	466	123	168	526	110	4019
APPROACH %'s :	9.72%	80.80%	9.48%	5.46%	73.66%	20.88%	24.97%	59.36%	15.67%	20.90%	65.42%	13.68%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	67	559	65	34	469	119	83	260	73	83	270	64	2146
PEAK HR FACTOR :	0.944			0.942			0.920			0.883			0.965

UTURNS			
NB	SB	EB	WB
	0		
	1		
	0		
	0		
	0		
	1		
	0		
NB	SB	EB	WB
0	2	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-6081-003

City: San Bernardino

2 Axle Trucks

Day: Tuesday

Date: 5/9/2017

NS/EW Streets:	AM												TOTAL
	Mt Vernon Ave			Mt Vernon Ave			Rialto Ave			Rialto Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM	0	3	0	0	1	0	0	1	0	0	1	0	6
7:15 AM	0	1	0	0	2	0	0	0	0	0	0	0	3
7:30 AM	1	0	0	0	2	0	0	2	0	0	0	0	5
7:45 AM	0	4	1	1	1	1	2	1	1	2	0	0	14
8:00 AM	1	3	0	1	1	0	0	0	0	0	0	0	6
8:15 AM	0	3	0	0	3	1	0	0	1	0	0	0	8
8:30 AM	0	2	0	0	3	0	0	1	0	0	0	0	6
8:45 AM	0	2	0	0	0	0	0	0	0	1	2	0	5
TOTAL VOLUMES :	2	18	1	2	13	2	2	5	2	3	3	0	53
APPROACH %'s :	9.52%	85.71%	4.76%	11.76%	76.47%	11.76%	22.22%	55.56%	22.22%	50.00%	50.00%	0.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	2	8	1	2	6	1	2	3	1	2	0	0	28
PEAK HR FACTOR :	0.550			0.750			0.375			0.250			0.853

CONTROL : Signalized

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-6081-003

City: San Bernardino

2 Axle Trucks

Day: Tuesday

Date: 5/9/2017

PM

NS/EW Streets:	Mt Vernon Ave			Mt Vernon Ave			Rialto Ave			Rialto Ave			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	2	0	1	2	0	1	2	0	1	2	0	
4:00 PM	0	4	0	0	1	1	0	1	0	0	0	0	7
4:15 PM	0	4	0	0	3	2	0	0	0	0	1	0	10
4:30 PM	0	2	0	0	1	0	4	1	0	0	0	0	8
4:45 PM	0	1	0	0	1	1	0	0	1	0	0	0	4
5:00 PM	0	1	1	0	1	0	0	1	0	1	1	0	6
5:15 PM	0	1	0	0	0	1	0	1	0	0	0	0	3
5:30 PM	0	1	0	0	1	0	0	0	0	1	0	0	3
5:45 PM	0	1	0	0	2	0	0	0	1	0	1	0	5
TOTAL VOLUMES :	0	15	1	0	10	5	4	4	2	2	3	0	46
APPROACH %'s :	0.00%	93.75%	6.25%	0.00%	66.67%	33.33%	40.00%	40.00%	20.00%	40.00%	60.00%	0.00%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	4	1	0	4	1	0	2	1	2	2	0	17
PEAK HR FACTOR :	0.625			0.625			0.750			0.500			0.965

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-6081-003

City: San Bernardino

3 Axle Trucks

Day: Tuesday

Date: 5/9/2017

AM													
NS/EW Streets:	Mt Vernon Ave			Mt Vernon Ave			Rialto Ave			Rialto Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
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	
7:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	1	0	0	0	1
7:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	2
8:00 AM	0	0	0	0	0	1	1	0	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
8:30 AM	1	0	1	0	0	0	0	0	1	0	0	0	3
8:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
TOTAL VOLUMES :	1	0	1	0	0	3	3	1	2	0	0	0	11
APPROACH %'s :	50.00%	0.00%	50.00%	0.00%	0.00%	100.00%	50.00%	16.67%	33.33%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	2	1	1	1	0	0	0	5
PEAK HR FACTOR :	0.000			0.500			0.750			0.000			0.853

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-6081-003

Day: Tuesday

City: San Bernardino

3 Axle Trucks

Date: 5/9/2017

PM

NS/EW Streets:	Mt Vernon Ave			Mt Vernon Ave			Rialto Ave			Rialto Ave			TOTAL	
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR		
4:00 PM	0	0	0	0	0	1	1	0	0	0	0	0	2	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	1	1	1	0	0	0	0	3	
4:45 PM	0	0	0	0	1	1	2	0	0	0	3	0	7	
5:00 PM	0	0	0	0	0	1	1	1	0	0	0	0	3	
5:15 PM	0	0	0	0	1	0	0	1	1	0	0	0	3	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	1	
TOTAL VOLUMES :	0	0	0	0	2	4	6	3	1	0	3	0	19	
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	33.33%	66.67%	60.00%	30.00%	10.00%	0.00%	100.00%	0.00%		
PEAK HR START TIME :	500 PM												TOTAL	
PEAK HR VOL :	0	0	0	0	1	1	2	2	1	0	0	0	7	
PEAK HR FACTOR :				0.000			0.500			0.625			0.000	0.965

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-6081-003

City: San Bernardino

4 Axle+ Trucks

Day: Tuesday

Date: 5/9/2017

NS/EW Streets:	AM												TOTAL
	Mt Vernon Ave			Mt Vernon Ave			Rialto Ave			Rialto Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
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	
7:00 AM	0	0	0	0	0	1	4	0	0	0	0	0	5
7:15 AM	0	0	0	0	0	4	5	0	0	0	0	0	9
7:30 AM	0	0	0	0	0	2	3	0	0	0	1	0	6
7:45 AM	1	0	0	0	1	0	3	1	0	0	0	0	6
8:00 AM	0	0	0	0	0	1	2	2	0	0	0	0	5
8:15 AM	1	0	0	0	0	2	3	2	0	0	0	0	8
8:30 AM	1	0	0	0	0	2	5	0	1	0	1	0	10
8:45 AM	1	0	0	0	0	0	4	0	0	0	1	0	6
TOTAL VOLUMES :	4	0	0	0	1	12	29	5	1	0	3	0	55
APPROACH %'s :	100.00%	0.00%	0.00%	0.00%	7.69%	92.31%	82.86%	14.29%	2.86%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	1	0	0	0	1	7	13	3	0	0	1	0	26
PEAK HR FACTOR :	0.250			0.500			0.800			0.250			0.853

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-6081-003

City: San Bernardino

4 Axle+ Trucks

PM

Day: Tuesday

Date: 5/9/2017

NS/EW Streets:	Mt Vernon Ave			Mt Vernon Ave			Rialto Ave			Rialto Ave			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	2	0	1	2	0	1	2	0	1	2	0	
4:00 PM	0	0	0	0	0	3	1	0	0	0	0	0	4
4:15 PM	0	0	0	0	0	4	0	0	1	0	0	0	5
4:30 PM	0	0	0	0	0	1	0	0	0	0	1	0	2
4:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	2	1	0	0	0	0	0	3
5:15 PM	0	0	0	0	0	2	0	0	0	0	0	0	2
5:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	1	0	1	0	0	0	0	0	2
TOTAL VOLUMES :	0	0	0	0	1	14	3	0	1	0	1	0	20
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	6.67%	93.33%	75.00%	0.00%	25.00%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	0	0	1	5	2	0	0	0	0	0	8
PEAK HR FACTOR :	0.000			0.750			0.500			0.000			0.965

UTURNS			
NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

National Data & Surveying Services

Intersection Turning Movement Count

Location: K St & 2nd St
 City: San Bernardino
 Control: 4-Way Stop

Project ID: 17-06163-007
 Date: 10/24/2017

Total

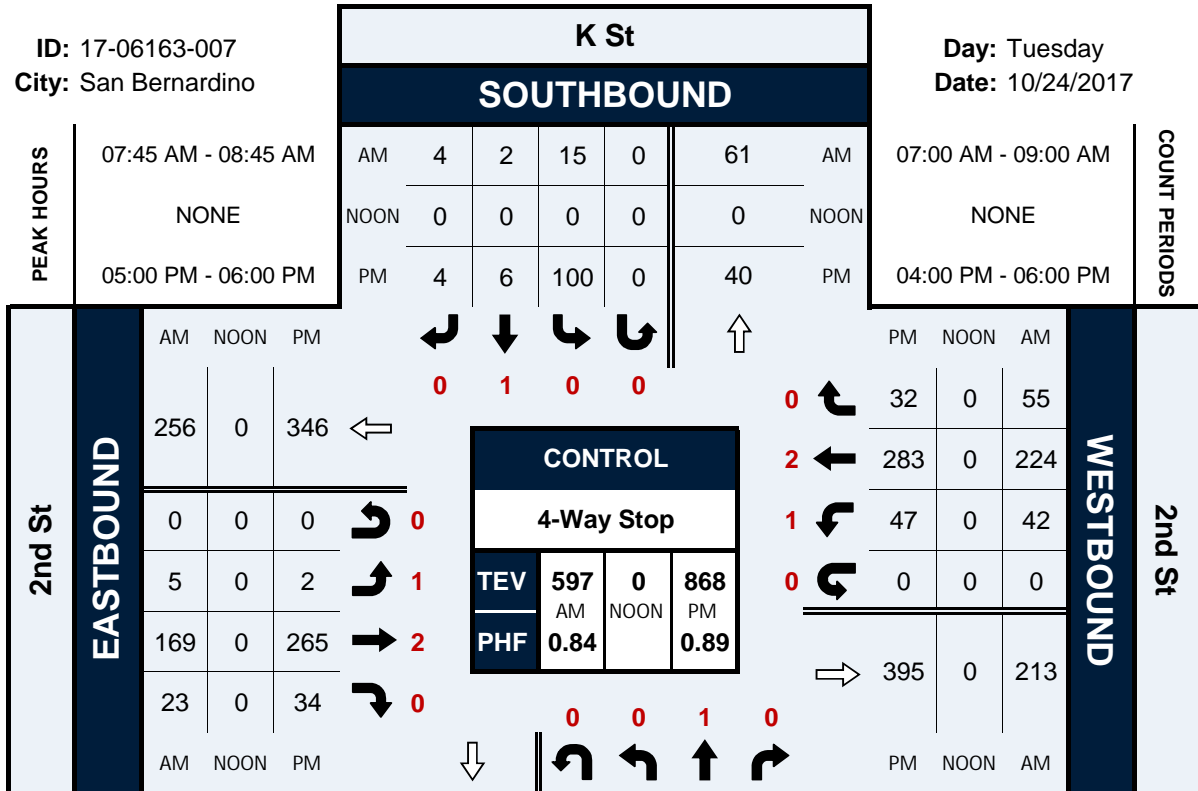
NS/EW Streets:	K St				K St				2nd St				2nd St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	13	1	5	0	4	0	0	0	1	28	4	0	12	27	6	0	101
7:15 AM	8	0	16	0	0	0	0	0	0	38	7	0	22	35	9	0	135
7:30 AM	10	0	12	0	6	2	0	0	0	54	5	0	15	43	18	0	165
7:45 AM	3	0	8	0	6	0	3	0	3	58	5	0	10	62	12	0	170
8:00 AM	4	0	2	0	2	0	0	0	2	28	6	0	9	54	14	0	121
8:15 AM	7	0	8	0	1	0	1	0	0	30	3	0	9	53	17	0	129
8:30 AM	14	1	11	0	6	2	0	0	0	53	9	0	14	55	12	0	177
8:45 AM	6	0	10	0	6	0	2	0	2	35	5	0	11	52	10	0	139
TOTAL VOLUMES :	65	2	72	0	31	4	6	0	8	324	44	0	102	381	98	0	1137
APPROACH %'s :	46.76%	1.44%	51.80%	0.00%	75.61%	9.76%	14.63%	0.00%	2.13%	86.17%	11.70%	0.00%	17.56%	65.58%	16.87%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	28	1	29	0	15	2	4	0	5	169	23	0	42	224	55	0	597
PEAK HR FACTOR :	0.500	0.250	0.659	0.000	0.625	0.250	0.333	0.000	0.417	0.728	0.639	0.000	0.750	0.903	0.809	0.000	0.843
	0.558				0.583				0.746				0.955				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	9	0	6	0	7	0	1	0	0	76	7	0	23	84	4	0	217
4:15 PM	4	1	8	0	10	3	1	0	0	75	6	0	10	76	8	0	202
4:30 PM	8	1	5	0	13	3	1	0	1	79	7	0	14	75	9	0	216
4:45 PM	10	0	6	0	23	1	2	0	0	66	11	0	10	71	3	0	203
5:00 PM	17	1	6	0	18	1	1	0	0	49	3	0	12	74	4	0	186
5:15 PM	14	1	7	0	29	2	1	0	1	78	9	0	11	80	10	0	243
5:30 PM	15	3	12	0	16	1	1	0	1	64	13	0	13	59	9	0	207
5:45 PM	13	1	5	0	37	2	1	0	0	74	9	0	11	70	9	0	232
TOTAL VOLUMES :	90	8	55	0	153	13	9	0	3	561	65	0	104	589	56	0	1706
APPROACH %'s :	58.82%	5.23%	35.95%	0.00%	87.43%	7.43%	5.14%	0.00%	0.48%	89.19%	10.33%	0.00%	13.89%	78.64%	7.48%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	59	6	30	0	100	6	4	0	2	265	34	0	47	283	32	0	868
PEAK HR FACTOR :	0.868	0.500	0.625	0.000	0.676	0.750	1.000	0.000	0.500	0.849	0.654	0.000	0.904	0.884	0.800	0.000	0.893
	0.792				0.688				0.855				0.896				

K St & 2nd St

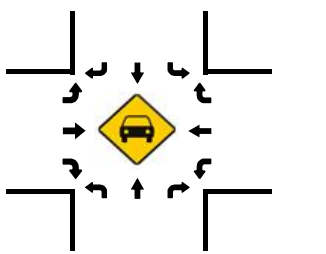
Peak Hour Turning Movement Count

ID: 17-06163-007
City: San Bernardino

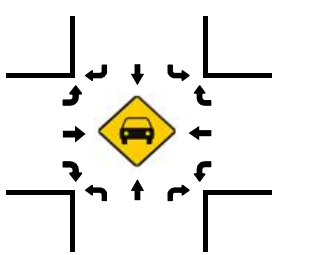
Day: Tuesday
Date: 10/24/2017



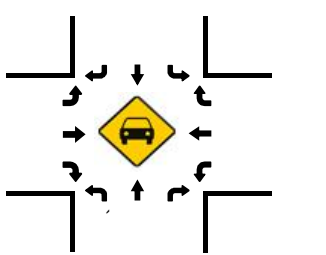
Total Vehicles (AM)



Total Vehicles (NOON)

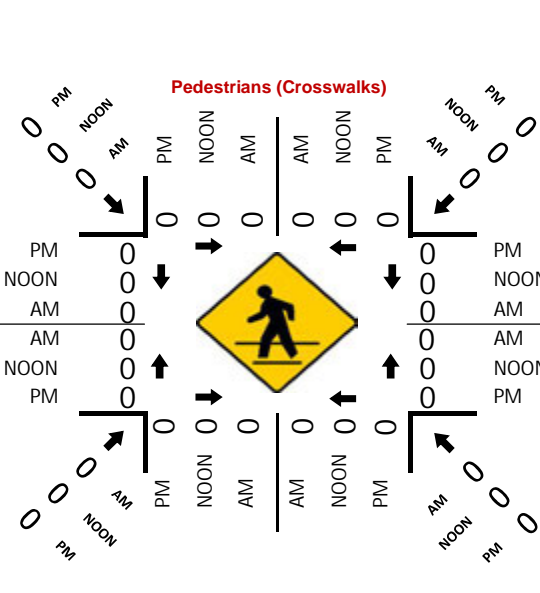


Total Vehicles (PM)

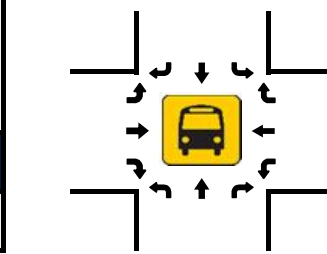


Direction	Left	Thru	Right	Total
AM	0	1	0	1
NOON	0	0	0	0
PM	0	1	0	1

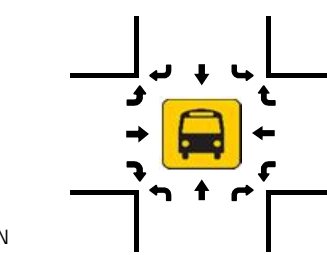
NORTHBOUND



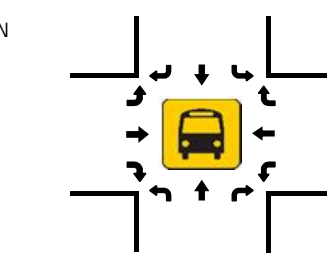
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: K St & Rialto Ave
 City: San Bernardino
 Control: Signalized

Project ID: 17-06163-008
 Date: 10/24/2017

Total

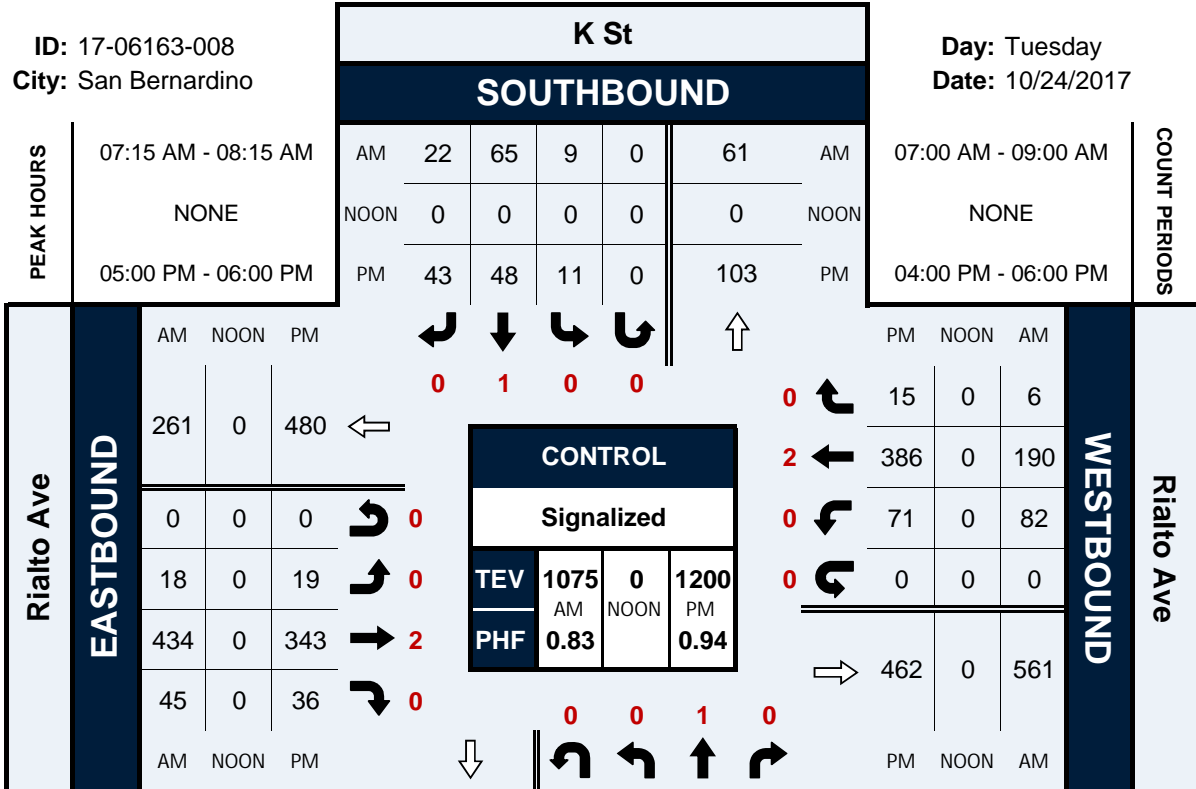
NS/EW Streets:	K St				K St				Rialto Ave				Rialto Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	9	14	22	0	0	7	5	0	4	70	4	0	10	36	0	0	181
7:15 AM	17	13	33	0	1	22	3	0	5	98	12	0	23	49	1	0	277
7:30 AM	21	16	46	0	3	18	8	0	4	125	14	0	18	48	3	0	324
7:45 AM	5	5	21	0	5	12	7	0	5	135	12	0	20	48	0	0	275
8:00 AM	6	3	18	0	0	13	4	0	4	76	7	0	21	45	2	0	199
8:15 AM	12	8	19	0	1	11	2	0	3	77	20	0	15	36	1	0	205
8:30 AM	13	26	17	0	0	20	4	0	5	55	10	0	11	31	2	0	194
8:45 AM	16	12	21	0	2	15	6	0	3	41	11	0	13	44	2	0	186
TOTAL VOLUMES :	99	97	197	0	12	118	39	0	33	677	90	0	131	337	11	0	1841
APPROACH %'s :	25.19%	24.68%	50.13%	0.00%	7.10%	69.82%	23.08%	0.00%	4.13%	84.63%	11.25%	0.00%	27.35%	70.35%	2.30%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	49	37	118	0	9	65	22	0	18	434	45	0	82	190	6	0	1075
PEAK HR FACTOR :	0.583	0.578	0.641	0.000	0.450	0.739	0.688	0.000	0.900	0.804	0.804	0.000	0.891	0.969	0.500	0.000	0.829
	0.614				0.828				0.817				0.952				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	8	7	24	0	3	9	16	0	1	72	6	0	24	99	3	0	272
4:15 PM	8	7	31	0	5	9	8	0	6	72	7	0	16	96	4	0	269
4:30 PM	11	8	21	0	4	13	10	0	1	81	7	0	13	90	3	0	262
4:45 PM	5	14	33	0	3	8	9	0	3	70	8	0	21	88	4	0	266
5:00 PM	13	23	31	0	1	15	9	0	2	79	10	0	15	102	4	0	304
5:15 PM	11	13	23	0	3	5	11	0	6	79	11	0	20	101	4	0	287
5:30 PM	15	19	30	0	3	15	12	0	7	94	9	0	19	91	6	0	320
5:45 PM	12	14	24	0	4	13	11	0	4	91	6	0	17	92	1	0	289
TOTAL VOLUMES :	83	105	217	0	26	87	86	0	30	638	64	0	145	759	29	0	2269
APPROACH %'s :	20.49%	25.93%	53.58%	0.00%	13.07%	43.72%	43.22%	0.00%	4.10%	87.16%	8.74%	0.00%	15.54%	81.35%	3.11%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	51	69	108	0	11	48	43	0	19	343	36	0	71	386	15	0	1200
PEAK HR FACTOR :	0.850	0.750	0.871	0.000	0.688	0.800	0.896	0.000	0.679	0.912	0.818	0.000	0.888	0.946	0.625	0.000	0.938
	0.851				0.850				0.905				0.944				

K St & Rialto Ave

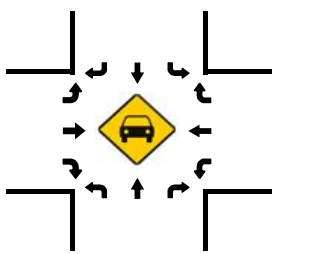
Peak Hour Turning Movement Count

ID: 17-06163-008
City: San Bernardino

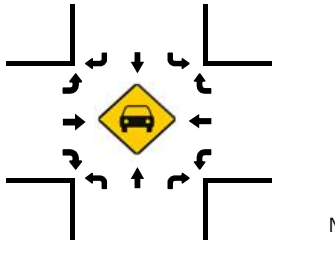
Day: Tuesday
Date: 10/24/2017



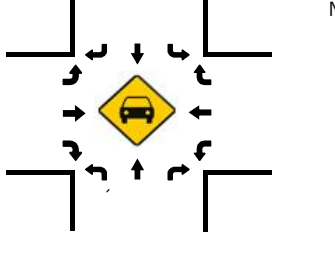
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)

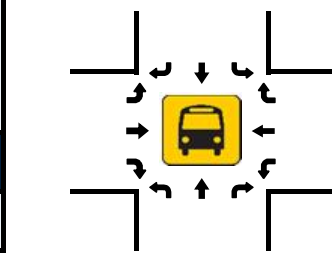


PM	155	0	51	69	108	PM
NOON	0	0	0	0	0	NOON
AM	192	0	49	37	118	AM

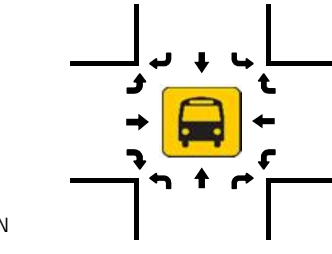
NORTHBOUND

K St

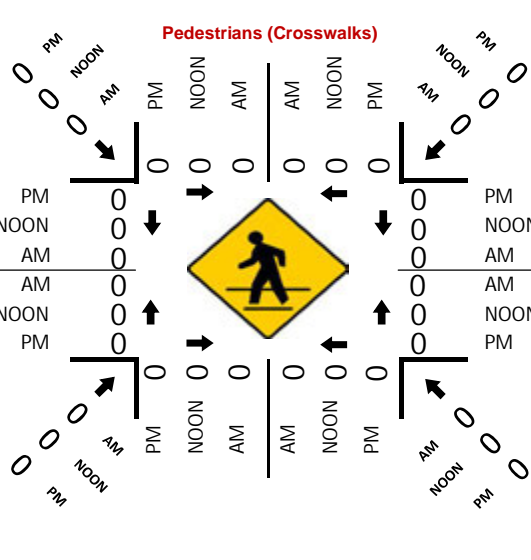
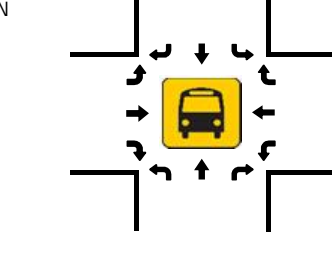
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: L St & 5th St
 City: San Bernardino
 Control: Signalized

Project ID: 17-06163-009
 Date: 10/24/2017

Total

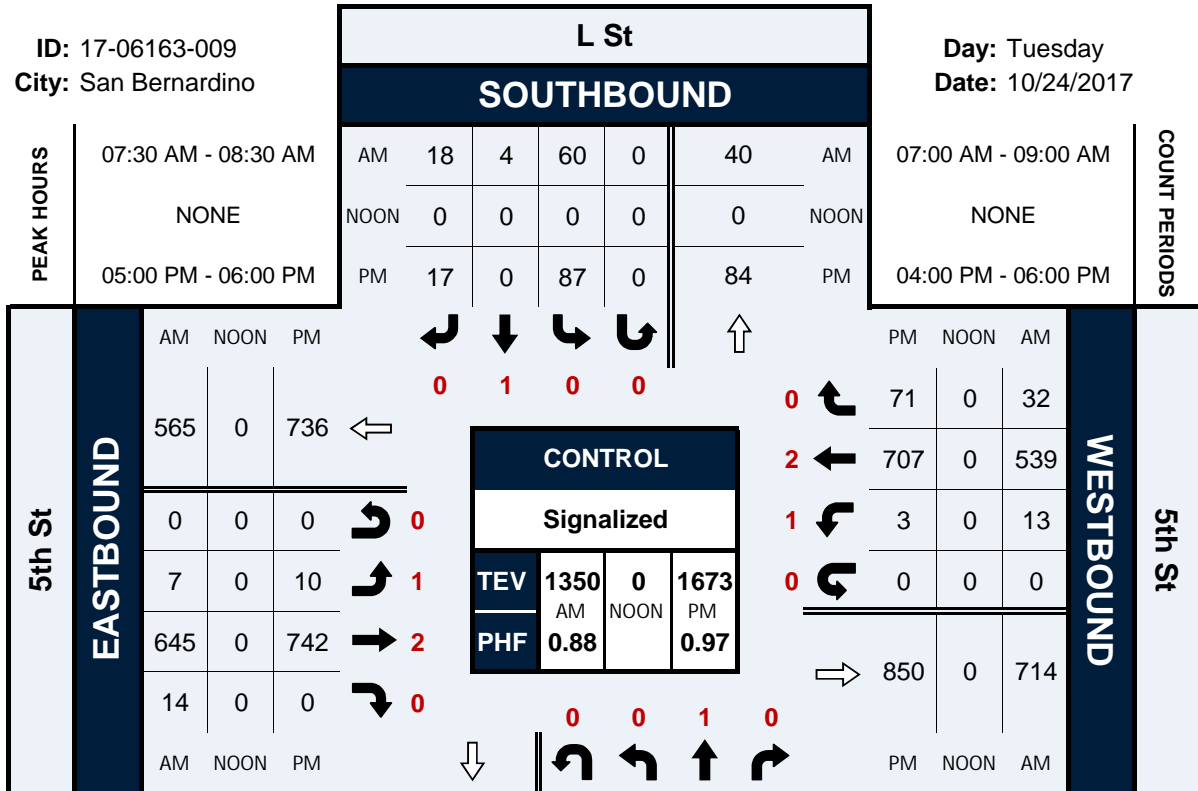
NS/EW Streets:	L St				L St				5th St				5th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
7:00 AM	0	0	2	0	20	0	4	0	2	127	1	0	3	103	11	0	273
7:15 AM	1	0	1	0	19	0	2	0	1	149	1	0	2	126	7	0	309
7:30 AM	0	0	3	0	16	0	9	0	3	192	5	0	4	140	10	0	382
7:45 AM	0	1	1	0	20	2	2	0	3	152	4	0	6	131	3	0	325
8:00 AM	3	0	1	0	11	1	3	0	1	152	4	0	2	125	14	0	317
8:15 AM	5	0	4	0	13	1	4	0	0	149	1	0	1	143	5	0	326
8:30 AM	5	0	4	0	28	1	4	0	0	142	1	0	1	156	10	0	352
8:45 AM	2	0	3	0	25	1	5	0	1	141	2	0	1	117	5	0	303
TOTAL VOLUMES :	16	1	19	0	152	6	33	0	11	1204	19	0	20	1041	65	0	2587
APPROACH %'s :	44.44%	2.78%	52.78%	0.00%	79.58%	3.14%	17.28%	0.00%	0.89%	97.57%	1.54%	0.00%	1.78%	92.45%	5.77%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	8	1	9	0	60	4	18	0	7	645	14	0	13	539	32	0	1350
PEAK HR FACTOR :	0.400	0.250	0.563	0.000	0.750	0.500	0.500	0.000	0.583	0.840	0.700	0.000	0.542	0.942	0.571	0.000	0.884
	0.500				0.820				0.833				0.948				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU		
4:00 PM	1	1	2	0	30	0	4	0	4	159	1	0	3	176	18	0	399
4:15 PM	2	0	7	0	22	0	3	0	3	162	0	0	2	190	12	0	403
4:30 PM	5	1	8	0	23	0	9	0	3	174	0	0	2	195	18	0	438
4:45 PM	0	1	2	0	22	0	1	0	4	155	0	0	1	148	15	0	349
5:00 PM	1	0	7	0	21	0	2	0	2	184	0	0	1	192	14	0	424
5:15 PM	7	1	8	0	25	0	9	0	3	172	0	0	1	190	16	0	432
5:30 PM	4	2	6	0	23	0	5	0	4	190	0	0	1	165	19	0	419
5:45 PM	0	0	0	0	18	0	1	0	1	196	0	0	0	160	22	0	398
TOTAL VOLUMES :	20	6	40	0	184	0	34	0	24	1392	1	0	11	1416	134	0	3262
APPROACH %'s :	30.30%	9.09%	60.61%	0.00%	84.40%	0.00%	15.60%	0.00%	1.69%	98.24%	0.07%	0.00%	0.70%	90.71%	8.58%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	12	3	21	0	87	0	17	0	10	742	0	0	3	707	71	0	1673
PEAK HR FACTOR :	0.429	0.375	0.656	0.000	0.870	0.000	0.472	0.000	0.625	0.946	0.000	0.000	0.750	0.921	0.807	0.000	0.968
	0.563				0.765				0.954				0.943				

L St & 5th St

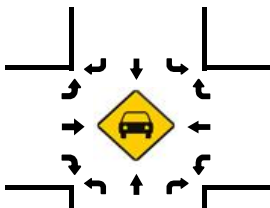
Peak Hour Turning Movement Count

ID: 17-06163-009
City: San Bernardino

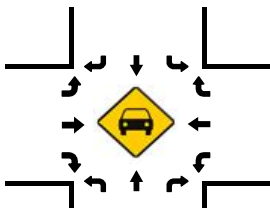
Day: Tuesday
Date: 10/24/2017



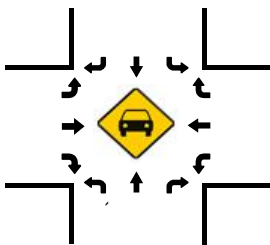
Total Vehicles (AM)



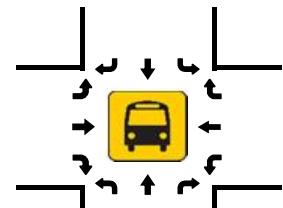
Total Vehicles (NOON)



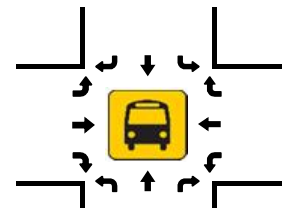
Total Vehicles (PM)



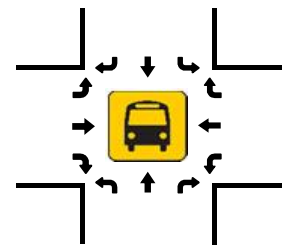
Total Vehicles (AM)



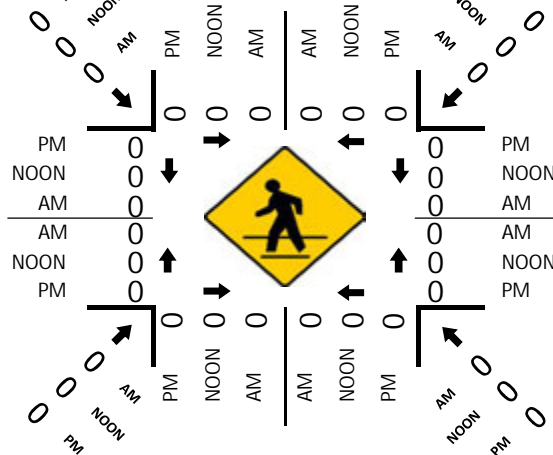
Total Vehicles (NOON)



Total Vehicles (PM)



Pedestrians (Crosswalks)



National Data & Surveying Services

Intersection Turning Movement Count

Location: I St & 2nd St
 City: San Bernardino
 Control: Signalized

Project ID: 17-06163-010
 Date: 10/24/2017

Total

NS/EW Streets:	I St				I St				2nd St				2nd St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	4	0	2	0	0	0	0	60	3	0	3	59	2	0	133
7:15 AM	0	0	3	0	2	0	0	0	0	86	1	0	1	88	1	0	182
7:30 AM	0	0	2	0	1	0	0	0	1	98	1	0	6	103	1	0	213
7:45 AM	0	0	2	0	0	1	1	0	0	94	4	0	6	99	1	0	208
8:00 AM	1	0	2	0	1	0	0	0	0	50	1	0	2	92	1	0	150
8:15 AM	0	0	7	0	1	0	0	0	0	54	1	0	4	95	2	0	164
8:30 AM	1	0	3	0	1	0	0	0	1	86	1	0	7	84	0	0	184
8:45 AM	0	0	4	0	1	0	1	0	0	71	1	0	7	89	3	0	177
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	2	0	27	0	9	1	2	0	2	599	13	0	36	709	11	0	1411
	6.90%	0.00%	93.10%	0.00%	75.00%	8.33%	16.67%	0.00%	0.33%	97.56%	2.12%	0.00%	4.76%	93.78%	1.46%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	1	0	9	0	4	1	1	0	1	328	7	0	15	382	4	0	753
PEAK HR FACTOR :	0.250	0.000	0.750	0.000	0.500	0.250	0.250	0.000	0.250	0.837	0.438	0.000	0.625	0.927	1.000	0.000	0.884
	0.833				0.750				0.840				0.911				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	2	0	16	0	1	0	0	0	0	127	4	0	5	118	1	0	274
4:15 PM	3	0	5	0	0	0	0	0	1	116	2	0	3	97	2	0	229
4:30 PM	0	0	9	0	3	0	0	0	0	119	1	0	3	107	1	0	243
4:45 PM	1	0	12	0	0	0	0	0	0	129	2	0	3	104	2	0	253
5:00 PM	1	1	17	0	3	0	2	0	0	101	0	0	2	107	0	0	234
5:15 PM	2	0	9	0	1	0	1	0	0	146	1	0	8	110	3	0	281
5:30 PM	1	0	6	0	2	0	1	0	1	113	1	0	6	82	1	0	214
5:45 PM	0	0	6	0	0	0	0	0	0	128	0	0	6	96	0	0	236
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	10	1	80	0	10	0	4	0	2	979	11	0	36	821	10	0	1964
	10.99%	1.10%	87.91%	0.00%	71.43%	0.00%	28.57%	0.00%	0.20%	98.69%	1.11%	0.00%	4.15%	94.69%	1.15%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	4	1	47	0	7	0	3	0	0	495	4	0	16	428	6	0	1011
PEAK HR FACTOR :	0.500	0.250	0.691	0.000	0.583	0.000	0.375	0.000	0.000	0.848	0.500	0.000	0.500	0.973	0.500	0.000	0.899
	0.684				0.500				0.849				0.930				

National Data & Surveying Services

Intersection Turning Movement Count

Location: I St & Rialto Ave
 City: San Bernardino
 Control: 1-Way Stop (SB)

Project ID: 17-06163-011
 Date: 10/24/2017

Total

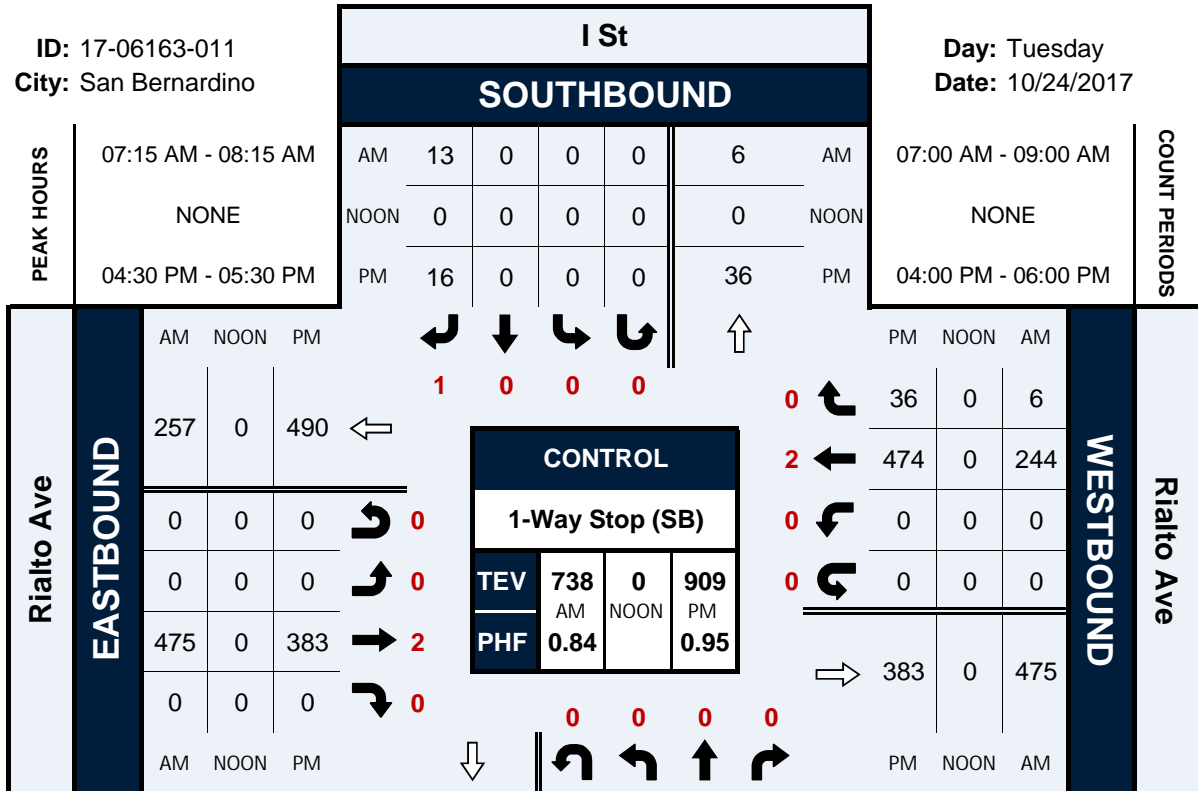
NS/EW Streets:	I St				I St				Rialto Ave				Rialto Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	1	0	0	2	0	0	0	2	0	0	137
7:15 AM	0	0	0	0	0	0	2	0	0	119	0	0	0	58	4	0	183
7:30 AM	0	0	0	0	0	0	5	0	0	143	0	0	0	71	1	0	220
7:45 AM	0	0	0	0	0	0	3	0	0	131	0	0	0	60	0	0	194
8:00 AM	0	0	0	0	0	0	3	0	0	82	0	0	0	55	1	0	141
8:15 AM	0	0	0	0	0	0	3	0	0	86	0	0	0	38	2	0	129
8:30 AM	0	0	0	0	0	0	4	0	0	60	0	0	0	49	1	0	114
8:45 AM	0	0	0	0	0	0	5	1	0	52	0	0	0	65	1	0	124
TOTAL VOLUMES :	0	0	0	0	0	0	26	1	0	756	0	0	0	444	15	0	1242
APPROACH %'s :					0.00%	0.00%	96.30%	3.70%	0.00%	100.00%	0.00%	0.00%	0.00%	96.73%	3.27%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	13	0	0	475	0	0	0	244	6	0	738
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.650	0.000	0.000	0.830	0.000	0.000	0.000	0.859	0.375	0.000	0.839
							0.650				0.830				0.868		
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	7	0	0	88	0	0	0	120	14	0	229
4:15 PM	0	0	0	0	0	0	4	0	0	82	0	0	0	86	6	0	178
4:30 PM	0	0	0	0	0	0	1	0	0	100	0	0	0	119	7	0	227
4:45 PM	0	0	0	0	0	0	6	0	0	92	0	0	0	113	14	0	225
5:00 PM	0	0	0	0	0	0	7	0	0	100	0	0	0	119	12	0	238
5:15 PM	0	0	0	0	0	0	2	0	0	91	0	0	0	123	3	0	219
5:30 PM	0	0	0	0	0	0	2	0	0	119	0	0	0	99	5	0	225
5:45 PM	0	0	0	0	0	0	0	0	0	107	0	0	0	100	6	0	213
TOTAL VOLUMES :	0	0	0	0	0	0	29	0	0	779	0	0	0	879	67	0	1754
APPROACH %'s :					0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	92.92%	7.08%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	16	0	0	383	0	0	0	474	36	0	909
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.571	0.000	0.000	0.958	0.000	0.000	0.000	0.963	0.643	0.000	0.955
							0.571				0.958				0.973		

I St & Rialto Ave

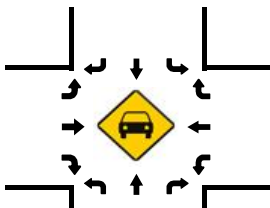
Peak Hour Turning Movement Count

ID: 17-06163-011
City: San Bernardino

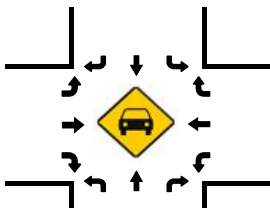
Day: Tuesday
Date: 10/24/2017



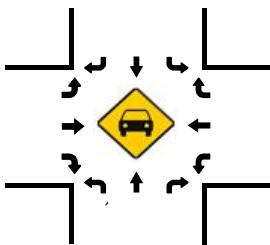
Total Vehicles (AM)



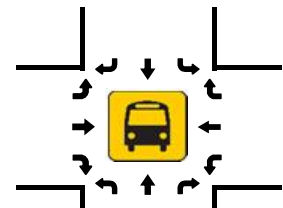
Total Vehicles (NOON)



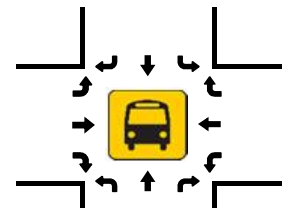
Total Vehicles (PM)



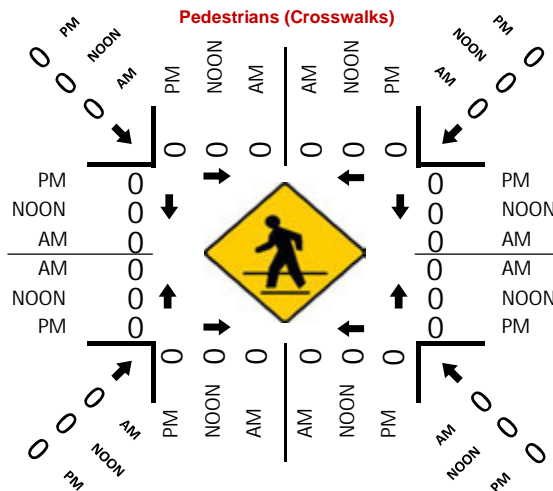
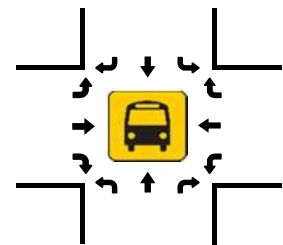
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: I-215 SB Ramps & 5th St
 City: San Bernardino
 Control: Signalized

Project ID: 17-06163-012
 Date: 10/24/2017

Total

NS/EW Streets:	I-215 SB Ramps				I-215 SB Ramps				5th St				5th St						
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL		
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU			
7:00 AM	0	0	0	0	119	0	31	0	0	79	79	0	56	84	0	0	448		
7:15 AM	0	0	0	0	146	5	36	0	0	109	83	0	84	104	0	0	567		
7:30 AM	0	0	0	0	158	3	39	0	0	128	98	0	51	120	0	0	597		
7:45 AM	0	0	0	0	206	0	48	0	0	108	91	0	68	97	0	0	618		
8:00 AM	0	0	0	0	124	1	39	0	0	113	80	0	67	133	0	0	557		
8:15 AM	0	0	0	0	120	2	47	0	0	107	79	0	65	113	0	0	533		
8:30 AM	0	0	0	0	98	2	38	0	0	108	90	0	71	135	0	0	542		
8:45 AM	0	0	0	0	95	0	42	0	0	94	97	0	68	97	0	0	493		
TOTAL VOLUMES :	0	0	0	0	1066	13	320	0	0	846	697	0	530	883	0	0	4355		
APPROACH %'s :					76.20%	0.93%	22.87%	0.00%	0.00%	54.83%	45.17%	0.00%	37.51%	62.49%	0.00%	0.00%			
PEAK HR :	07:15 AM - 08:15 AM																TOTAL		
PEAK HR VOL :	0	0	0	0	634	9	162	0	0	458	352	0	270	454	0	0	2339		
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.769	0.450	0.844	0.000	0.000	0.895	0.898	0.000	0.804	0.853	0.000	0.000	0.946		
					0.792					0.896					0.905				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL		
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU			
4:00 PM	0	0	0	0	59	3	43	0	0	129	93	0	106	174	0	0	607		
4:15 PM	0	0	0	0	56	0	33	0	0	124	84	0	104	199	0	0	600		
4:30 PM	0	0	0	0	54	1	51	0	0	137	91	0	141	198	0	0	673		
4:45 PM	0	0	0	0	60	1	39	0	0	134	78	0	94	157	0	0	563		
5:00 PM	0	0	0	0	40	0	34	0	0	156	79	0	134	193	0	0	636		
5:15 PM	0	0	0	0	47	2	51	0	0	145	64	0	95	160	0	0	564		
5:30 PM	0	0	0	0	53	1	36	0	0	160	84	0	108	168	0	0	610		
5:45 PM	0	0	0	0	52	2	31	0	0	181	69	0	72	188	0	0	595		
TOTAL VOLUMES :	0	0	0	0	421	10	318	0	0	1166	642	0	854	1437	0	0	4848		
APPROACH %'s :					56.21%	1.34%	42.46%	0.00%	0.00%	64.49%	35.51%	0.00%	37.28%	62.72%	0.00%	0.00%			
PEAK HR :	04:15 PM - 05:15 PM																TOTAL		
PEAK HR VOL :	0	0	0	0	210	2	157	0	0	551	332	0	473	747	0	0	2472		
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.875	0.500	0.770	0.000	0.000	0.883	0.912	0.000	0.839	0.938	0.000	0.000	0.918		
					0.870					0.939					0.900				

National Data & Surveying Services

Intersection Turning Movement Count

Location: I-215 SB Ramps & 5th St
 City: San Bernardino
 Control: Signalized

Project ID: 17-06163-012
 Date: 10/24/2017

2axle

NS/EW Streets:	I-215 SB Ramps				I-215 SB Ramps				5th St				5th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	0	0	0	0	1.3	0.3	1.3	0	0	4	0	0	2	2	0	0	
7:00 AM	0	0	0	0	1	0	0	0	0	2	0	0	2	3	0	0	8
7:15 AM	0	0	0	0	1	0	0	0	0	4	1	0	1	3	0	0	10
7:30 AM	0	0	0	0	2	0	0	0	0	3	1	0	2	3	0	0	11
7:45 AM	0	0	0	0	0	0	1	0	0	4	2	0	2	8	0	0	17
8:00 AM	0	0	0	0	0	1	0	0	0	7	1	0	0	4	0	0	13
8:15 AM	0	0	0	0	1	1	2	0	0	5	3	0	2	6	0	0	20
8:30 AM	0	0	0	0	0	0	1	0	0	5	7	0	4	6	0	0	23
8:45 AM	0	0	0	0	0	0	1	0	0	2	1	0	3	6	0	0	13
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	5	2	5	0	0	32	16	0	16	39	0	0	115
					41.67%	16.67%	41.67%	0.00%	0.00%	66.67%	33.33%	0.00%	29.09%	70.91%	0.00%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	0	0	0	3	1	1	0	0	18	5	0	5	18	0	0	51
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.375	0.250	0.250	0.000	0.000	0.643	0.625	0.000	0.625	0.563	0.000	0.000	0.750
					0.625				0.719				0.575				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	0	0	0	0	1.3	0.3	1.3	0	0	4	0	0	2	2	0	0	
4:00 PM	0	0	0	0	2	1	0	0	0	6	1	0	4	3	0	0	17
4:15 PM	0	0	0	0	2	0	0	0	0	3	4	0	2	2	0	0	13
4:30 PM	0	0	0	0	0	0	0	0	0	6	2	0	3	4	0	0	15
4:45 PM	0	0	0	0	0	0	1	0	0	2	2	0	3	4	0	0	12
5:00 PM	0	0	0	0	0	0	0	0	0	2	3	0	1	3	0	0	9
5:15 PM	0	0	0	0	0	0	0	0	0	4	0	0	1	1	0	0	6
5:30 PM	0	0	0	0	1	1	0	0	0	3	0	0	2	3	0	0	10
5:45 PM	0	0	0	0	0	0	0	0	0	3	1	0	0	3	0	0	7
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	5	2	1	0	0	29	13	0	16	23	0	0	89
					62.50%	25.00%	12.50%	0.00%	0.00%	69.05%	30.95%	0.00%	41.03%	58.97%	0.00%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	0	0	0	0	2	0	1	0	0	13	11	0	9	13	0	0	49
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.542	0.688	0.000	0.750	0.813	0.000	0.000	0.817
					0.375				0.750				0.786				

National Data & Surveying Services

Intersection Turning Movement Count

Location: I-215 SB Ramps & 5th St
 City: San Bernardino
 Control: Signalized

Project ID: 17-06163-012
 Date: 10/24/2017

3axle

NS/EW Streets:	I-215 SB Ramps				I-215 SB Ramps				5th St				5th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	0	0	0	0	1.3	0.3	1.3	0	0	4	0	0	2	2	0	0	
7:00 AM	0	0	0	0	0	0	1	0	0	0	1	0	0	2	0	0	4
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	4	0	0	6
7:30 AM	0	0	0	0	0	0	1	0	0	0	1	0	0	7	0	0	9
7:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	6	0	0	7
8:00 AM	0	0	0	0	1	0	0	0	0	1	1	0	0	5	0	0	8
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3
8:30 AM	0	0	0	0	0	0	1	0	0	0	3	0	0	1	0	0	5
8:45 AM	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	1	0	4	0	0	2	8	0	2	27	0	0	44
					20.00%	0.00%	80.00%	0.00%	0.00%	20.00%	80.00%	0.00%	6.90%	93.10%	0.00%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	0	0	0	1	0	2	0	0	1	3	0	1	22	0	0	30
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.250	0.000	0.500	0.000	0.000	0.250	0.750	0.000	0.250	0.786	0.000	0.000	0.833
					0.750				0.500				0.821				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	0	0	0	0	1.3	0.3	1.3	0	0	4	0	0	2	2	0	0	
4:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	4
4:15 PM	0	0	0	0	0	0	0	0	0	1	4	0	1	0	0	0	6
4:30 PM	0	0	0	0	0	0	0	0	0	5	4	0	1	2	0	0	12
4:45 PM	0	0	0	0	0	0	0	0	0	1	4	0	0	1	0	0	6
5:00 PM	0	0	0	0	0	0	0	0	0	4	2	0	0	1	0	0	7
5:15 PM	0	0	0	0	1	0	1	0	0	2	3	0	1	1	0	0	9
5:30 PM	0	0	0	0	0	0	1	0	0	2	1	0	0	1	0	0	5
5:45 PM	0	0	0	0	0	0	0	0	0	4	0	0	0	1	0	0	5
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	1	0	2	0	0	19	20	0	5	7	0	0	54
					33.33%	0.00%	66.67%	0.00%	0.00%	48.72%	51.28%	0.00%	41.67%	58.33%	0.00%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	11	14	0	2	4	0	0	31
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.550	0.875	0.000	0.500	0.500	0.000	0.000	0.646
									0.694				0.500				

National Data & Surveying Services

Intersection Turning Movement Count

Location: I-215 SB Ramps & 5th St
 City: San Bernardino
 Control: Signalized

Project ID: 17-06163-012
 Date: 10/24/2017

4axle

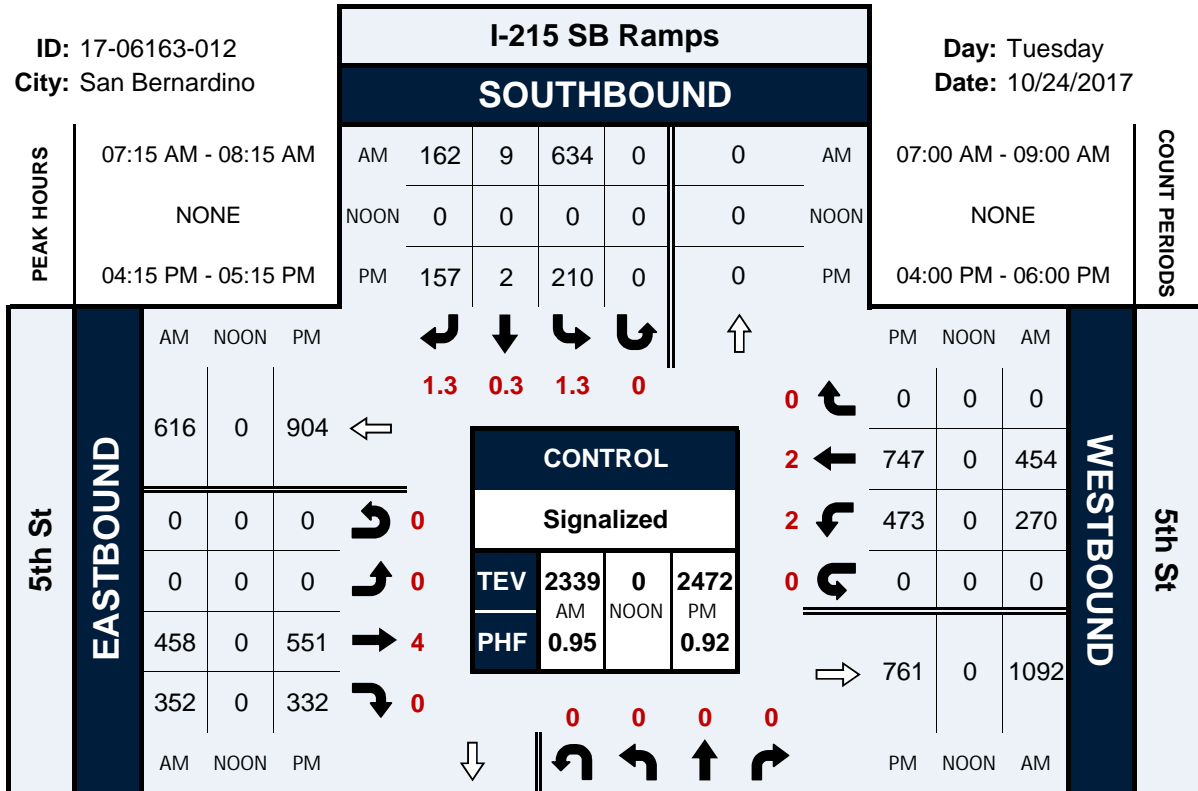
NS/EW Streets:	I-215 SB Ramps				I-215 SB Ramps				5th St				5th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1.3	0.3	1.3	0	0	4	0	0	2	2	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	0	0	0	0	3	0	0	1	8	0	0	4	0	0	16
7:15 AM	0	0	0	0	1	0	3	0	0	3	4	0	0	4	0	0	15
7:30 AM	0	0	0	0	0	0	0	0	0	0	7	0	1	5	0	0	13
7:45 AM	0	0	0	0	1	0	3	0	0	2	4	0	1	2	0	0	13
8:00 AM	0	0	0	0	0	0	0	0	0	2	10	0	3	6	0	0	21
8:15 AM	0	0	0	0	0	0	1	0	0	1	11	0	2	5	0	0	20
8:30 AM	0	0	0	0	0	0	0	0	0	1	3	0	0	6	0	0	10
8:45 AM	0	0	0	0	0	0	1	0	0	2	6	0	2	5	0	0	16
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	2	0	11	0	0	12	53	0	9	37	0	0	124
					15.38%	0.00%	84.62%	0.00%	0.00%	18.46%	81.54%	0.00%	19.57%	80.43%	0.00%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	0	0	0	2	0	6	0	0	7	25	0	5	17	0	0	62
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.000	0.000	0.583	0.625	0.000	0.417	0.708	0.000	0.000	0.738
					0.500				0.667				0.611				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1.3	0.3	1.3	0	0	4	0	0	2	2	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	0	0	0	0	1	6	0	0	0	1	0	1	6	0	0	15
4:15 PM	0	0	0	0	0	0	0	0	0	4	3	0	1	12	0	0	20
4:30 PM	0	0	0	0	0	0	4	0	0	4	3	0	1	5	0	0	17
4:45 PM	0	0	0	0	0	0	1	0	0	1	2	0	0	4	0	0	8
5:00 PM	0	0	0	0	0	0	3	0	0	2	4	0	0	3	0	0	12
5:15 PM	0	0	0	0	1	0	1	0	0	1	5	0	0	4	0	0	12
5:30 PM	0	0	0	0	1	0	0	0	0	1	2	0	0	5	0	0	9
5:45 PM	0	0	0	0	0	0	2	0	0	2	6	0	0	7	0	0	17
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	2	1	17	0	0	15	26	0	3	46	0	0	110
					10.00%	5.00%	85.00%	0.00%	0.00%	36.59%	63.41%	0.00%	6.12%	93.88%	0.00%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	8	0	0	11	12	0	2	24	0	0	57
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.688	0.750	0.000	0.500	0.500	0.000	0.000	0.713
					0.500				0.821				0.500				

I-215 SB Ramps & 5th St

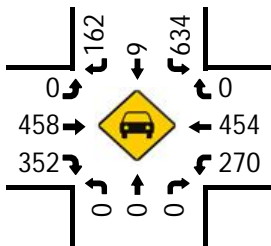
Peak Hour Turning Movement Count

ID: 17-06163-012
City: San Bernardino

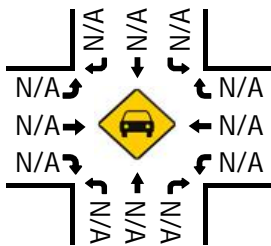
Day: Tuesday
Date: 10/24/2017



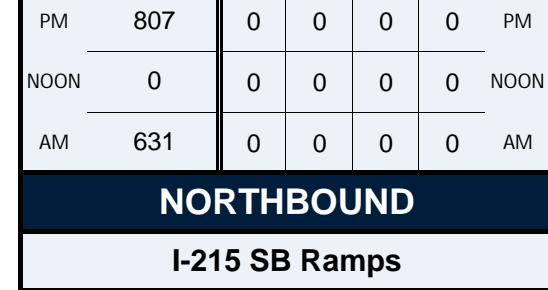
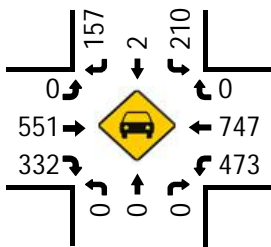
Total Vehicles (AM)



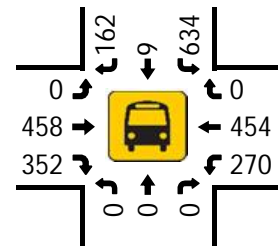
Total Vehicles (NOON)



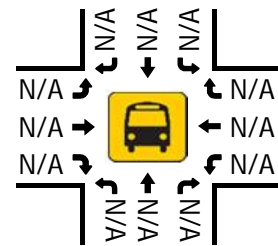
Total Vehicles (PM)



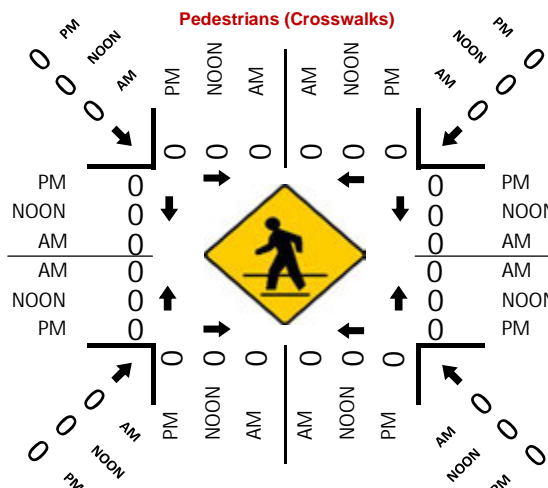
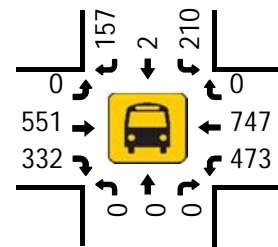
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: I-215 SB Ramps & 2nd St
 City: San Bernardino
 Control: Signalized

Project ID: 17-06163-013
 Date: 10/24/2017

Total

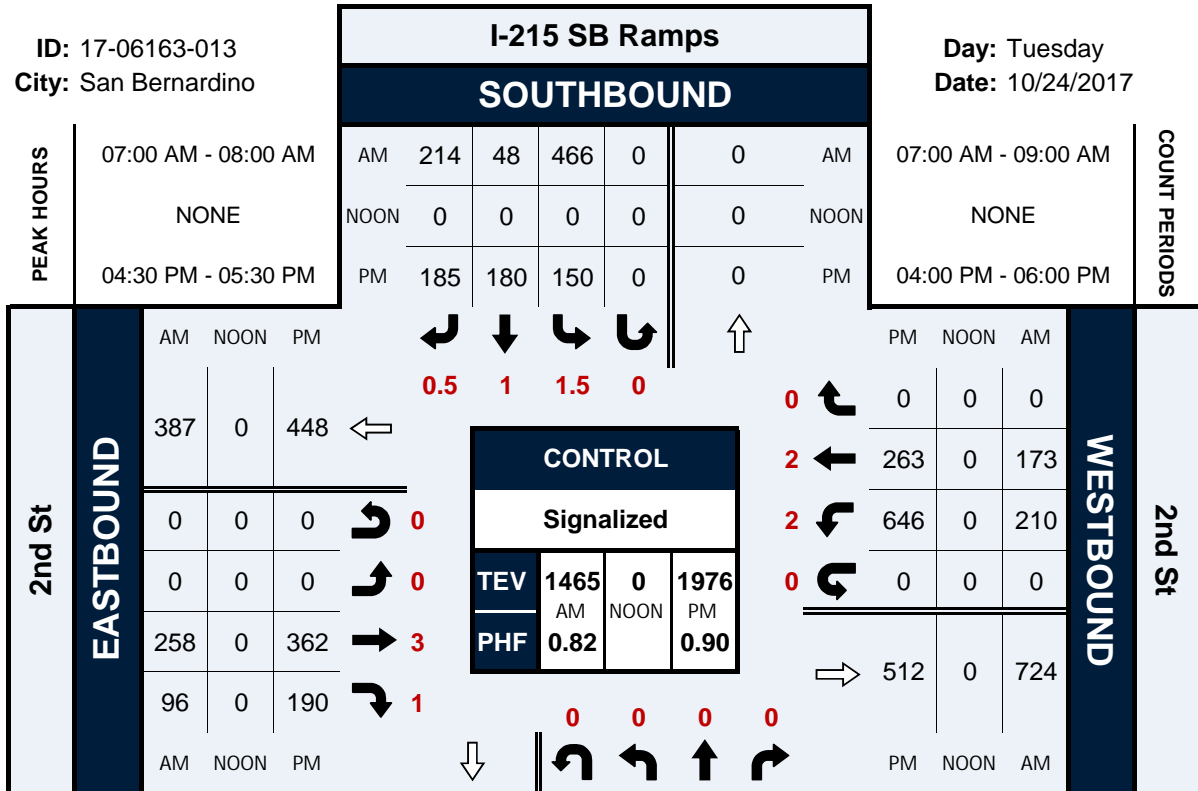
NS/EW Streets:	I-215 SB Ramps				I-215 SB Ramps				2nd St				2nd St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	0	0	0	1.5	1	0.5	0	0	3	1	0	2	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	0	0	93	10	46	0	0	51	22	0	46	37	0	0	305
7:15 AM	0	0	0	0	119	10	42	0	0	67	25	0	56	36	0	0	355
7:30 AM	0	0	0	0	134	17	74	0	0	78	28	0	64	54	0	0	449
7:45 AM	0	0	0	0	120	11	52	0	0	62	21	0	44	46	0	0	356
8:00 AM	0	0	0	0	76	3	42	0	0	41	17	0	38	48	0	0	265
8:15 AM	0	0	0	0	62	9	46	0	0	48	14	0	54	68	0	0	301
8:30 AM	0	0	0	0	71	9	38	0	0	54	37	0	49	44	0	0	302
8:45 AM	0	0	0	0	83	9	25	0	0	53	26	0	77	64	0	0	337
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	758	78	365	0	0	454	190	0	428	397	0	0	2670
					63.11%	6.49%	30.39%	0.00%	0.00%	70.50%	29.50%	0.00%	51.88%	48.12%	0.00%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	0	0	0	0	466	48	214	0	0	258	96	0	210	173	0	0	1465
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.869	0.706	0.723	0.000	0.000	0.827	0.857	0.000	0.820	0.801	0.000	0.000	0.816
					0.809				0.835				0.811				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	0	0	0	1.5	1	0.5	0	0	3	1	0	2	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	0	0	0	42	32	57	0	0	93	40	0	132	71	0	0	467
4:15 PM	0	0	0	0	29	45	32	0	0	88	34	0	137	65	0	0	430
4:30 PM	0	0	0	0	32	55	39	0	0	100	45	0	180	76	0	0	527
4:45 PM	0	0	0	0	41	39	47	0	0	89	46	0	131	67	0	0	460
5:00 PM	0	0	0	0	35	59	49	0	0	88	44	0	206	68	0	0	549
5:15 PM	0	0	0	0	42	27	50	0	0	85	55	0	129	52	0	0	440
5:30 PM	0	0	0	0	36	19	37	0	0	81	39	0	127	63	0	0	402
5:45 PM	0	0	0	0	21	22	26	0	0	96	42	0	106	60	0	0	373
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	278	298	337	0	0	720	345	0	1148	522	0	0	3648
					30.45%	32.64%	36.91%	0.00%	0.00%	67.61%	32.39%	0.00%	68.74%	31.26%	0.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	0	0	0	150	180	185	0	0	362	190	0	646	263	0	0	1976
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.893	0.763	0.925	0.000	0.000	0.905	0.864	0.000	0.784	0.865	0.000	0.000	0.900
					0.900				0.952				0.829				

I-215 SB Ramps & 2nd St

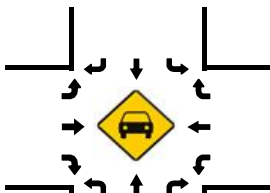
Peak Hour Turning Movement Count

ID: 17-06163-013
City: San Bernardino

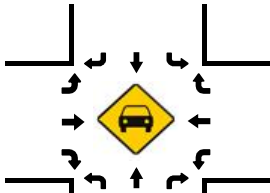
Day: Tuesday
Date: 10/24/2017



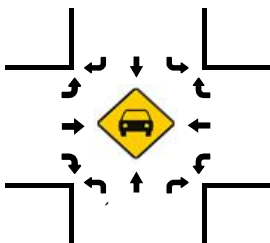
Total Vehicles (AM)



Total Vehicles (NOON)



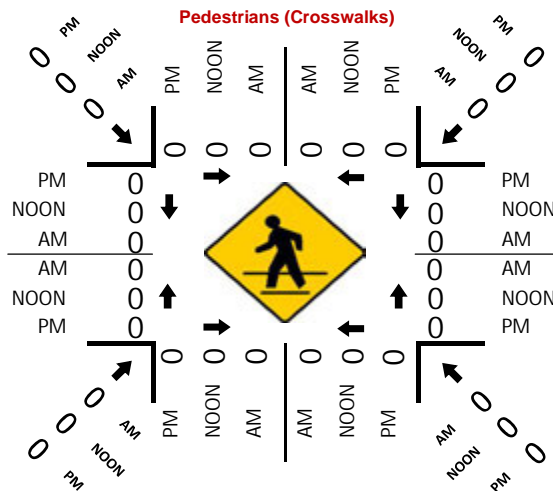
Total Vehicles (PM)



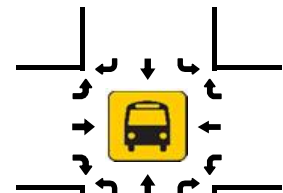
NORTHBOUND

I-215 SB Ramps

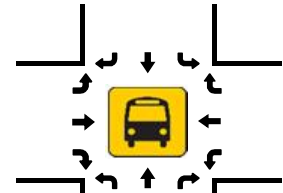
PM	1016	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	354	0	0	0	0	AM



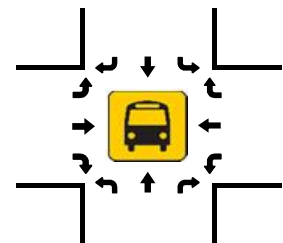
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: I-215 NB Ramps & 5th St
 City: San Bernardino
 Control: Signalized

Project ID: 17-06163-014
 Date: 10/24/2017

Total

NS/EW Streets:	I-215 NB Ramps				I-215 NB Ramps				5th St				5th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1.3	0.3	1.3	0	0	0	0	0	2	2	0	0	0	4	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	51	0	107	0	0	0	0	0	44	149	0	0	0	91	34	0	476
7:15 AM	55	0	123	0	0	0	0	0	44	217	0	0	0	124	26	0	589
7:30 AM	72	2	120	0	0	0	0	0	37	244	0	0	0	112	34	0	621
7:45 AM	51	1	197	0	0	0	0	0	35	281	0	0	0	122	32	0	719
8:00 AM	71	2	136	0	0	0	0	0	39	206	0	0	0	115	42	0	611
8:15 AM	68	0	136	0	0	0	0	0	29	189	0	0	0	108	32	0	562
8:30 AM	66	0	120	0	0	0	0	0	44	170	0	0	0	134	47	0	581
8:45 AM	52	1	131	0	0	0	0	0	29	160	0	0	0	113	54	0	540
TOTAL VOLUMES :	486	6	1070	0	0	0	0	0	301	1616	0	0	0	919	301	0	4699
APPROACH %'s :	31.11%	0.38%	68.50%	0.00%					15.70%	84.30%	0.00%	0.00%	0.00%	75.33%	24.67%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	249	5	576	0	0	0	0	0	155	948	0	0	0	473	134	0	2540
PEAK HR FACTOR :	0.865	0.625	0.731	0.000	0.000	0.000	0.000	0.000	0.881	0.843	0.000	0.000	0.000	0.954	0.798	0.000	0.883
	0.833								0.873				0.967				

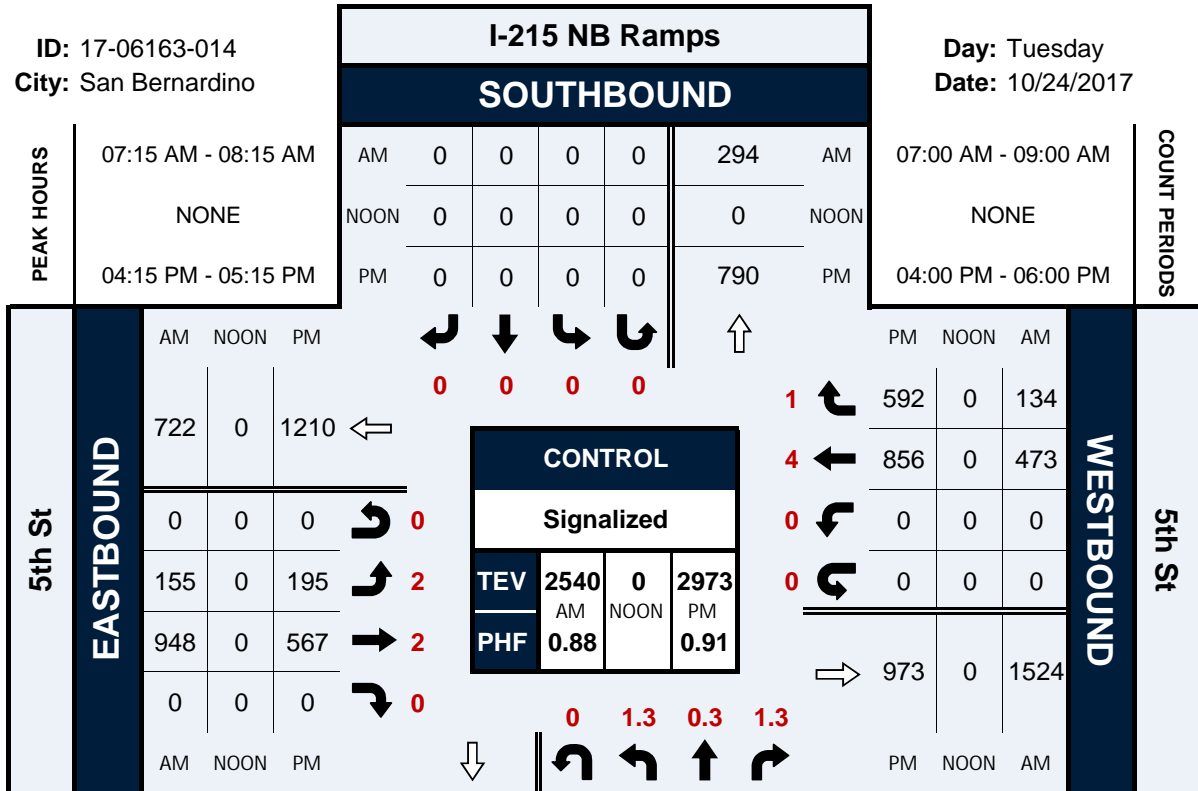
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
1.3	0.3	1.3	0	0	0	0	0	2	2	0	0	0	4	1	0		
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	90	1	101	0	0	0	0	0	38	149	0	0	0	192	147	0	718
4:15 PM	99	2	105	0	0	0	0	0	32	148	0	0	0	203	136	0	725
4:30 PM	98	0	98	0	0	0	0	0	53	140	0	0	0	238	138	0	765
4:45 PM	76	0	101	0	0	0	0	0	54	138	0	0	0	174	126	0	669
5:00 PM	81	1	102	0	0	0	0	0	56	141	0	0	0	241	192	0	814
5:15 PM	76	2	89	0	0	0	0	0	51	135	0	0	0	190	156	0	699
5:30 PM	63	1	68	0	0	0	0	0	63	166	0	0	0	200	109	0	670
5:45 PM	98	0	84	0	0	0	0	0	61	164	0	0	0	169	96	0	672
TOTAL VOLUMES :	681	7	748	0	0	0	0	0	408	1181	0	0	0	1607	1100	0	5732
APPROACH %'s :	47.42%	0.49%	52.09%	0.00%					25.68%	74.32%	0.00%	0.00%	0.00%	59.36%	40.64%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	354	3	406	0	0	0	0	0	195	567	0	0	0	856	592	0	2973
PEAK HR FACTOR :	0.894	0.375	0.967	0.000	0.000	0.000	0.000	0.000	0.871	0.958	0.000	0.000	0.000	0.888	0.771	0.000	0.913
	0.926								0.967				0.836				

I-215 NB Ramps & 5th St

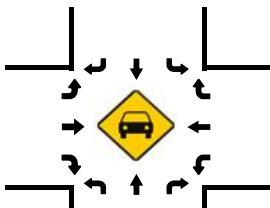
Peak Hour Turning Movement Count

ID: 17-06163-014
City: San Bernardino

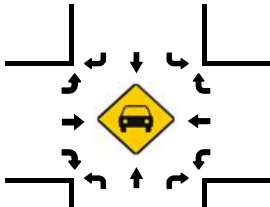
Day: Tuesday
Date: 10/24/2017



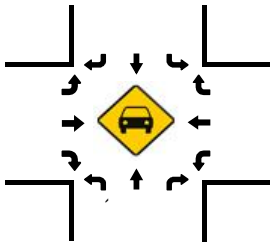
Total Vehicles (AM)



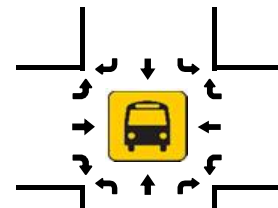
Total Vehicles (NOON)



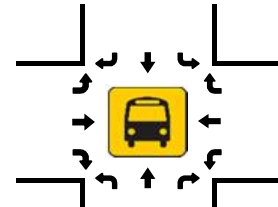
Total Vehicles (PM)



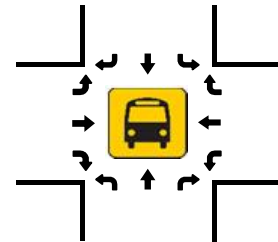
Total Vehicles (AM)



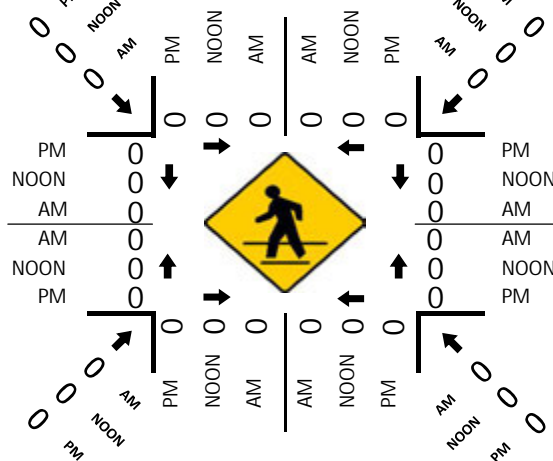
Total Vehicles (NOON)



Total Vehicles (PM)



Pedestrians (Crosswalks)



National Data & Surveying Services

Intersection Turning Movement Count

Location: I-215 NB Ramps & 2nd St
 City: San Bernardino
 Control: Signalized

Project ID: 17-6163-015
 Date: 10/24/2017

Total

NS/EW Streets:	I-215 NB Ramps				I-215 NB Ramps				2nd St				2nd St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1.3	0.3	1.3	0	0	0	0	0	2	2	0	0	0	4	1	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	19	24	171	0	0	0	0	0	27	106	0	0	0	60	20	0	427
7:15 AM	20	28	239	0	0	0	0	0	44	138	0	0	0	77	31	0	577
7:30 AM	30	20	218	0	0	0	0	0	42	155	0	1	0	80	49	0	595
7:45 AM	32	52	216	0	0	0	0	0	54	148	0	0	0	72	53	0	627
8:00 AM	29	34	200	0	0	0	0	0	26	99	0	0	0	45	43	0	476
8:15 AM	39	35	219	0	0	0	0	0	31	84	0	0	0	68	27	0	503
8:30 AM	34	19	214	0	0	0	0	0	30	92	0	0	0	75	40	0	504
8:45 AM	34	16	163	0	0	0	0	0	19	106	0	0	0	101	36	0	475
TOTAL VOLUMES :	237	228	1640	0	0	0	0	0	273	928	0	1	0	578	299	0	4184
APPROACH %'s :	11.26%	10.83%	77.91%	0.00%					22.71%	77.20%	0.00%	0.08%	0.00%	65.91%	34.09%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	111	134	873	0	0	0	0	0	166	540	0	1	0	274	176	0	2275
PEAK HR FACTOR :	0.867	0.644	0.913	0.000	0.000	0.000	0.000	0.000	0.769	0.871	0.000	0.250	0.000	0.856	0.830	0.000	0.907
	0.932								0.875				0.872				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1.3	0.3	1.3	0	0	0	0	0	2	2	0	0	0	4	1	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	31	13	96	0	0	0	0	0	50	90	0	0	0	172	116	0	568
4:15 PM	29	9	81	0	0	0	0	0	51	65	0	0	0	161	100	0	496
4:30 PM	34	8	97	0	0	0	0	0	46	83	0	0	0	222	120	0	610
4:45 PM	26	9	101	0	0	0	0	0	47	85	0	0	0	175	96	0	539
5:00 PM	32	12	94	0	0	0	0	0	46	56	0	0	0	216	140	0	596
5:15 PM	24	8	91	0	0	0	0	0	58	94	0	0	0	194	110	0	579
5:30 PM	33	7	69	0	0	0	0	0	48	65	0	0	0	151	96	0	469
5:45 PM	25	13	104	0	0	0	0	0	51	61	0	0	0	141	96	0	491
TOTAL VOLUMES :	234	79	733	0	0	0	0	0	397	599	0	0	0	1432	874	0	4348
APPROACH %'s :	22.37%	7.55%	70.08%	0.00%					39.86%	60.14%	0.00%	0.00%	0.00%	62.10%	37.90%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	116	37	383	0	0	0	0	0	197	318	0	0	0	807	466	0	2324
PEAK HR FACTOR :	0.853	0.771	0.948	0.000	0.000	0.000	0.000	0.000	0.849	0.846	0.000	0.000	0.000	0.909	0.832	0.000	0.952
	0.964								0.847				0.894				

National Data & Surveying Services

Intersection Turning Movement Count

Location: I-215 NB Ramps & 2nd St
 City: San Bernardino
 Control: Signalized

Project ID: 17-6163-015
 Date: 10/24/2017

2axle

NS/EW Streets:	I-215 NB Ramps				I-215 NB Ramps				2nd St				2nd St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1.3	0.3	1.3	0	0	0	0	0	2	2	0	0	0	4	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	1	0	2	0	0	0	0	0	4	3	0	0	0	4	3	0	17
7:15 AM	0	1	3	0	0	0	0	0	2	3	0	0	0	5	0	0	14
7:30 AM	0	0	1	0	0	0	0	0	1	2	0	0	0	5	2	0	11
7:45 AM	0	3	4	0	0	0	0	0	5	3	0	0	0	2	1	0	18
8:00 AM	1	0	2	0	0	0	0	0	3	2	0	0	0	2	0	0	10
8:15 AM	0	0	4	0	0	0	0	0	1	4	0	0	0	6	0	0	15
8:30 AM	0	1	1	0	0	0	0	0	1	1	0	0	0	6	1	0	11
8:45 AM	1	2	3	0	0	0	0	0	2	5	0	0	0	3	1	0	17
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	3	7	20	0	0	0	0	0	19	23	0	0	0	33	8	0	113
APPROACH %'s :	10.00%	23.33%	66.67%	0.00%					45.24%	54.76%	0.00%	0.00%	0.00%	80.49%	19.51%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	1	4	10	0	0	0	0	0	11	10	0	0	0	14	3	0	53
PEAK HR FACTOR :	0.250	0.333	0.625	0.000	0.000	0.000	0.000	0.000	0.550	0.833	0.000	0.000	0.000	0.700	0.375	0.000	0.736
	0.536								0.656				0.607				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
1.3	0.3	1.3	0	0	0	0	0	2	2	0	0	0	4	1	0		
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	2	0	1	0	0	0	0	0	0	3	0	0	0	2	0	0	8
4:15 PM	1	0	0	0	0	0	0	0	0	2	0	0	0	5	0	0	8
4:30 PM	1	0	1	0	0	0	0	0	2	2	0	0	0	4	1	0	11
4:45 PM	0	0	2	0	0	0	0	0	0	2	0	0	0	3	1	0	8
5:00 PM	0	0	3	0	0	0	0	0	0	2	0	0	0	3	1	0	9
5:15 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	2	1	0	5
5:30 PM	1	0	1	0	0	0	0	0	0	2	0	0	0	2	0	0	6
5:45 PM	0	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	3
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	5	0	9	0	0	0	0	0	3	15	0	0	0	22	4	0	58
APPROACH %'s :	35.71%	0.00%	64.29%	0.00%					16.67%	83.33%	0.00%	0.00%	0.00%	84.62%	15.38%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	1	0	6	0	0	0	0	0	3	7	0	0	0	12	4	0	33
PEAK HR FACTOR :	0.25	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.375	0.875	0.000	0.000	0.000	0.750	1.000	0.000	0.750
	0.583								0.625				0.800				

National Data & Surveying Services

Intersection Turning Movement Count

Location: I-215 NB Ramps & 2nd St
 City: San Bernardino
 Control: Signalized

Project ID: 17-6163-015
 Date: 10/24/2017

4axle

NS/EW Streets:	I-215 NB Ramps				I-215 NB Ramps				2nd St				2nd St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1.3	0.3	1.3	0	0	0	0	0	2	2	0	0	0	4	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	4
7:15 AM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7:30 AM	1	0	0	0	0	0	0	0	1	0	0	0	0	2	0	0	4
7:45 AM	2	0	0	0	0	0	0	0	4	0	0	0	0	1	0	0	7
8:00 AM	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
8:15 AM	2	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	4
8:30 AM	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
8:45 AM	5	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	7
TOTAL VOLUMES :	NL 18	NT 0	NR 2	NU 0	SL 0	ST 0	SR 0	SU 0	EL 5	ET 1	ER 0	EU 0	WL 0	WT 7	WR 0	WU 0	TOTAL 33
APPROACH %'s :	90.00%	0.00%	10.00%	0.00%					83.33%	16.67%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																
PEAK HR VOL :	6	0	0	0	0	0	0	0	5	1	0	0	0	3	0	0	TOTAL 15
PEAK HR FACTOR :	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.313	0.250	0.000	0.000	0.000	0.375	0.000	0.000	0.536
	0.750								0.375				0.375				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
1.3	0.3	1.3	0	0	0	0	0	2	2	0	0	0	4	1	0		
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3
4:15 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
5:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2
5:15 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL 5	NT 0	NR 0	NU 0	SL 0	ST 0	SR 0	SU 0	EL 3	ET 0	ER 0	EU 0	WL 0	WT 1	WR 1	WU 0	TOTAL 10
APPROACH %'s :	100.00%	0.00%	0.00%	0.00%					100.00%	0.00%	0.00%	0.00%	0.00%	50.00%	50.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																
PEAK HR VOL :	2	0	0	0	0	0	0	0	3	0	0	0	0	0	1	0	TOTAL 6
PEAK HR FACTOR :	0.50	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.750
	0.500								0.750				0.250				

National Data & Surveying Services

Intersection Turning Movement Count

Location: I-215 NB Ramps & 2nd St
 City: San Bernardino
 Control: Signalized

Project ID: 17-6163-015
 Date: 10/24/2017

3axle

NS/EW Streets:	I-215 NB Ramps				I-215 NB Ramps				2nd St				2nd St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1.3 NL	0.3 NT	1.3 NR	0 NU	0 SL	0 ST	0 SR	0 SU	2 EL	2 ET	0 ER	0 EU	0 WL	4 WT	1 WR	0 WU	
7:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
7:45 AM	2	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	4
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
8:15 AM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:30 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
TOTAL VOLUMES :	NL 8	NT 0	NR 5	NU 0	SL 0	ST 0	SR 0	SU 0	EL 0	ET 0	ER 0	EU 0	WL 0	WT 2	WR 0	WU 0	TOTAL 15
APPROACH %'s :	61.54%	0.00%	38.46%	0.00%									0.00%	100.00%	0.00%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	4	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	8
PEAK HR FACTOR :	0.500	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.500
	0.500												0.500				

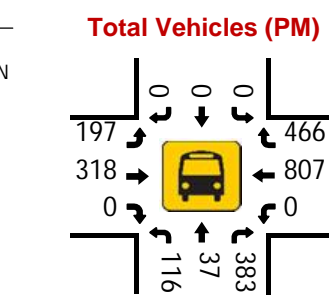
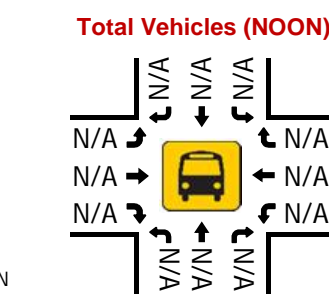
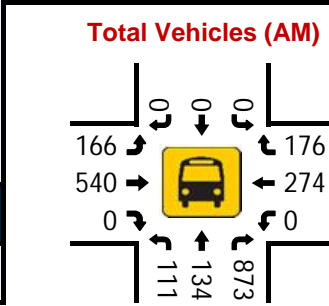
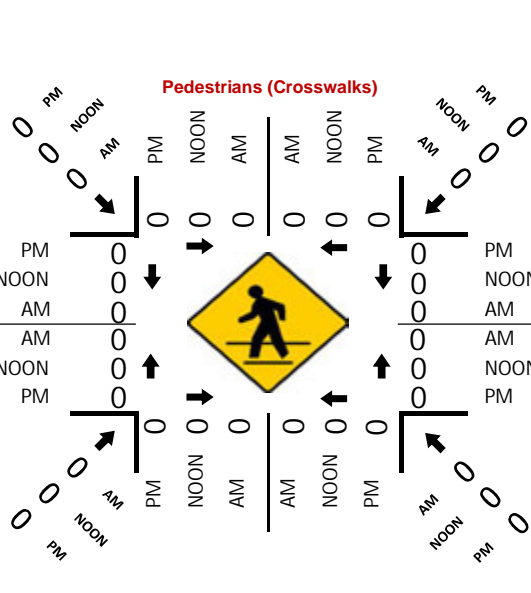
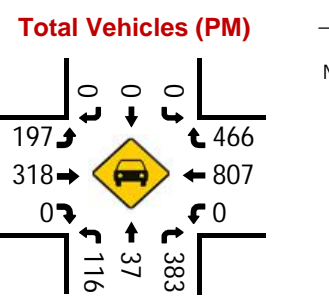
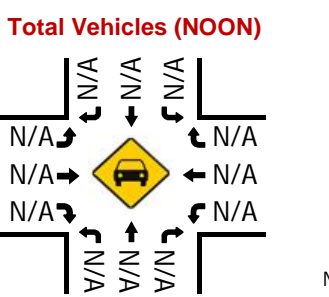
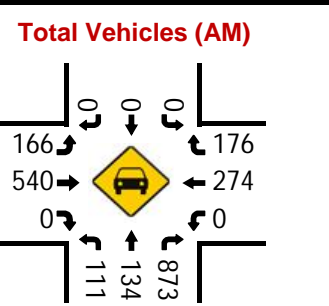
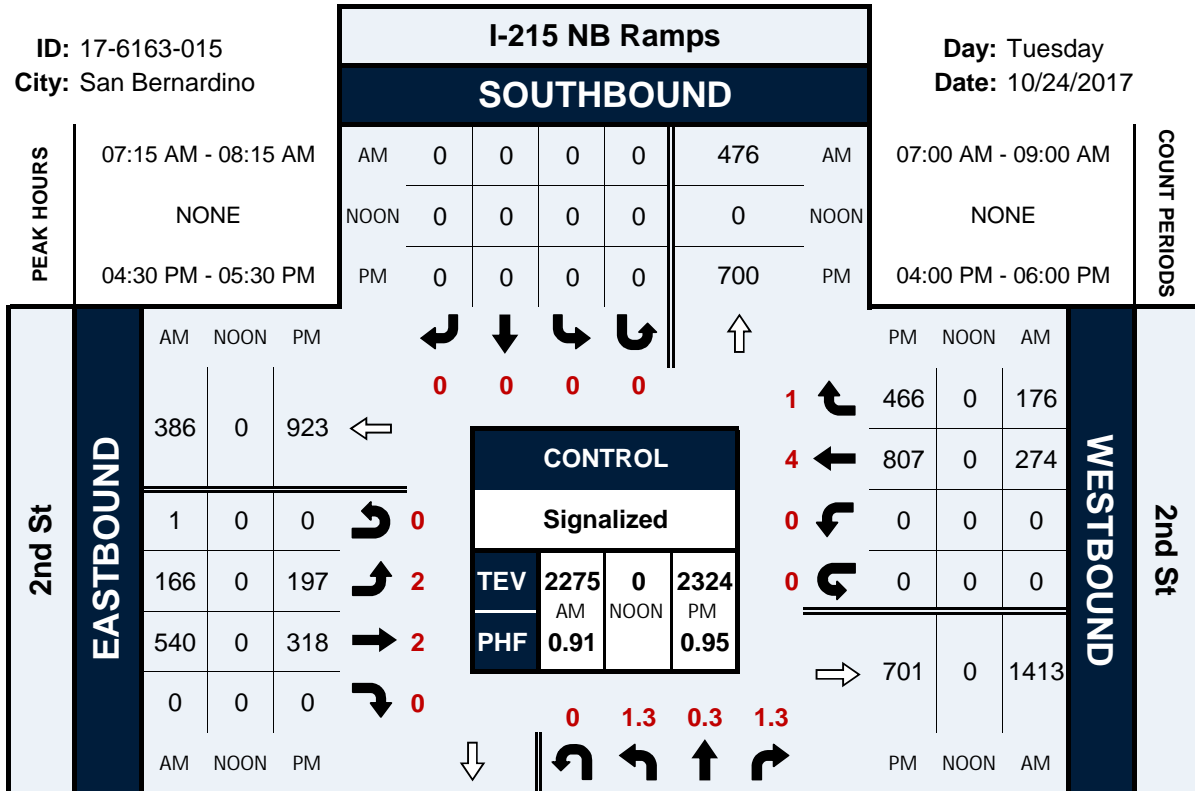
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
1.3 NL	0.3 NT	1.3 NR	0 NU	0 SL	0 ST	0 SR	0 SU	2 EL	2 ET	0 ER	0 EU	0 WL	4 WT	1 WR	0 WU		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
4:15 PM	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2
4:30 PM	0	0	1	0	0	0	0	0	1	0	0	0	0	1	0	0	3
4:45 PM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
5:30 PM	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2
5:45 PM	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
TOTAL VOLUMES :	NL 7	NT 0	NR 1	NU 0	SL 0	ST 0	SR 0	SU 0	EL 3	ET 2	ER 0	EU 0	WL 0	WT 1	WR 1	WU 0	TOTAL 15
APPROACH %'s :	87.50%	0.00%	12.50%	0.00%					60.00%	40.00%	0.00%	0.00%	0.00%	50.00%	50.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	4	0	1	0	0	0	0	0	1	1	0	0	0	1	0	0	8
PEAK HR FACTOR :	0.50	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.667
	0.625								0.500				0.250				

I-215 NB Ramps & 2nd St

Peak Hour Turning Movement Count

ID: 17-6163-015
City: San Bernardino

Day: Tuesday
Date: 10/24/2017



National Data & Surveying Services

Intersection Turning Movement Count

Location: H St & 5th St
 City: San Bernardino
 Control: Signalized

Project ID: 17-06163-016
 Date: 10/24/2017

Total

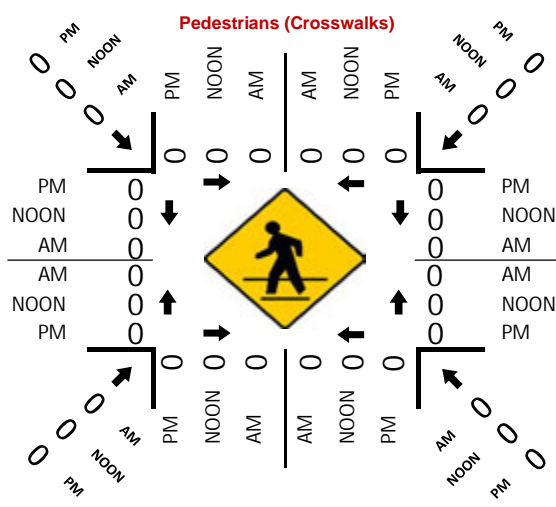
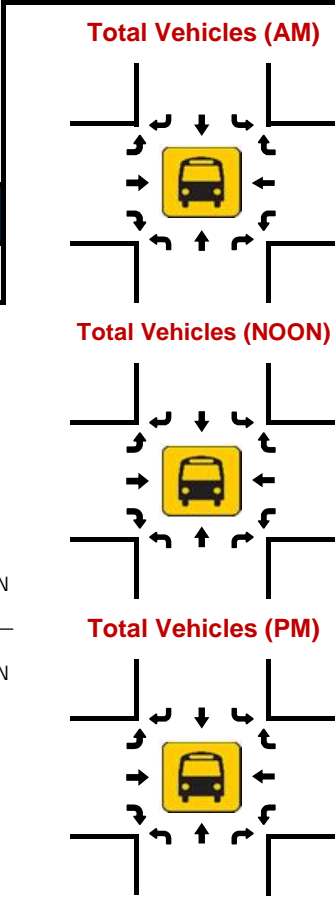
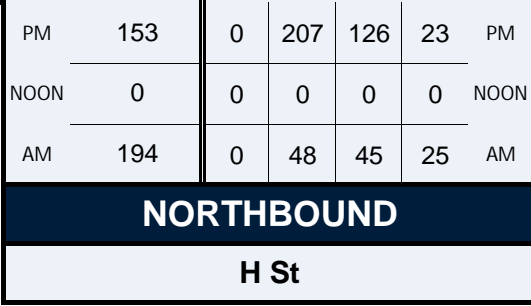
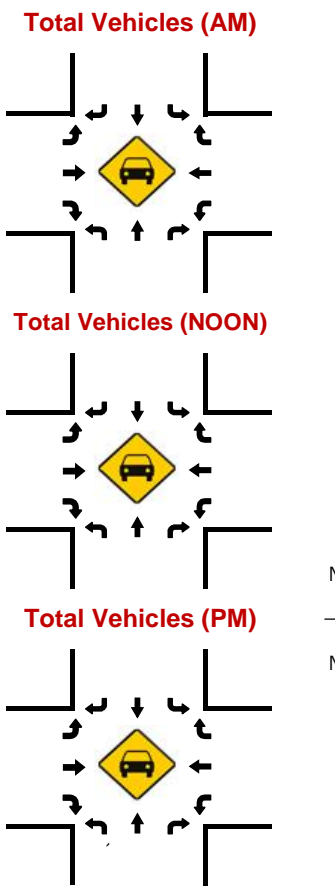
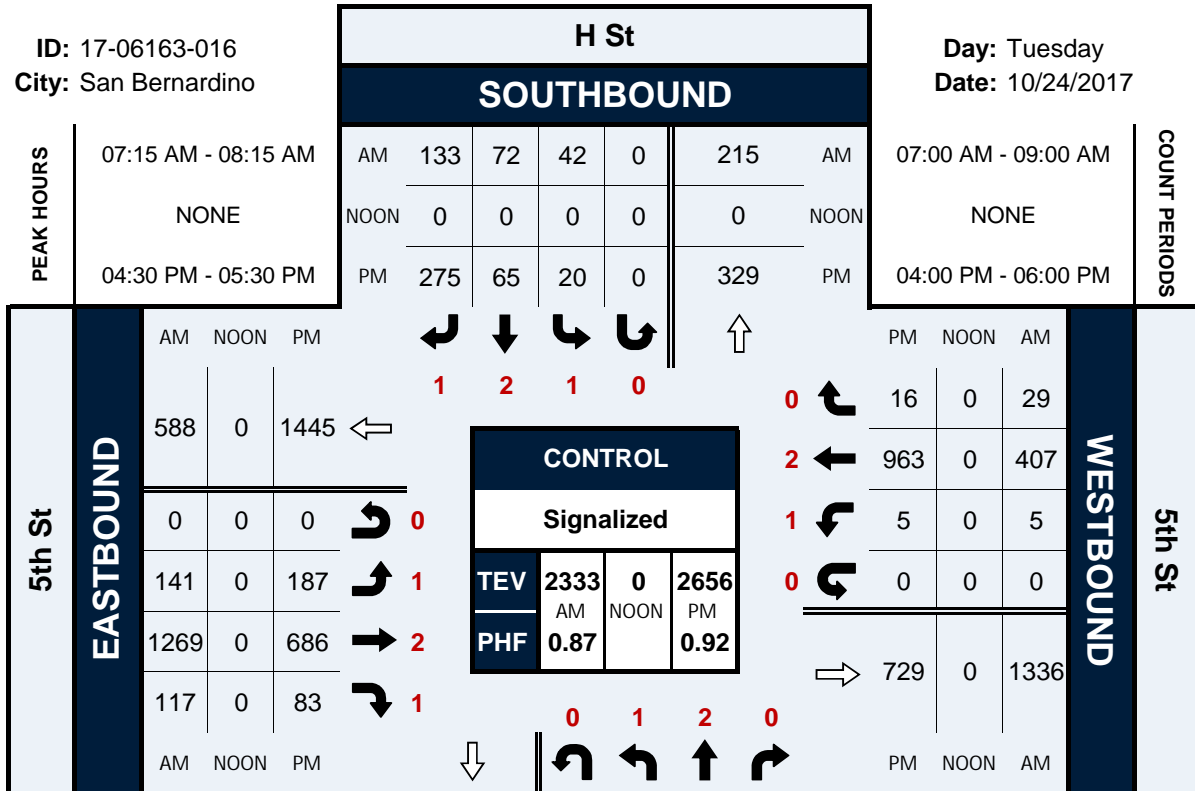
NS/EW Streets:	H St				H St				5th St				5th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	1 SR	0 SU	1 EL	2 ET	1 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
7:00 AM	12	10	2	0	1	11	28	0	13	236	9	0	2	92	4	0	420
7:15 AM	6	11	3	0	7	14	29	0	20	274	24	0	0	98	7	0	493
7:30 AM	9	12	9	0	17	27	36	0	28	295	28	0	2	99	8	0	570
7:45 AM	16	11	6	0	14	20	38	0	52	378	34	0	1	91	6	0	667
8:00 AM	17	11	7	0	4	11	30	0	41	322	31	0	2	119	8	0	603
8:15 AM	10	10	4	0	3	12	23	0	29	256	14	0	6	115	6	0	488
8:30 AM	15	21	4	0	5	15	39	0	22	245	20	0	2	129	7	0	524
8:45 AM	7	13	6	0	4	13	38	0	37	247	22	0	1	127	4	0	519
TOTAL VOLUMES :	92	99	41	0	55	123	261	0	242	2253	182	0	16	870	50	0	4284
APPROACH %'s :	39.66%	42.67%	17.67%	0.00%	12.53%	28.02%	59.45%	0.00%	9.04%	84.16%	6.80%	0.00%	1.71%	92.95%	5.34%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	48	45	25	0	42	72	133	0	141	1269	117	0	5	407	29	0	2333
PEAK HR FACTOR :	0.706	0.938	0.694	0.000	0.618	0.667	0.875	0.000	0.678	0.839	0.860	0.000	0.625	0.855	0.906	0.000	0.874
	0.843				0.772				0.823				0.855				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	1 SR	0 SU	1 EL	2 ET	1 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
4:00 PM	44	28	6	0	4	28	50	0	34	195	24	0	4	240	3	0	660
4:15 PM	42	33	10	0	3	12	56	0	43	180	19	0	2	241	2	0	643
4:30 PM	53	35	8	0	8	15	81	0	49	183	22	0	1	236	2	0	693
4:45 PM	36	22	5	0	6	11	52	0	46	159	20	0	1	214	4	0	576
5:00 PM	60	35	7	0	4	21	82	0	47	173	23	0	1	262	5	0	720
5:15 PM	58	34	3	0	2	18	60	0	45	171	18	0	2	251	5	0	667
5:30 PM	51	38	5	0	4	16	48	0	41	180	16	0	0	245	8	0	652
5:45 PM	30	30	3	0	4	12	36	0	45	169	16	0	0	191	10	0	546
TOTAL VOLUMES :	374	255	47	0	35	133	465	0	350	1410	158	0	11	1880	39	0	5157
APPROACH %'s :	55.33%	37.72%	6.95%	0.00%	5.53%	21.01%	73.46%	0.00%	18.25%	73.51%	8.24%	0.00%	0.57%	97.41%	2.02%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	207	126	23	0	20	65	275	0	187	686	83	0	5	963	16	0	2656
PEAK HR FACTOR :	0.863	0.900	0.719	0.000	0.625	0.774	0.838	0.000	0.954	0.937	0.902	0.000	0.625	0.919	0.800	0.000	0.922
	0.873				0.841				0.941				0.918				

H St & 5th St

Peak Hour Turning Movement Count

ID: 17-06163-016
City: San Bernardino

Day: Tuesday
Date: 10/24/2017



National Data & Surveying Services

Intersection Turning Movement Count

Location: H St & 4th St
 City: San Bernardino
 Control: 1-Way Stop (WB)

Project ID: 17-06163-017
 Date: 10/24/2017

Total

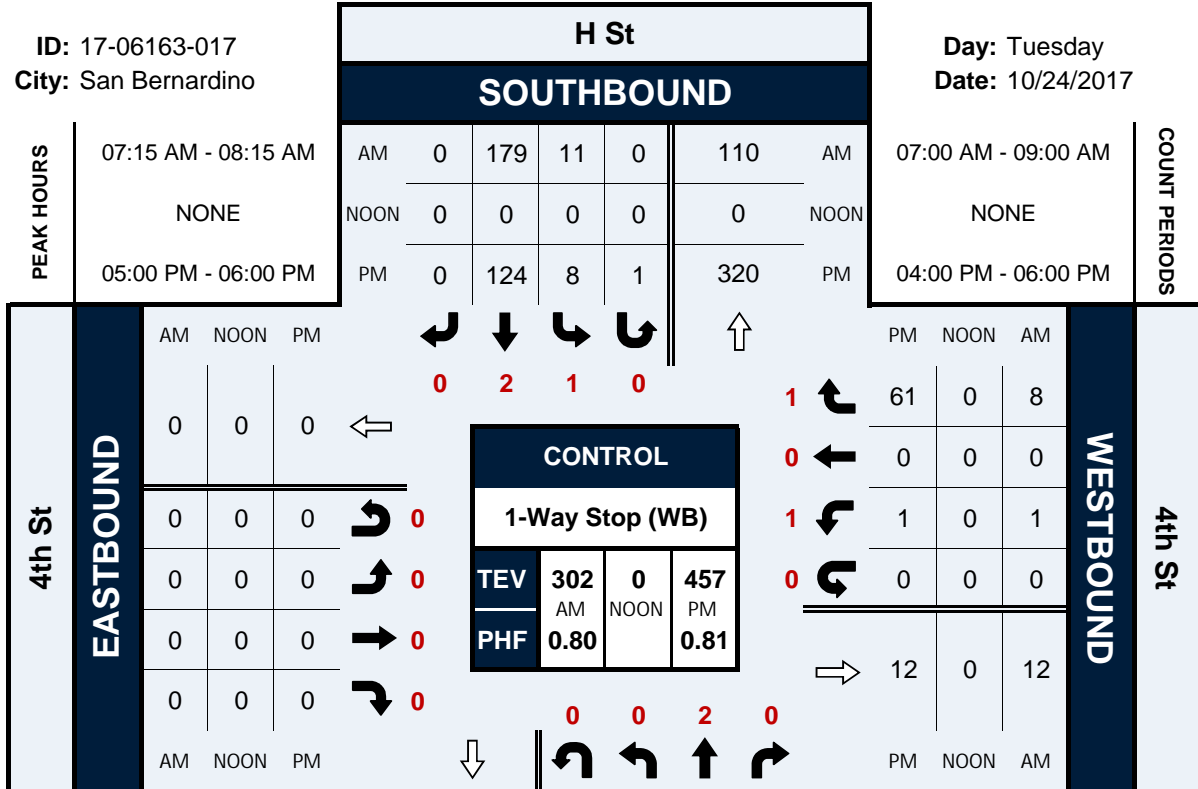
NS/EW Streets:	H St				H St				4th St				4th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	15	0	0	1	20	0	0	0	0	0	0	0	0	3	0	39
7:15 AM	0	21	1	0	2	35	0	0	0	0	0	0	0	0	0	0	59
7:30 AM	0	31	0	0	0	59	0	0	0	0	0	0	1	0	3	0	94
7:45 AM	0	27	0	0	6	51	0	0	0	0	0	0	0	0	1	0	85
8:00 AM	0	23	0	0	3	34	0	0	0	0	0	0	0	0	4	0	64
8:15 AM	0	26	0	0	1	29	0	0	0	0	0	0	0	0	3	0	59
8:30 AM	0	25	1	0	3	31	0	0	0	0	0	0	1	0	5	1	67
8:45 AM	0	25	0	0	2	32	0	0	0	0	0	0	0	0	1	0	60
TOTAL VOLUMES :	0	193	2	0	18	291	0	0	0	0	0	0	2	0	20	1	527
APPROACH %'s :	0.00%	98.97%	1.03%	0.00%	5.83%	94.17%	0.00%	0.00%					8.70%	0.00%	86.96%	4.35%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	102	1	0	11	179	0	0	0	0	0	0	1	0	8	0	302
PEAK HR FACTOR :	0.000	0.823	0.250	0.000	0.458	0.758	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.500	0.000	0.803
	0.831				0.805								0.563				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	60	3	0	1	51	0	0	0	0	0	0	1	0	10	0	126
4:15 PM	0	59	0	0	2	28	0	0	0	0	0	0	0	0	15	0	104
4:30 PM	0	65	2	0	0	39	0	0	0	0	0	0	0	0	16	0	122
4:45 PM	0	44	0	0	4	20	0	1	0	0	0	0	1	0	12	0	82
5:00 PM	0	67	1	0	1	40	0	0	0	0	0	0	0	0	32	0	141
5:15 PM	0	58	1	0	1	34	0	0	0	0	0	0	0	0	11	0	105
5:30 PM	0	74	1	0	3	30	0	1	0	0	0	0	1	0	9	0	119
5:45 PM	0	59	1	0	3	20	0	0	0	0	0	0	0	0	9	0	92
TOTAL VOLUMES :	0	486	9	0	15	262	0	2	0	0	0	0	3	0	114	0	891
APPROACH %'s :	0.00%	98.18%	1.82%	0.00%	5.38%	93.91%	0.00%	0.72%					2.56%	0.00%	97.44%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	258	4	0	8	124	0	1	0	0	0	0	1	0	61	0	457
PEAK HR FACTOR :	0.000	0.872	1.000	0.000	0.667	0.775	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.477	0.000	0.810
	0.873				0.811								0.484				

H St & 4th St

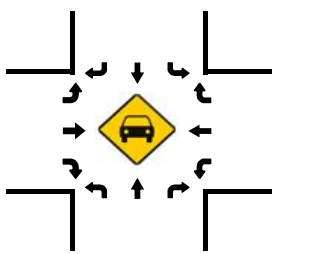
Peak Hour Turning Movement Count

ID: 17-06163-017
City: San Bernardino

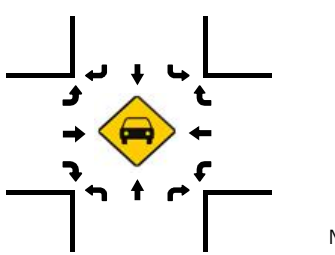
Day: Tuesday
Date: 10/24/2017



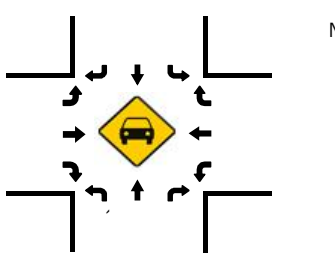
Total Vehicles (AM)



Total Vehicles (NOON)



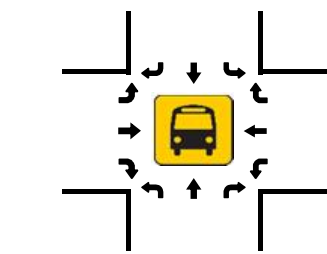
Total Vehicles (PM)



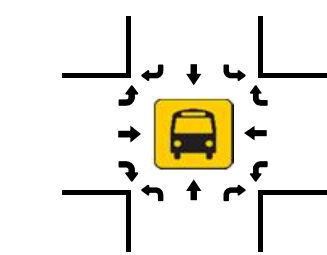
H St	NORTHBOUND				
	PM	NOON	AM	PM	NOON
PM	125	0	0	258	4
NOON	0	0	0	0	0
AM	180	0	0	102	1

H St

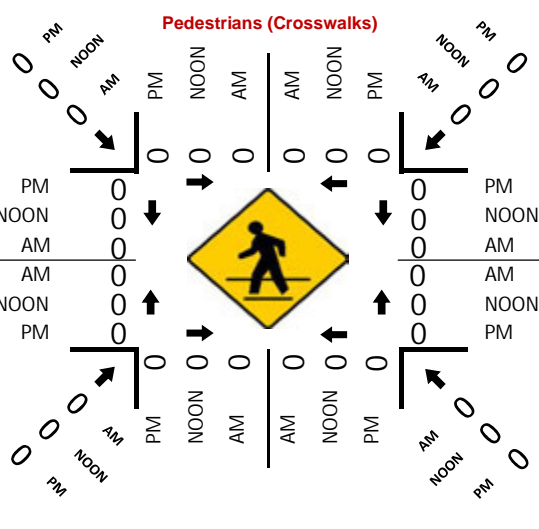
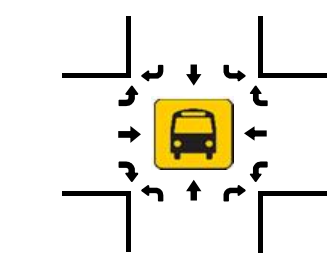
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: H St & 3rd St
 City: San Bernardino
 Control: Signalized

Project ID: 17-6163-018
 Date: 10/24/2017

Total

NS/EW Streets:	H St				H St				3rd St				3rd St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
7:00 AM	5	24	6	0	3	12	4	0	0	50	25	0	5	7	0	0	141
7:15 AM	7	13	6	0	3	30	1	0	2	67	47	0	9	4	0	0	189
7:30 AM	19	29	8	0	1	45	2	0	1	50	55	0	4	6	0	0	220
7:45 AM	9	27	9	0	9	43	5	0	3	85	54	0	6	9	2	0	261
8:00 AM	8	25	6	0	7	20	1	0	6	96	24	0	8	6	0	0	207
8:15 AM	10	20	9	0	3	19	7	0	0	72	29	0	8	12	0	0	189
8:30 AM	12	22	8	0	3	30	4	0	3	43	19	0	14	8	0	0	166
8:45 AM	7	26	12	0	2	24	2	0	5	36	18	0	18	10	1	0	161
TOTAL VOLUMES :	77	186	64	0	31	223	26	0	20	499	271	0	72	62	3	0	1534
APPROACH %'s :	23.55%	56.88%	19.57%	0.00%	11.07%	79.64%	9.29%	0.00%	2.53%	63.16%	34.30%	0.00%	52.55%	45.26%	2.19%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	43	94	29	0	20	138	9	0	12	298	180	0	27	25	2	0	877
PEAK HR FACTOR :	0.566	0.810	0.806	0.000	0.556	0.767	0.450	0.000	0.500	0.776	0.818	0.000	0.750	0.694	0.250	0.000	0.840
	0.741				0.732				0.863				0.794				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
4:00 PM	30	55	15	0	2	37	14	0	4	21	15	0	21	56	1	0	271
4:15 PM	29	54	14	0	2	30	6	0	6	13	14	0	24	51	1	0	244
4:30 PM	30	58	14	0	1	29	6	0	2	17	12	0	10	98	1	0	278
4:45 PM	26	47	15	0	2	15	9	0	4	17	11	0	14	64	0	0	224
5:00 PM	27	50	16	0	0	22	8	0	7	17	11	0	16	100	3	0	277
5:15 PM	32	61	12	0	0	32	5	0	2	27	10	0	13	71	0	0	265
5:30 PM	34	67	13	0	2	23	6	0	7	10	12	0	16	38	3	0	231
5:45 PM	11	54	18	0	2	19	3	0	4	7	11	0	15	28	1	0	173
TOTAL VOLUMES :	219	446	117	0	11	207	57	0	36	129	96	0	129	506	10	0	1963
APPROACH %'s :	28.01%	57.03%	14.96%	0.00%	4.00%	75.27%	20.73%	0.00%	13.79%	49.43%	36.78%	0.00%	20.00%	78.45%	1.55%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	115	216	57	0	3	98	28	0	15	78	44	0	53	333	4	0	1044
PEAK HR FACTOR :	0.898	0.885	0.891	0.000	0.375	0.766	0.778	0.000	0.536	0.722	0.917	0.000	0.828	0.833	0.333	0.000	0.939
	0.924				0.872				0.878				0.819				

National Data & Surveying Services

Intersection Turning Movement Count

Location: H St & 3rd St
 City: San Bernardino
 Control: Signalized

Project ID: 17-6163-018
 Date: 10/24/2017

2axle

NS/EW Streets:	H St				H St				3rd St				3rd St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
7:00 AM	1	4	0	0	0	0	0	0	0	0	1	0	0	0	0	0	6
7:15 AM	1	0	0	0	0	2	0	0	0	1	0	0	2	0	0	0	6
7:30 AM	0	1	1	0	0	2	0	0	0	0	2	0	0	0	0	0	6
7:45 AM	0	2	0	0	0	1	0	0	1	0	1	0	1	0	0	0	6
8:00 AM	1	1	0	0	0	2	0	0	2	2	0	0	0	0	0	0	8
8:15 AM	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	3
8:30 AM	2	2	1	0	0	3	1	0	0	0	0	0	0	1	0	0	10
8:45 AM	1	2	0	0	0	2	0	0	1	1	0	0	0	0	0	0	7
TOTAL VOLUMES :	6	13	2	0	0	13	1	0	4	4	4	0	4	1	0	0	52
APPROACH %'s :	28.57%	61.90%	9.52%	0.00%	0.00%	92.86%	7.14%	0.00%	33.33%	33.33%	33.33%	0.00%	80.00%	20.00%	0.00%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	2	4	1	0	0	7	0	0	3	3	3	0	3	0	0	0	26
PEAK HR FACTOR :	0.500	0.500	0.250	0.000	0.000	0.875	0.000	0.000	0.375	0.375	0.375	0.000	0.375	0.000	0.000	0.000	0.813
	0.875				0.875				0.563				0.375				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU		
4:00 PM	0	2	0	0	0	4	0	0	0	0	0	0	1	1	0	0	8
4:15 PM	0	2	0	0	0	2	0	0	0	0	0	0	2	0	0	0	6
4:30 PM	1	1	0	0	0	2	0	0	0	1	2	0	1	2	0	0	10
4:45 PM	0	1	1	0	0	1	1	0	0	1	0	0	0	1	0	0	6
5:00 PM	0	1	1	0	0	1	0	0	0	1	0	0	2	0	0	0	6
5:15 PM	0	2	0	0	0	2	0	0	0	0	1	0	0	0	0	0	5
5:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2
5:45 PM	0	3	0	0	0	2	0	0	0	0	0	0	0	1	0	0	6
TOTAL VOLUMES :	1	13	2	0	0	14	1	0	0	3	3	0	7	5	0	0	49
APPROACH %'s :	6.25%	81.25%	12.50%	0.00%	0.00%	93.33%	6.67%	0.00%	0.00%	50.00%	50.00%	0.00%	58.33%	41.67%	0.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	1	5	2	0	0	6	1	0	0	3	3	0	3	3	0	0	27
PEAK HR FACTOR :	0.25	0.625	0.500	0.000	0.000	0.750	0.250	0.000	0.000	0.750	0.375	0.000	0.375	0.375	0.000	0.000	0.675
	1.000				0.875				0.500				0.500				

National Data & Surveying Services

Intersection Turning Movement Count

Location: H St & 3rd St
 City: San Bernardino
 Control: Signalized

Project ID: 17-6163-018
 Date: 10/24/2017

4axle

NS/EW Streets:	H St				H St				3rd St				3rd St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	3
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL 3	NT 0	NR 0	NU 0	SL 0	ST 0	SR 0	SU 0	EL 0	ET 0	ER 2	EU 0	WL 0	WT 0	WR 0	WU 0	TOTAL 5
APPROACH %'s :	100.00%	0.00%	0.00%	0.00%					0.00%	0.00%	100.00%	0.00%					
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	4
PEAK HR FACTOR :	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.333
	0.500								0.250								

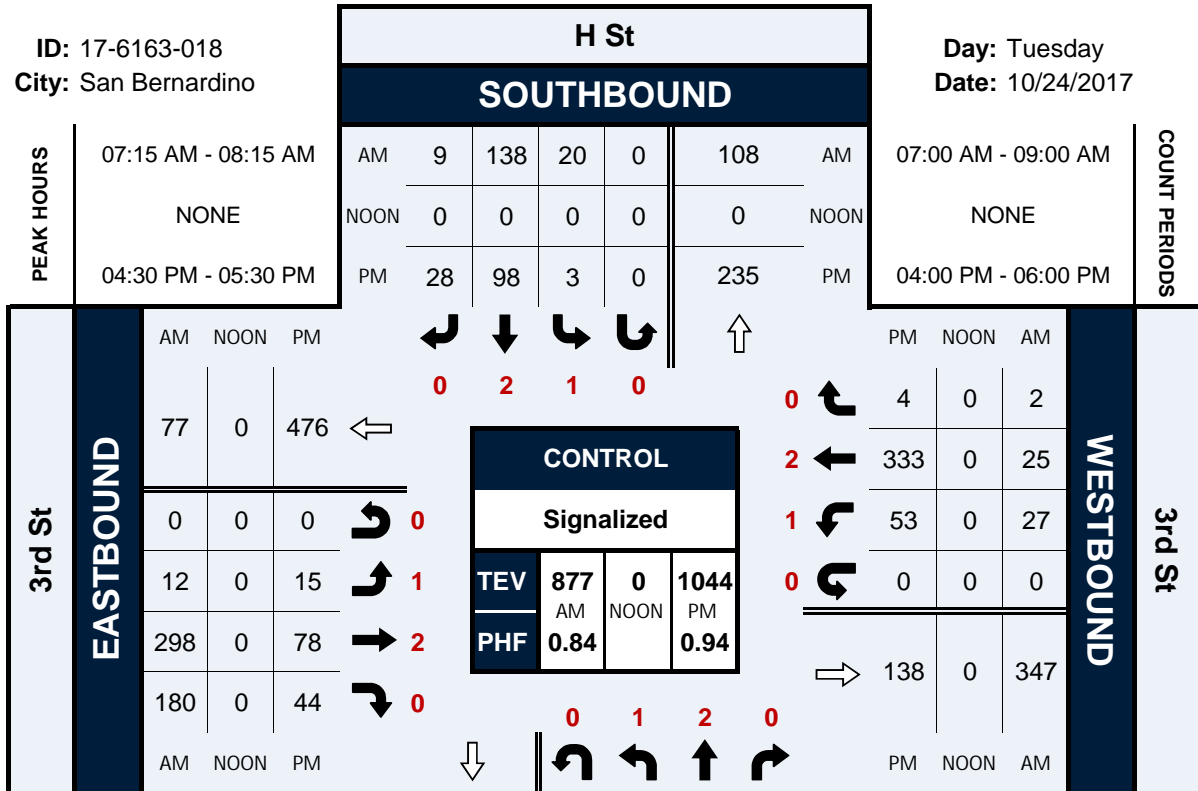
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	TOTAL	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
5:45 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES :	NL 1	NT 0	NR 0	NU 0	SL 1	ST 0	SR 1	SU 0	EL 0	ET 0	ER 0	EU 0	WL 0	WT 0	WR 1	WU 0	TOTAL 4
APPROACH %'s :	100.00%	0.00%	0.00%	0.00%	50.00%	0.00%	50.00%	0.00%					0.00%	0.00%	100.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
					0.250												

H St & 3rd St

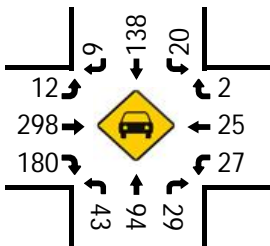
Peak Hour Turning Movement Count

ID: 17-6163-018
City: San Bernardino

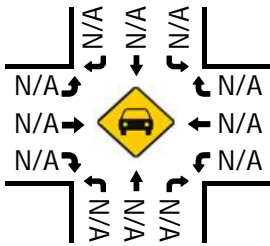
Day: Tuesday
Date: 10/24/2017



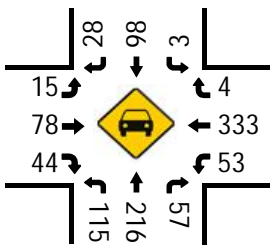
Total Vehicles (AM)



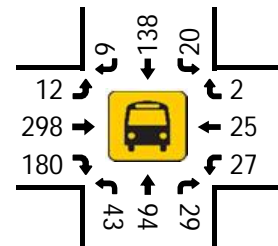
Total Vehicles (NOON)



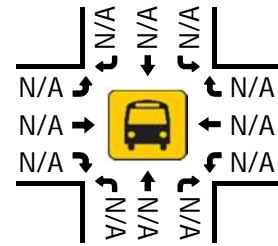
Total Vehicles (PM)



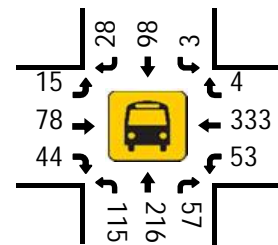
Total Vehicles (AM)



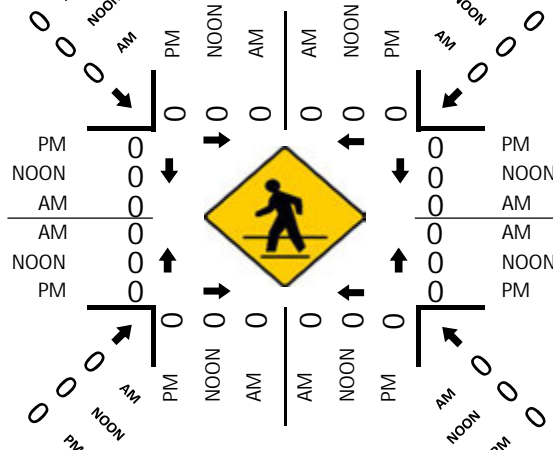
Total Vehicles (NOON)



Total Vehicles (PM)



Pedestrians (Crosswalks)



National Data & Surveying Services

Intersection Turning Movement Count

Location: G St & 2nd St
 City: San Bernardino
 Control: Signalized

Project ID: 17-06163-019
 Date: 10/24/2017

Total

NS/EW Streets:	G St				G St				2nd St				2nd St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	1 EL	3 ET	0 ER	0 EU	1 WL	3 WT	0 WR	0 WU	
7:00 AM	7	14	15	0	26	21	3	0	8	210	39	0	9	65	7	1	425
7:15 AM	35	28	9	0	38	42	4	0	9	283	52	0	4	62	8	1	575
7:30 AM	38	37	19	1	49	45	4	0	8	298	65	0	15	93	8	3	683
7:45 AM	28	23	11	0	48	42	4	0	7	262	81	0	9	79	15	1	610
8:00 AM	18	25	13	0	23	25	3	0	6	251	41	0	14	66	7	1	493
8:15 AM	22	23	15	0	30	24	2	0	10	251	36	1	8	70	12	1	505
8:30 AM	17	22	15	0	32	32	2	0	13	240	32	0	20	86	17	1	529
8:45 AM	21	24	12	0	20	33	7	1	12	199	34	2	7	105	8	3	488
TOTAL VOLUMES :	186	196	109	1	266	264	29	1	73	1994	380	3	86	626	82	12	4308
APPROACH %'s :	37.80%	39.84%	22.15%	0.20%	47.50%	47.14%	5.18%	0.18%	2.98%	81.39%	15.51%	0.12%	10.67%	77.67%	10.17%	1.49%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	119	113	52	1	158	154	15	0	30	1094	239	0	42	300	38	6	2361
PEAK HR FACTOR :	0.783	0.764	0.684	0.250	0.806	0.856	0.938	0.000	0.833	0.918	0.738	0.000	0.700	0.806	0.633	0.500	0.864
	0.750				0.834				0.918				0.811				

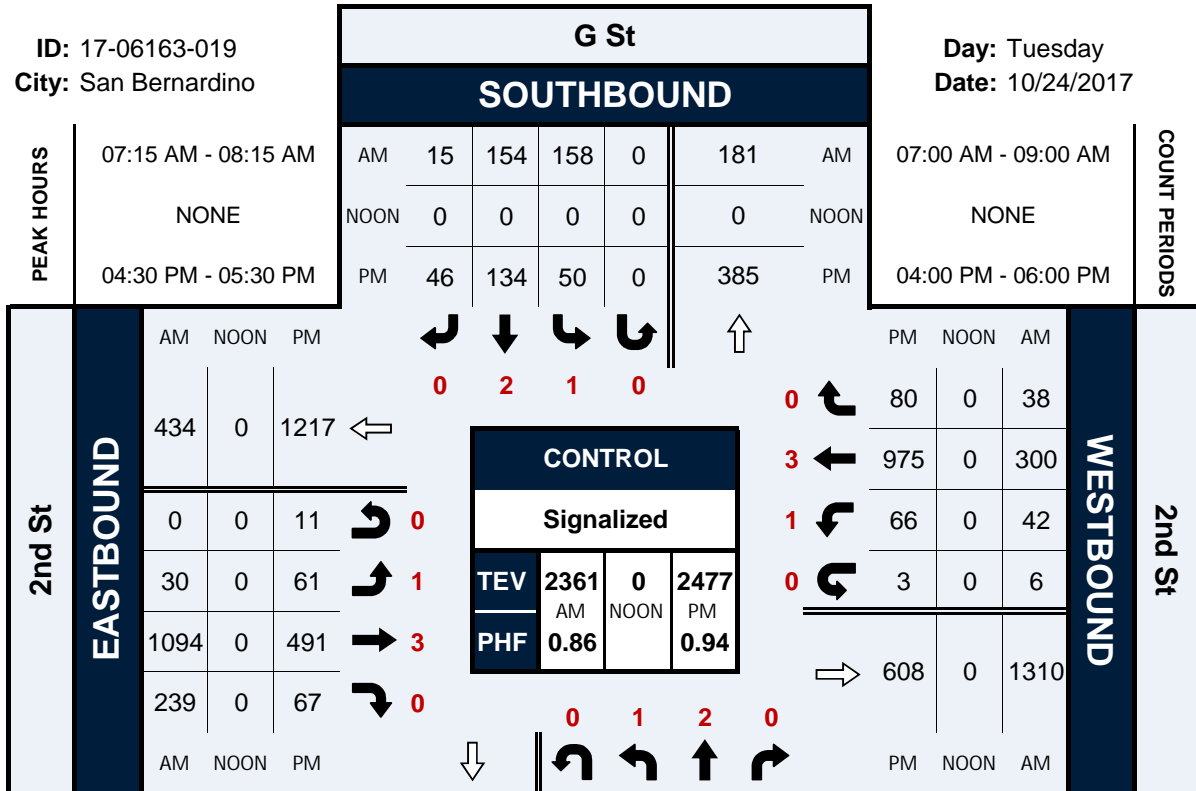
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	1 EL	3 ET	0 ER	0 EU	1 WL	3 WT	0 WR	0 WU	
4:00 PM	65	77	15	0	30	32	15	0	11	133	24	2	14	199	30	2	649
4:15 PM	45	54	14	0	26	40	14	0	6	110	16	6	17	194	21	1	564
4:30 PM	47	66	17	0	13	42	11	0	20	124	18	3	19	261	16	2	659
4:45 PM	42	44	11	0	11	23	10	0	18	131	17	2	19	200	25	0	553
5:00 PM	52	63	19	0	14	24	8	0	12	108	16	4	16	298	17	0	651
5:15 PM	44	71	17	0	12	45	17	0	11	128	16	2	12	216	22	1	614
5:30 PM	41	64	13	0	21	23	13	0	18	95	15	2	17	185	23	1	531
5:45 PM	43	44	11	0	14	23	11	0	18	101	10	2	14	177	16	0	484
TOTAL VOLUMES :	379	483	117	0	141	252	99	0	114	930	132	23	128	1730	170	7	4705
APPROACH %'s :	38.71%	49.34%	11.95%	0.00%	28.66%	51.22%	20.12%	0.00%	9.51%	77.56%	11.01%	1.92%	6.29%	85.01%	8.35%	0.34%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	185	244	64	0	50	134	46	0	61	491	67	11	66	975	80	3	2477
PEAK HR FACTOR :	0.889	0.859	0.842	0.000	0.893	0.744	0.676	0.000	0.763	0.937	0.931	0.688	0.868	0.818	0.800	0.375	0.940
	0.920				0.777				0.938				0.849				

G St & 2nd St

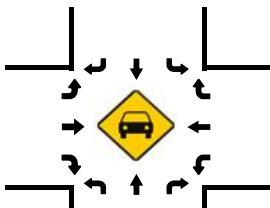
Peak Hour Turning Movement Count

ID: 17-06163-019
City: San Bernardino

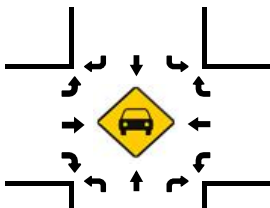
Day: Tuesday
Date: 10/24/2017



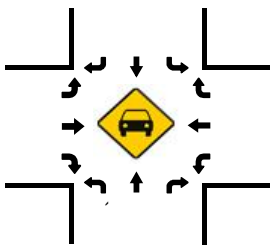
Total Vehicles (AM)



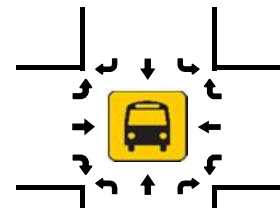
Total Vehicles (NOON)



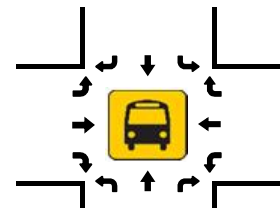
Total Vehicles (PM)



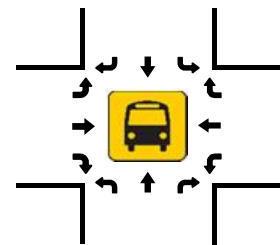
Total Vehicles (AM)



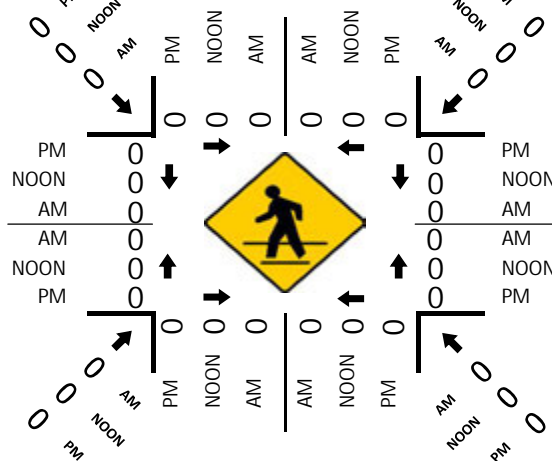
Total Vehicles (NOON)



Total Vehicles (PM)



Pedestrians (Crosswalks)



National Data & Surveying Services

Intersection Turning Movement Count

Location: G St & Rialto Ave
 City: San Bernardino
 Control: Signalized

Project ID: 17-6163-020
 Date: 10/24/2017

Total

NS/EW Streets:	G St				G St				Rialto Ave				Rialto Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	4	6	0	22	12	13	0	13	65	0	0	4	39	12	0	190
7:15 AM	0	12	6	0	31	30	8	0	16	90	4	0	7	56	8	0	268
7:30 AM	0	9	2	0	37	22	10	0	36	115	4	0	6	63	16	0	320
7:45 AM	0	9	7	0	50	42	5	0	9	112	5	0	12	56	22	0	329
8:00 AM	1	9	4	0	31	15	1	0	7	72	1	0	7	55	19	0	222
8:15 AM	1	13	6	0	15	22	3	0	12	70	3	0	9	36	14	0	204
8:30 AM	1	10	5	0	17	23	10	0	9	41	5	0	10	39	22	0	192
8:45 AM	1	15	7	0	20	22	7	0	12	40	0	0	10	57	15	0	206
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	4	81	43	0	223	188	57	0	114	605	22	0	65	401	128	0	1931
	3.13%	63.28%	33.59%	0.00%	47.65%	40.17%	12.18%	0.00%	15.38%	81.65%	2.97%	0.00%	10.94%	67.51%	21.55%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	1	39	19	0	149	109	24	0	68	389	14	0	32	230	65	0	1139
PEAK HR FACTOR :	0.250	0.813	0.679	0.000	0.745	0.649	0.600	0.000	0.472	0.846	0.700	0.000	0.667	0.913	0.739	0.000	0.866
	0.819				0.727				0.760				0.908				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	11	36	9	0	12	27	19	0	23	60	3	0	8	101	41	0	350
4:15 PM	3	41	14	0	21	27	13	0	12	66	1	0	7	76	25	0	306
4:30 PM	5	49	7	0	19	24	12	0	9	75	6	0	8	106	40	0	360
4:45 PM	4	18	6	0	14	18	11	0	14	73	5	0	12	103	25	0	303
5:00 PM	5	40	13	0	10	22	11	0	22	66	4	0	7	113	52	0	365
5:15 PM	4	43	5	0	17	24	14	0	14	75	4	0	9	96	33	0	338
5:30 PM	3	38	15	0	13	14	10	0	22	80	6	0	3	82	35	0	321
5:45 PM	5	35	9	0	16	6	12	0	22	75	6	0	7	81	28	0	302
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	40	300	78	0	122	162	102	0	138	570	35	0	61	758	279	0	2645
	9.57%	71.77%	18.66%	0.00%	31.61%	41.97%	26.42%	0.00%	18.57%	76.72%	4.71%	0.00%	5.56%	69.03%	25.41%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	18	150	31	0	60	88	48	0	59	289	19	0	36	418	150	0	1366
PEAK HR FACTOR :	0.900	0.765	0.596	0.000	0.789	0.917	0.857	0.000	0.670	0.963	0.792	0.000	0.750	0.925	0.721	0.000	0.936
	0.816				0.891				0.987				0.878				

National Data & Surveying Services

Intersection Turning Movement Count

Location: G St & Rialto Ave
 City: San Bernardino
 Control: Signalized

Project ID: 17-6163-020
 Date: 10/24/2017

2axle

NS/EW Streets:	G St				G St				Rialto Ave				Rialto Ave					
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
7:00 AM	0	1	1	0	2	0	0	0	0	1	1	0	0	1	0	0	0	6
7:15 AM	0	1	0	0	4	1	0	0	0	1	0	0	0	0	3	1	0	11
7:30 AM	0	1	0	0	2	1	0	0	0	2	1	0	0	0	0	1	0	8
7:45 AM	0	0	1	0	4	1	0	0	0	0	1	0	0	1	0	2	0	10
8:00 AM	0	0	0	0	3	0	0	0	0	0	2	0	0	0	1	1	0	7
8:15 AM	0	1	1	1	2	0	1	0	0	1	2	0	0	1	1	2	0	13
8:30 AM	0	1	1	0	4	0	0	0	0	0	0	0	0	0	1	3	0	10
8:45 AM	1	0	1	0	2	1	0	0	0	0	1	0	0	1	2	2	0	11
TOTAL VOLUMES :	1	5	5	1	23	4	1	0	0	4	8	0	0	4	8	12	0	76
APPROACH %'s :	8.33%	41.67%	41.67%	8.33%	82.14%	14.29%	3.57%	0.00%	0.00%	33.33%	66.67%	0.00%	0.00%	16.67%	33.33%	50.00%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL	
PEAK HR VOL :	0	2	1	0	13	3	0	0	0	3	4	0	0	1	4	5	0	36
PEAK HR FACTOR :	0.000	0.500	0.250	0.000	0.813	0.750	0.000	0.000	0.000	0.375	0.500	0.000	0.000	0.250	0.333	0.625	0.000	0.818
	0.750				0.800				0.583				0.625					
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
4:00 PM	1	1	2	0	4	0	1	0	0	0	1	0	0	0	1	1	0	12
4:15 PM	0	0	0	0	3	0	0	0	0	0	2	0	0	0	0	2	0	7
4:30 PM	0	0	1	0	4	0	0	0	0	0	3	0	0	1	0	3	0	12
4:45 PM	0	0	1	0	2	0	0	0	0	1	2	0	0	1	0	0	0	7
5:00 PM	0	1	2	0	2	1	0	0	0	0	1	1	0	0	0	4	0	12
5:15 PM	0	0	0	0	2	0	0	0	0	0	1	0	0	1	3	1	0	8
5:30 PM	0	0	1	0	5	0	0	0	0	0	1	0	0	0	0	3	0	10
5:45 PM	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0	1	0	4
TOTAL VOLUMES :	1	2	8	0	23	1	1	0	0	1	12	1	0	3	4	15	0	72
APPROACH %'s :	9.09%	18.18%	72.73%	0.00%	92.00%	4.00%	4.00%	0.00%	0.00%	7.14%	85.71%	7.14%	0.00%	13.64%	18.18%	68.18%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL	
PEAK HR VOL :	0	1	4	0	10	1	0	0	0	1	7	1	0	3	3	8	0	39
PEAK HR FACTOR :	0.00	0.250	0.500	0.000	0.625	0.250	0.000	0.000	0.000	0.250	0.583	0.250	0.000	0.750	0.250	0.500	0.000	0.813
	0.417				0.688				0.750				0.700					

National Data & Surveying Services

Intersection Turning Movement Count

Location: G St & Rialto Ave
 City: San Bernardino
 Control: Signalized

Project ID: 17-6163-020
 Date: 10/24/2017

4axle

NS/EW Streets:	G St				G St				Rialto Ave				Rialto Ave					
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	2
7:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	3
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL	
APPROACH %'s :	0	0	0	0	1	0	1	0	1	2	0	0	0	0	2	0	7	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL	
PEAK HR VOL :	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	3	
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.375	
					0.250				0.250				0.250					
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
4:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	
4:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
5:45 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL	
APPROACH %'s :	0	1	0	0	0	0	0	0	1	3	0	0	0	4	0	0	9	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL	
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3	
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.375	
					0.250				0.250				0.250					

National Data & Surveying Services

Intersection Turning Movement Count

Location: G St & Rialto Ave
 City: San Bernardino
 Control: Signalized

Project ID: 17-6163-020
 Date: 10/24/2017

3axle

NS/EW Streets:	G St				G St				Rialto Ave				Rialto Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
8:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0
TOTAL VOLUMES :	0	0	0	0	1	0	1	0	1	3	0	0	0	2	0	0	0
APPROACH %'s :					50.00%	0.00%	50.00%	0.00%	25.00%	75.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%
PEAK HR :	07:15 AM - 08:15 AM																
PEAK HR VOL :	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000
					0.250				0.250								0.375

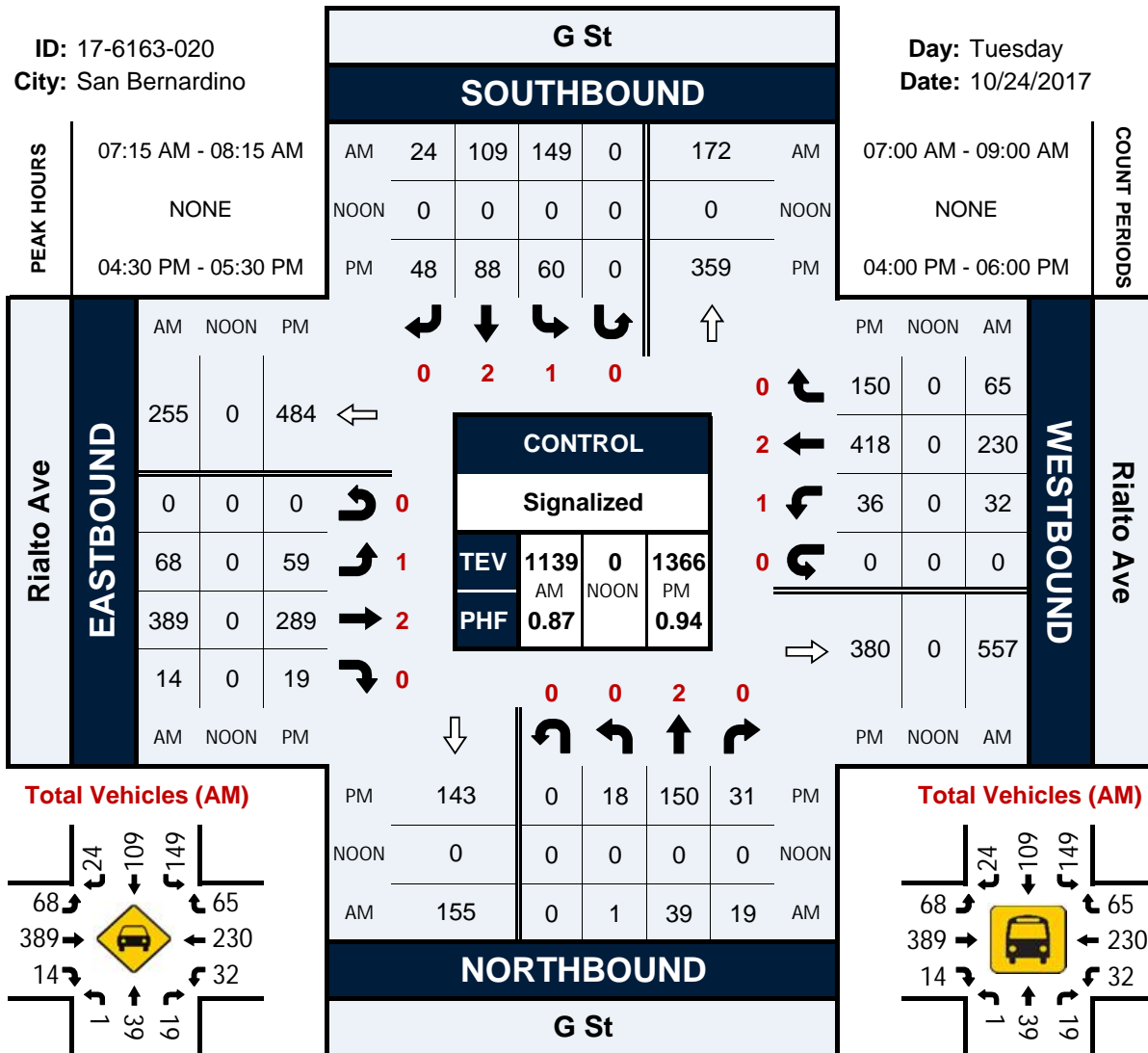
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	2	0	0	1	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	
5:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
5:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	
TOTAL VOLUMES :	1	0	0	0	1	0	0	0	0	2	2	0	0	6	0	0	
APPROACH %'s :	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	50.00%	50.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																
PEAK HR VOL :	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	
PEAK HR FACTOR :	0.25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	
													0.250				0.375

G St & Rialto Ave

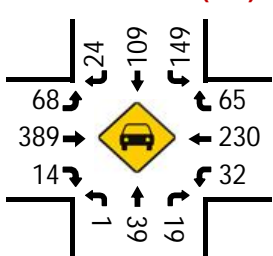
Peak Hour Turning Movement Count

ID: 17-6163-020
City: San Bernardino

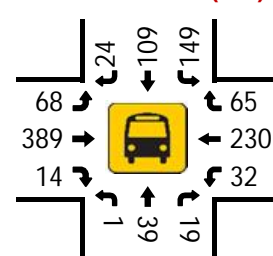
Day: Tuesday
Date: 10/24/2017



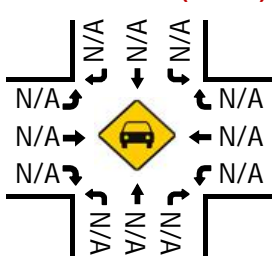
Total Vehicles (AM)



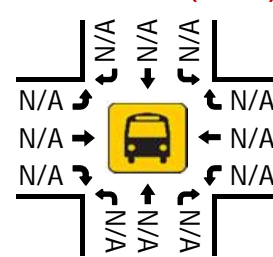
Total Vehicles (AM)



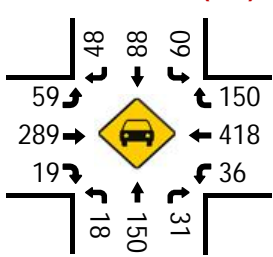
Total Vehicles (NOON)



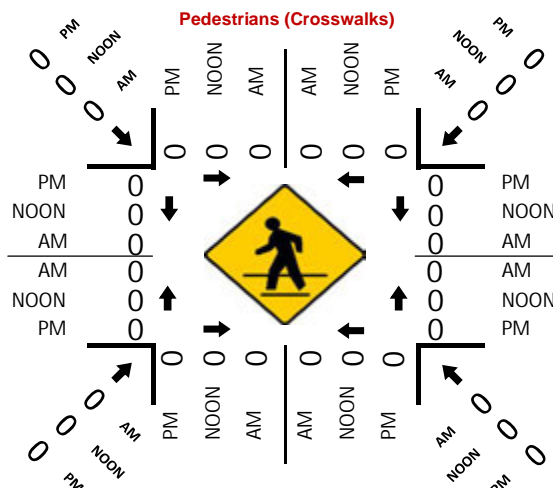
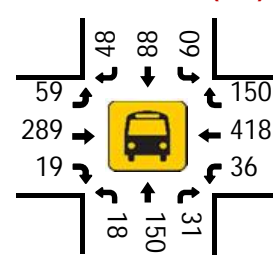
Total Vehicles (NOON)



Total Vehicles (PM)



Total Vehicles (PM)



Appendix B: Level of Service Worksheets

Existing (2017) Conditions

AM PEAK HOUR

Intersection

Int Delay, s/veh 14.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑	↑
Traffic Vol, veh/h	555	149	237	435	89	228
Future Vol, veh/h	555	149	237	435	89	228
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	225	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	603	162	258	473	97	248

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	765
Stage 1	-	-	684
Stage 2	-	-	752
Critical Hdwy	-	-	4.1
Critical Hdwy Stg 1	-	-	5.8
Critical Hdwy Stg 2	-	-	5.8
Follow-up Hdwy	-	-	2.2
Pot Cap-1 Maneuver	-	-	857
Stage 1	-	-	468
Stage 2	-	-	432
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	857
Mov Cap-2 Maneuver	-	-	~ 89
Stage 1	-	-	468
Stage 2	-	-	302

Approach	EB	WB	NB
HCM Control Delay, s	0	3.9	68.6
HCM LOS			F























Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	89	621	-	-	857	-
HCM Lane V/C Ratio	1.087	0.399	-	-	0.301	-
HCM Control Delay (s)	207	14.6	-	-	11	-
HCM Lane LOS	F	B	-	-	B	-
HCM 95th %tile Q(veh)	6.5	1.9	-	-	1.3	-

Notes

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

HCM 2010 Signalized Intersection Summary
2: Rialto Avenue & Rancho Ave

Existing (2017)
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	354	129	64	201	70	65	169	166	101	216	42
Future Volume (veh/h)	38	354	129	64	201	70	65	169	166	101	216	42
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	40	373	136	67	212	74	68	178	175	106	227	44
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	402	781	281	303	794	269	586	918	781	589	748	145
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.51	0.51	0.51	0.51	0.51	0.51
Sat Flow, veh/h	1049	2466	887	855	2509	851	1063	1800	1530	986	1466	284
Grp Volume(v), veh/h	40	257	252	67	143	143	68	178	175	106	0	271
Grp Sat Flow(s),veh/h/ln	1049	1710	1643	855	1710	1650	1063	1800	1530	986	0	1750
Q Serve(g_s), s	1.5	6.3	6.4	3.6	3.2	3.4	2.1	2.8	3.3	3.4	0.0	4.7
Cycle Q Clear(g_c), s	4.9	6.3	6.4	10.0	3.2	3.4	6.7	2.8	3.3	6.2	0.0	4.7
Prop In Lane	1.00		0.54	1.00		0.52	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	402	541	520	303	541	522	586	918	781	589	0	893
V/C Ratio(X)	0.10	0.47	0.48	0.22	0.26	0.27	0.12	0.19	0.22	0.18	0.00	0.30
Avail Cap(c_a), veh/h	565	807	775	436	807	778	586	918	781	589	0	893
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	0.00	1.00
Uniform Delay (d), s/veh	15.1	14.3	14.3	18.4	13.2	13.3	9.3	6.9	7.0	8.6	0.0	7.4
Incr Delay (d2), s/veh	0.1	0.6	0.7	0.4	0.3	0.3	0.4	0.5	0.7	0.7	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	3.0	3.0	0.9	1.5	1.6	0.7	1.5	1.5	1.0	0.0	2.4
LnGrp Delay(d),s/veh	15.2	14.9	15.0	18.7	13.5	13.6	9.7	7.4	7.7	9.3	0.0	8.2
LnGrp LOS	B	B	B	B	B	B	A	A	A	A		A
Approach Vol, veh/h		549			353			421				377
Approach Delay, s/veh		15.0			14.5			7.9				8.5
Approach LOS		B			B			A				A
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		31.0		20.9		31.0		20.9				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		26.5		24.5		26.5		24.5				
Max Q Clear Time (g_c+I1), s		8.7		8.4		8.2		12.0				
Green Ext Time (p_c), s		3.9		5.0		4.0		4.4				
Intersection Summary												
HCM 2010 Ctrl Delay				11.7								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
3: 4th St & Foothill Blvd

Existing (2017)
AM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑		↵	↑↑	↵			
Traffic Volume (veh/h)	702	81	49	588	84	24		
Future Volume (veh/h)	702	81	49	588	84	24		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1800	1800	1700	1800	1800	1800		
Adj Flow Rate, veh/h	755	87	53	632	90	26		
Adj No. of Lanes	2	0	1	2	0	0		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	0	0	0	0	0	0		
Cap, veh/h	1476	170	335	1633	443	128		
Arrive On Green	0.48	0.48	0.48	0.48	0.35	0.35		
Sat Flow, veh/h	3181	356	627	3510	1285	371		
Grp Volume(v), veh/h	418	424	53	632	117	0		
Grp Sat Flow(s),veh/h/ln	1710	1737	627	1710	1670	0		
Q Serve(g_s), s	8.6	8.6	3.2	6.0	2.5	0.0		
Cycle Q Clear(g_c), s	8.6	8.6	11.8	6.0	2.5	0.0		
Prop In Lane		0.20	1.00		0.77	0.22		
Lane Grp Cap(c), veh/h	816	829	335	1633	576	0		
V/C Ratio(X)	0.51	0.51	0.16	0.39	0.20	0.00		
Avail Cap(c_a), veh/h	1130	1148	450	2259	576	0		
HCM Platoon Ratio	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	0.00		
Uniform Delay (d), s/veh	9.2	9.2	13.2	8.5	11.7	0.0		
Incr Delay (d2), s/veh	0.5	0.5	0.2	0.2	0.8	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	4.1	4.1	0.6	2.8	1.3	0.0		
LnGrp Delay(d),s/veh	9.7	9.7	13.5	8.6	12.5	0.0		
LnGrp LOS	A	A	B	A	B			
Approach Vol, veh/h	842			685	117			
Approach Delay, s/veh	9.7			9.0	12.5			
Approach LOS	A			A	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		22.0		28.7				28.7
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		17.5		33.5				33.5
Max Q Clear Time (g_c+l1), s		4.5		10.6				13.8
Green Ext Time (p_c), s		0.2		11.3				10.4
Intersection Summary								
HCM 2010 Ctrl Delay			9.6					
HCM 2010 LOS			A					
Notes								

HCM 2010 Signalized Intersection Summary
 4: 5th Street & Medical Center Dr

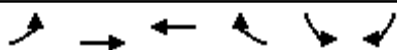
Existing (2017)
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	113	561	7	4	408	148	1	5	7	95	9	126
Future Volume (veh/h)	113	561	7	4	408	148	1	5	7	95	9	126
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	120	597	7	4	434	157	1	5	7	101	10	134
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	255	1343	16	17	596	214	87	246	302	581	51	480
Arrive On Green	0.16	0.39	0.39	0.01	0.24	0.24	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	1619	3462	41	1619	2469	885	39	713	877	1308	149	1392
Grp Volume(v), veh/h	120	295	309	4	299	292	13	0	0	111	0	134
Grp Sat Flow(s),veh/h/ln	1619	1710	1793	1619	1710	1644	1629	0	0	1457	0	1392
Q Serve(g_s), s	3.5	6.7	6.7	0.1	8.5	8.6	0.0	0.0	0.0	2.5	0.0	3.7
Cycle Q Clear(g_c), s	3.5	6.7	6.7	0.1	8.5	8.6	0.3	0.0	0.0	2.8	0.0	3.7
Prop In Lane	1.00		0.02	1.00		0.54	0.08		0.54	0.91		1.00
Lane Grp Cap(c), veh/h	255	663	695	17	413	397	635	0	0	633	0	480
V/C Ratio(X)	0.47	0.44	0.44	0.23	0.73	0.73	0.02	0.00	0.00	0.18	0.00	0.28
Avail Cap(c_a), veh/h	320	663	695	308	586	563	635	0	0	633	0	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(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.2	11.9	11.9	25.8	18.3	18.4	11.4	0.0	0.0	12.2	0.0	12.5
Incr Delay (d2), s/veh	1.4	0.5	0.4	6.5	2.6	3.0	0.1	0.0	0.0	0.6	0.0	1.4
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	1.7	3.2	3.4	0.1	4.3	4.2	0.1	0.0	0.0	1.2	0.0	1.6
LnGrp Delay(d),s/veh	21.5	12.4	12.3	32.3	21.0	21.4	11.4	0.0	0.0	12.8	0.0	13.9
LnGrp LOS	C	B	B	C	C	C	B			B		B
Approach Vol, veh/h		724			595			13			245	
Approach Delay, s/veh		13.9			21.2			11.4			13.4	
Approach LOS		B			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.6	5.1	24.9		22.6	12.8	17.2				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.1	10.0	18.4		18.1	10.4	18.0				
Max Q Clear Time (g_c+1), s		2.3	2.1	8.7		5.7	5.5	10.6				
Green Ext Time (p_c), s		1.3	0.0	5.0		1.2	0.1	2.1				
Intersection Summary												
HCM 2010 Ctrl Delay				16.6								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
5: Rialto Avenue & Santa Fe Ave

Existing (2017)
AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	21	519	237	37	59	31		
Future Volume (veh/h)	21	519	237	37	59	31		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1700	1800	1800	1800	1800	1800		
Adj Flow Rate, veh/h	24	603	276	43	69	36		
Adj No. of Lanes	1	2	2	1	0	0		
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86		
Percent Heavy Veh, %	0	0	0	0	0	0		
Cap, veh/h	454	1164	1164	521	484	253		
Arrive On Green	0.34	0.34	0.34	0.34	0.45	0.45		
Sat Flow, veh/h	1018	3510	3510	1530	1073	560		
Grp Volume(v), veh/h	24	603	276	43	106	0		
Grp Sat Flow(s),veh/h/ln	1018	1710	1710	1530	1648	0		
Q Serve(g_s), s	0.7	6.1	2.5	0.8	1.6	0.0		
Cycle Q Clear(g_c), s	3.3	6.1	2.5	0.8	1.6	0.0		
Prop In Lane	1.00			1.00	0.65	0.34		
Lane Grp Cap(c), veh/h	454	1164	1164	521	744	0		
V/C Ratio(X)	0.05	0.52	0.24	0.08	0.14	0.00		
Avail Cap(c_a), veh/h	850	2493	2493	1115	744	0		
HCM Platoon Ratio	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	0.00		
Uniform Delay (d), s/veh	11.4	11.4	10.2	9.7	7.0	0.0		
Incr Delay (d2), s/veh	0.0	0.4	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		
%ile BackOfQ(50%),veh/ln	0.2	2.9	1.2	0.4	0.8	0.0		
LnGrp Delay(d),s/veh	11.4	11.8	10.3	9.7	7.4	0.0		
LnGrp LOS	B	B	B	A	A			
Approach Vol, veh/h		627	319		106			
Approach Delay, s/veh		11.8	10.2		7.4			
Approach LOS		B	B		A			
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				19.2		24.0		19.2
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				31.5		19.5		31.5
Max Q Clear Time (g_c+I1), s				8.1		3.6		4.5
Green Ext Time (p_c), s				6.6		0.2		6.9
Intersection Summary								
HCM 2010 Ctrl Delay			10.9					
HCM 2010 LOS			B					
Notes								

HCM 2010 Signalized Intersection Summary
6: Cabrera Ave & 5th Street

Existing (2017)
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	679	15	23	527	4	10	6	23	11	3	2
Future Volume (veh/h)	6	679	15	23	527	4	10	6	23	11	3	2
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	7	738	16	25	573	4	11	7	25	12	3	2
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	365	1358	29	300	1382	10	214	154	387	546	132	74
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	802	3423	74	681	3481	24	292	363	910	999	310	174
Grp Volume(v), veh/h	7	369	385	25	281	296	43	0	0	17	0	0
Grp Sat Flow(s),veh/h/ln	802	1710	1787	681	1710	1796	1565	0	0	1483	0	0
Q Serve(g_s), s	0.3	8.4	8.4	1.5	6.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	6.3	8.4	8.4	9.9	6.0	6.0	0.8	0.0	0.0	0.3	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.01	0.26		0.58	0.71		0.12
Lane Grp Cap(c), veh/h	365	679	709	300	679	713	755	0	0	752	0	0
V/C Ratio(X)	0.02	0.54	0.54	0.08	0.41	0.41	0.06	0.00	0.00	0.02	0.00	0.00
Avail Cap(c_a), veh/h	515	997	1042	427	997	1047	755	0	0	752	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	13.3	11.7	11.7	15.5	11.0	11.0	8.6	0.0	0.0	8.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.7	0.1	0.4	0.4	0.1	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	4.0	4.2	0.3	2.9	3.0	0.4	0.0	0.0	0.1	0.0	0.0
LnGrp Delay(d),s/veh	13.3	12.4	12.4	15.6	11.4	11.4	8.7	0.0	0.0	8.5	0.0	0.0
LnGrp LOS	B	B	B	B	B	B	A			A		
Approach Vol, veh/h		761			602			43			17	
Approach Delay, s/veh		12.4			11.6			8.7			8.5	
Approach LOS		B			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		26.0		24.6		26.0		24.6				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		21.5		29.5		21.5		29.5				
Max Q Clear Time (g_c+1), s		2.8		10.4		2.3		11.9				
Green Ext Time (p_c), s		0.2		8.6		0.2		8.2				
Intersection Summary												
HCM 2010 Ctrl Delay				11.9								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
7: Mt. Vernon Avenue & 5th Street

Existing (2017)
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	627	101	44	508	64	65	289	43	127	359	50
Future Volume (veh/h)	51	627	101	44	508	64	65	289	43	127	359	50
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	53	653	105	46	529	67	68	301	45	132	374	52
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	75	1285	206	69	1319	166	292	898	133	326	908	125
Arrive On Green	0.05	0.44	0.44	0.04	0.43	0.43	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1619	2952	474	1619	3056	386	922	2990	442	993	3020	417
Grp Volume(v), veh/h	53	378	380	46	295	301	68	171	175	132	211	215
Grp Sat Flow(s),veh/h/ln	1619	1710	1716	1619	1710	1732	922	1710	1722	993	1710	1726
Q Serve(g_s), s	2.2	10.9	10.9	1.9	8.0	8.1	4.3	5.3	5.4	8.1	6.7	6.8
Cycle Q Clear(g_c), s	2.2	10.9	10.9	1.9	8.0	8.1	11.1	5.3	5.4	13.5	6.7	6.8
Prop In Lane	1.00		0.28	1.00		0.22	1.00		0.26	1.00		0.24
Lane Grp Cap(c), veh/h	75	744	747	69	738	747	292	514	518	326	514	519
V/C Ratio(X)	0.70	0.51	0.51	0.66	0.40	0.40	0.23	0.33	0.34	0.40	0.41	0.42
Avail Cap(c_a), veh/h	167	744	747	143	738	747	416	744	750	460	744	752
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	31.8	13.9	13.9	32.0	13.2	13.3	23.4	18.4	18.5	23.7	18.9	18.9
Incr Delay (d2), s/veh	11.2	2.5	2.5	10.4	1.6	1.6	0.4	0.4	0.4	0.8	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	5.5	5.6	1.0	4.1	4.2	1.1	2.5	2.6	2.3	3.2	3.3
LnGrp Delay(d),s/veh	43.1	16.3	16.3	42.4	14.9	14.9	23.8	18.8	18.8	24.5	19.4	19.5
LnGrp LOS	D	B	B	D	B	B	C	B	B	C	B	B
Approach Vol, veh/h		811			642			414			558	
Approach Delay, s/veh		18.1			16.8			19.6			20.6	
Approach LOS		B			B			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	35.0		25.9	7.2	34.7		25.9				
Change Period (Y+Rc), s	4.0	5.5		5.5	4.0	5.5		5.5				
Max Green Setting (Gmax), s	29.5	29.5		29.5	7.0	28.5		29.5				
Max Q Clear Time (g_c+I), s	12.9	12.9		15.5	4.2	10.1		13.1				
Green Ext Time (p_c), s	0.0	7.9		4.9	0.0	8.4		5.3				
Intersection Summary												
HCM 2010 Ctrl Delay			18.6									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
 8: Mt. Vernon Avenue & 2nd Street

Existing (2017)
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕			↕			↕	
Traffic Volume (veh/h)	4	10	5	143	4	80	6	315	131	94	406	11
Future Volume (veh/h)	4	10	5	143	4	80	6	315	131	94	406	11
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	5	11	6	166	0	0	7	358	0	107	461	12
Adj No. of Lanes	0	1	0	2	1	0	0	2	0	0	2	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	97	158	70	640	277	0	25	1325	0	144	656	18
Arrive On Green	0.15	0.15	0.15	0.15	0.00	0.00	0.39	0.39	0.00	0.23	0.23	0.23
Sat Flow, veh/h	188	1029	456	2679	1800	0	64	3533	0	626	2852	77
Grp Volume(v), veh/h	22	0	0	166	0	0	196	169	0	302	0	278
Grp Sat Flow(s),veh/h/ln	1673	0	0	1339	1800	0	1797	1710	0	1769	0	1786
Q Serve(g_s), s	0.0	0.0	0.0	2.8	0.0	0.0	4.9	4.4	0.0	10.3	0.0	9.2
Cycle Q Clear(g_c), s	0.7	0.0	0.0	3.5	0.0	0.0	4.9	4.4	0.0	10.3	0.0	9.2
Prop In Lane	0.23		0.27	1.00		0.00	0.04		0.00	0.35		0.04
Lane Grp Cap(c), veh/h	326	0	0	640	277	0	692	658	0	407	0	411
V/C Ratio(X)	0.07	0.00	0.00	0.26	0.00	0.00	0.28	0.26	0.00	0.74	0.00	0.68
Avail Cap(c_a), veh/h	627	0	0	1135	610	0	692	658	0	627	0	633
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	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.5	0.0	0.0	24.7	0.0	0.0	13.8	13.6	0.0	23.2	0.0	22.8
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.2	0.0	0.0	1.0	0.9	0.0	2.7	0.0	1.9
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	10.3	0.0	0.0	1.4	0.0	0.0	2.6	2.2	0.0	5.3	0.0	4.8
LnGrp Delay(d),s/veh	23.6	0.0	0.0	24.9	0.0	0.0	14.8	14.6	0.0	25.9	0.0	24.7
LnGrp LOS	C			C			B	B		C		C
Approach Vol, veh/h		22			166			365			580	
Approach Delay, s/veh		23.6			24.9			14.7			25.4	
Approach LOS		C			C			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		30.0		15.0		19.9		15.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		25.0		22.0		23.0		22.0				
Max Q Clear Time (g_c+I1), s		6.9		2.7		12.3		5.5				
Green Ext Time (p_c), s		1.9		0.6		2.6		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay				21.8								
HCM 2010 LOS				C								
Notes												

HCM 2010 Signalized Intersection Summary
 9: Mt. Vernon Avenue & Rialto Avenue

Existing (2017)
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	110	313	49	66	121	33	51	287	39	30	418	117
Future Volume (veh/h)	110	313	49	66	121	33	51	287	39	30	418	117
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	131	373	58	79	144	39	61	342	46	36	498	139
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	396	810	125	285	731	192	464	1655	221	596	1443	401
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.55	0.55	0.55	0.55	0.55	0.55
Sat Flow, veh/h	1152	2971	458	918	2681	705	759	3034	405	955	2646	734
Grp Volume(v), veh/h	131	213	218	79	90	93	61	192	196	36	321	316
Grp Sat Flow(s),veh/h/ln	152	1710	1719	918	1710	1676	759	1710	1729	955	1710	1670
Q Serve(g_s), s	5.4	5.7	5.8	4.3	2.2	2.3	2.7	3.2	3.2	1.1	5.8	5.8
Cycle Q Clear(g_c), s	7.8	5.7	5.8	10.1	2.2	2.3	8.5	3.2	3.2	4.3	5.8	5.8
Prop In Lane	1.00		0.27	1.00		0.42	1.00		0.23	1.00		0.44
Lane Grp Cap(c), veh/h	396	466	469	285	466	457	464	933	943	596	933	911
V/C Ratio(X)	0.33	0.46	0.46	0.28	0.19	0.20	0.13	0.21	0.21	0.06	0.34	0.35
Avail Cap(c_a), veh/h	501	622	625	368	622	609	464	933	943	596	933	911
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	18.4	16.6	16.7	20.9	15.4	15.4	9.4	6.4	6.4	7.5	7.0	7.0
Incr Delay (d2), s/veh	0.5	0.7	0.7	0.5	0.2	0.2	0.6	0.5	0.5	0.2	1.0	1.0
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	1.8	2.8	2.8	1.1	1.1	1.1	0.6	1.6	1.7	0.3	2.9	2.9
LnGrp Delay(d),s/veh	18.9	17.3	17.4	21.4	15.6	15.6	10.0	6.9	6.9	7.7	8.0	8.1
LnGrp LOS	B	B	B	C	B	B	A	A	A	A	A	A
Approach Vol, veh/h		562			262			449			673	
Approach Delay, s/veh		17.7			17.3			7.3			8.0	
Approach LOS		B			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		35.0		20.0		35.0		20.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		30.0		20.0		30.0		20.0				
Max Q Clear Time (g_c+I1), s		10.5		9.8		7.8		12.1				
Green Ext Time (p_c), s		7.0		3.4		7.4		2.9				
Intersection Summary												
HCM 2010 Ctrl Delay				11.9								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 10: L St & 5th Street

Existing (2017)
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	695	15	14	581	35	8	1	10	65	4	19
Future Volume (veh/h)	7	695	15	14	581	35	8	1	10	65	4	19
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	8	790	17	16	660	40	9	1	11	74	5	22
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	317	1379	30	281	1320	80	337	66	336	560	49	137
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	716	3423	74	648	3277	198	561	155	788	1036	114	320
Grp Volume(v), veh/h	8	395	412	16	344	356	21	0	0	101	0	0
Grp Sat Flow(s),veh/h/ln	716	1710	1787	648	1710	1765	1504	0	0	1470	0	0
Q Serve(g_s), s	0.4	9.4	9.5	1.0	7.9	8.0	0.0	0.0	0.0	1.4	0.0	0.0
Cycle Q Clear(g_c), s	8.4	9.4	9.5	10.5	7.9	8.0	0.4	0.0	0.0	2.1	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.11	0.43		0.52	0.73		0.22
Lane Grp Cap(c), veh/h	317	689	720	281	689	711	739	0	0	745	0	0
V/C Ratio(X)	0.03	0.57	0.57	0.06	0.50	0.50	0.03	0.00	0.00	0.14	0.00	0.00
Avail Cap(c_a), veh/h	415	924	965	370	924	953	739	0	0	745	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	14.9	12.2	12.2	16.3	11.8	11.8	8.8	0.0	0.0	9.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.7	0.1	0.6	0.5	0.1	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	4.5	4.7	0.2	3.8	4.0	0.2	0.0	0.0	1.0	0.0	0.0
LnGrp Delay(d),s/veh	15.0	13.0	12.9	16.4	12.3	12.3	8.9	0.0	0.0	9.6	0.0	0.0
LnGrp LOS	B	B	B	B	B	B	A			A		
Approach Vol, veh/h		815			716			21			101	
Approach Delay, s/veh		13.0			12.4			8.9			9.6	
Approach LOS		B			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		27.0		25.8		27.0		25.8				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		22.5		28.5		22.5		28.5				
Max Q Clear Time (g_c+1), s		2.4		11.5		4.1		12.5				
Green Ext Time (p_c), s		0.6		9.1		0.5		8.8				
Intersection Summary												
HCM 2010 Ctrl Delay				12.5								
HCM 2010 LOS				B								

Intersection

Intersection Delay, s/veh 9.6

Intersection LOS A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations		↙	↕			↙	↕				↕			↙	↕	
Traffic Vol, veh/h	0	5	174	24	0	43	230	57	0	29	1	30	0	16	2	4
Future Vol, veh/h	0	5	174	24	0	43	230	57	0	29	1	30	0	16	2	4
Peak Hour Factor	0.95	0.84	0.84	0.84	0.95	0.84	0.84	0.84	0.95	0.84	0.84	0.84	0.95	0.84	0.84	0.84
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	6	207	29	0	51	274	68	0	35	1	36	0	19	2	5
Number of Lanes	0	1	2	0	0	1	2	0	0	0	1	0	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	3	3
HCM Control Delay	9.6	9.6	9.6	9.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	48%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	2%	0%	100%	71%	0%	100%	57%	0%	33%
Vol Right, %	50%	0%	0%	29%	0%	0%	43%	0%	67%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	60	5	116	82	43	153	134	16	6
LT Vol	29	5	0	0	43	0	0	16	0
Through Vol	1	0	116	58	0	153	77	0	2
RT Vol	30	0	0	24	0	0	57	0	4
Lane Flow Rate	71	6	138	98	51	183	159	19	7
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.121	0.01	0.214	0.146	0.083	0.27	0.222	0.036	0.012
Departure Headway (Hd)	6.108	6.075	5.572	5.367	5.82	5.318	5.018	6.844	5.876
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	590	584	638	662	611	670	708	526	612
Service Time	3.81	3.861	3.358	3.152	3.599	3.096	2.796	4.547	3.579
HCM Lane V/C Ratio	0.12	0.01	0.216	0.148	0.083	0.273	0.225	0.036	0.011
HCM Control Delay	9.6	8.9	9.9	9.1	9.1	10.1	9.2	9.8	8.7
HCM Lane LOS	A	A	A	A	A	B	A	A	A
HCM 95th-tile Q	0.4	0	0.8	0.5	0.3	1.1	0.8	0.1	0

HCM 2010 Signalized Intersection Summary
 12: K St & Rialto Avenue

Existing (2017)
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (veh/h)	19	445	46	84	195	6	50	38	121	9	66	23
Future Volume (veh/h)	19	445	46	84	195	6	50	38	121	9	66	23
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	23	536	55	101	235	7	60	46	146	11	80	28
Adj No. of Lanes	0	2	0	0	2	0	0	1	0	0	1	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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	79	977	98	216	596	19	124	95	302	22	160	56
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.32	0.32	0.32	0.14	0.14	0.14
Sat Flow, veh/h	57	2995	301	371	1825	59	385	295	936	159	1157	405
Grp Volume(v), veh/h	325	0	289	149	0	194	252	0	0	119	0	0
Grp Sat Flow(s),veh/h/ln	768	0	1585	627	0	1628	1616	0	0	1721	0	0
Q Serve(g_s), s	0.0	0.0	9.6	7.0	0.0	5.8	7.9	0.0	0.0	4.1	0.0	0.0
Cycle Q Clear(g_c), s	9.4	0.0	9.6	16.6	0.0	5.8	7.9	0.0	0.0	4.1	0.0	0.0
Prop In Lane	0.07		0.19	0.68		0.04	0.24		0.58	0.09		0.24
Lane Grp Cap(c), veh/h	638	0	517	300	0	531	522	0	0	238	0	0
V/C Ratio(X)	0.51	0.00	0.56	0.50	0.00	0.37	0.48	0.00	0.00	0.50	0.00	0.00
Avail Cap(c_a), veh/h	686	0	562	328	0	577	522	0	0	501	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.6	0.0	17.6	22.2	0.0	16.4	17.2	0.0	0.0	25.3	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	1.1	1.3	0.0	0.4	3.2	0.0	0.0	1.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	0.0	4.3	2.5	0.0	2.7	4.0	0.0	0.0	2.0	0.0	0.0
LnGrp Delay(d),s/veh	18.2	0.0	18.7	23.5	0.0	16.8	20.4	0.0	0.0	27.0	0.0	0.0
LnGrp LOS	B		B	C		B	C			C		
Approach Vol, veh/h		614			343			252			119	
Approach Delay, s/veh		18.4			19.7			20.4			27.0	
Approach LOS		B			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		25.0		25.2		13.3		25.2				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		20.5		22.5		18.5		22.5				
Max Q Clear Time (g_c+I1), s		9.9		11.6		6.1		18.6				
Green Ext Time (p_c), s		1.1		4.6		0.4		2.1				
Intersection Summary												
HCM 2010 Ctrl Delay				19.9								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 13: I St & 2nd Street

Existing (2017)
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	352	7	16	401	4	1	0	9	4	1	1
Future Volume (veh/h)	1	352	7	16	401	4	1	0	9	4	1	1
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	1	400	8	18	456	5	1	0	10	5	1	1
Adj No. of Lanes	1	2	0	1	2	0	0	1	1	0	1	1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	373	811	16	73	1325	15	718	0	636	625	111	636
Arrive On Green	0.24	0.24	0.24	0.04	0.38	0.38	0.42	0.00	0.42	0.42	0.42	0.42
Sat Flow, veh/h	893	3429	69	1619	3465	38	1338	0	1530	1147	268	1530
Grp Volume(v), veh/h	1	199	209	18	225	236	1	0	10	6	0	1
Grp Sat Flow(s),veh/h/ln	893	1710	1788	1619	1710	1793	1339	0	1530	1415	0	1530
Q Serve(g_s), s	0.0	4.5	4.5	0.5	4.2	4.2	0.0	0.0	0.2	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	4.5	4.5	0.5	4.2	4.2	1.3	0.0	0.2	1.3	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.02	1.00		1.00	0.83		1.00
Lane Grp Cap(c), veh/h	373	404	423	73	654	685	718	0	636	736	0	636
V/C Ratio(X)	0.00	0.49	0.49	0.25	0.34	0.34	0.00	0.00	0.02	0.01	0.00	0.00
Avail Cap(c_a), veh/h	523	691	723	364	1248	1309	718	0	636	736	0	636
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.0	14.7	14.7	20.5	9.8	9.8	8.4	0.0	7.7	7.6	0.0	7.6
Incr Delay (d2), s/veh	0.0	0.9	0.9	1.8	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.2	2.3	0.3	2.0	2.1	0.0	0.0	0.1	0.0	0.0	0.0
LnGrp Delay(d),s/veh	13.0	15.6	15.6	22.3	10.1	10.1	8.4	0.0	7.7	7.7	0.0	7.6
LnGrp LOS	B	B	B	C	B	B	A		A	A		A
Approach Vol, veh/h		409			479			11			7	
Approach Delay, s/veh		15.6			10.5			7.8			7.7	
Approach LOS		B			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		23.0	6.5	15.0		23.0		21.5				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.5	10.0	18.0		18.5		32.5				
Max Q Clear Time (g_c+I1), s		3.3	2.5	6.5		3.3		6.2				
Green Ext Time (p_c), s		0.0	0.0	4.0		0.0		5.6				
Intersection Summary												
HCM 2010 Ctrl Delay				12.8								
HCM 2010 LOS				B								

Intersection

Int Delay, s/veh 0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	488	250	6	0	13
Future Vol, veh/h	0	488	250	6	0	13
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	84	84	84	84	84	84
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	581	298	7	0	15



















Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	152
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	6.9
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	3.3
Pot Cap-1 Maneuver	0	-	873
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	873
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	873
HCM Lane V/C Ratio	-	-	-	0.018
HCM Control Delay (s)	-	-	-	9.2
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0.1

HCM 2010 Signalized Intersection Summary
 15: I-215 SB Ramps & 5th Street

Existing (2017)
 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	550	408	284	519	0	0	0	0	641	10	177
Future Volume (veh/h)	0	550	408	284	519	0	0	0	0	641	10	177
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1800	1800	1600	1800	0				1700	1800	1800
Adj Flow Rate, veh/h	0	579	429	299	546	0				737	0	128
Adj No. of Lanes	0	4	0	2	2	0				2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1289	425	494	1780	0				1063	0	502
Arrive On Green	0.00	0.28	0.28	0.17	0.52	0.00				0.33	0.00	0.33
Sat Flow, veh/h	0	4896	1530	2956	3510	0				3238	0	1530
Grp Volume(v), veh/h	0	579	429	299	546	0				737	0	128
Grp Sat Flow(s),veh/h/ln	0	1548	1530	1478	1710	0				1619	0	1530
Q Serve(g_s), s	0.0	6.1	16.5	5.6	5.4	0.0				11.8	0.0	3.6
Cycle Q Clear(g_c), s	0.0	6.1	16.5	5.6	5.4	0.0				11.8	0.0	3.6
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1289	425	494	1780	0				1063	0	502
V/C Ratio(X)	0.00	0.45	1.01	0.61	0.31	0.00				0.69	0.00	0.25
Avail Cap(c_a), veh/h	0	1289	425	522	1813	0				1063	0	502
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	17.7	21.5	22.9	8.1	0.0				17.4	0.0	14.6
Incr Delay (d2), s/veh	0.0	0.2	46.2	1.8	0.1	0.0				3.7	0.0	1.2
Initial Q Delay(d3),s/veh	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	2.6	12.3	2.4	2.5	0.0				5.8	0.0	1.7
LnGrp Delay(d),s/veh	0.0	18.0	67.7	24.8	8.2	0.0				21.1	0.0	15.9
LnGrp LOS		B	F	C	A					C		B
Approach Vol, veh/h		1008			845						865	
Approach Delay, s/veh		39.1			14.1						20.3	
Approach LOS		D			B						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			14.4	21.0		24.0		35.4				
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s			10.5	16.5		19.5		31.5				
Max Q Clear Time (g_c+I1), s			7.6	18.5		13.8		7.4				
Green Ext Time (p_c), s			0.3	0.0		1.8		12.2				
Intersection Summary												
HCM 2010 Ctrl Delay			25.4									
HCM 2010 LOS			C									
Notes												

HCM 2010 Signalized Intersection Summary
 16: I-215 SB Ramps & 2nd Street

Existing (2017)
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑					↑	↑↑	
Traffic Volume (veh/h)	0	266	99	216	201	0	0	0	0	480	50	220
Future Volume (veh/h)	0	266	99	216	201	0	0	0	0	480	50	220
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1800	1800	1600	1800	0				1700	1800	1800
Adj Flow Rate, veh/h	0	324	121	263	245	0				585	61	268
Adj No. of Lanes	0	3	1	2	2	0				2	1	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82				0.82	0.82	0.82
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	949	296	558	1603	0				1157	104	458
Arrive On Green	0.00	0.19	0.19	0.19	0.47	0.00				0.36	0.36	0.36
Sat Flow, veh/h	0	5076	1530	2956	3510	0				3238	292	1282
Grp Volume(v), veh/h	0	324	121	263	245	0				585	0	329
Grp Sat Flow(s),veh/h/ln	0	1638	1530	1478	1710	0				1619	0	1574
Q Serve(g_s), s	0.0	2.9	3.6	4.1	2.1	0.0				7.3	0.0	8.8
Cycle Q Clear(g_c), s	0.0	2.9	3.6	4.1	2.1	0.0				7.3	0.0	8.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.81
Lane Grp Cap(c), veh/h	0	949	296	558	1603	0				1157	0	562
V/C Ratio(X)	0.00	0.34	0.41	0.47	0.15	0.00				0.51	0.00	0.59
Avail Cap(c_a), veh/h	0	1708	532	571	2147	0				1157	0	562
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	18.0	18.3	18.7	7.9	0.0				13.0	0.0	13.5
Incr Delay (d2), s/veh	0.0	0.2	0.9	0.6	0.0	0.0				1.6	0.0	4.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.3	1.6	1.7	1.0	0.0				3.5	0.0	4.4
LnGrp Delay(d),s/veh	0.0	18.3	19.2	19.3	7.9	0.0				14.6	0.0	17.9
LnGrp LOS		B	B	B	A					B		B
Approach Vol, veh/h		445			508						914	
Approach Delay, s/veh		18.5			13.8						15.8	
Approach LOS		B			B						B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			14.3	14.5		23.0		28.8				
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s			10.0	18.0		18.5		32.5				
Max Q Clear Time (g_c+I1), s			6.1	5.6		10.8		4.1				
Green Ext Time (p_c), s			0.3	3.4		2.8		4.5				
Intersection Summary												
HCM 2010 Ctrl Delay			15.9									
HCM 2010 LOS			B									
Notes												

HCM 2010 Signalized Intersection Summary
 17: I-215 NB Ramps & 5th Street

Existing (2017)
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	166	1025	0	0	535	144	268	5	621	0	0	0
Future Volume (veh/h)	166	1025	0	0	535	144	268	5	621	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1600	1800	0	0	1800	1800	1700	1800	1800			
Adj Flow Rate, veh/h	189	1165	0	0	608	164	205	0	817			
Adj No. of Lanes	2	2	0	0	4	1	1	0	2			
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	494	1766	0	0	1674	414	527	0	995			
Arrive On Green	0.17	0.52	0.00	0.00	0.27	0.27	0.33	0.00	0.33			
Sat Flow, veh/h	2956	3510	0	0	6444	1530	1619	0	3060			
Grp Volume(v), veh/h	189	1165	0	0	608	164	205	0	817			
Grp Sat Flow(s),veh/h/ln	1478	1710	0	0	1548	1530	1619	0	1530			
Q Serve(g_s), s	3.2	14.2	0.0	0.0	4.5	5.0	5.6	0.0	14.0			
Cycle Q Clear(g_c), s	3.2	14.2	0.0	0.0	4.5	5.0	5.6	0.0	14.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	494	1766	0	0	1674	414	527	0	995			
V/C Ratio(X)	0.38	0.66	0.00	0.00	0.36	0.40	0.39	0.00	0.82			
Avail Cap(c_a), veh/h	520	1954	0	0	1960	484	527	0	995			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	21.1	10.1	0.0	0.0	16.8	17.0	14.8	0.0	17.7			
Incr Delay (d2), s/veh	0.5	0.7	0.0	0.0	0.1	0.6	2.2	0.0	7.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.3	6.8	0.0	0.0	1.9	2.2	2.8	0.0	6.9			
LnGrp Delay(d),s/veh	21.6	10.8	0.0	0.0	16.9	17.6	17.0	0.0	25.2			
LnGrp LOS	C	B			B	B	B		C			
Approach Vol, veh/h		1354			772			1022				
Approach Delay, s/veh		12.3			17.1			23.6				
Approach LOS		B			B			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		23.0		33.9			14.0	19.9				
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5				
Max Green Setting (Gmax), s		18.5		32.5			10.0	18.0				
Max Q Clear Time (g_c+l1), s		16.0		16.2			5.2	7.0				
Green Ext Time (p_c), s		1.2		11.4			0.2	8.4				
Intersection Summary												
HCM 2010 Ctrl Delay				17.1								
HCM 2010 LOS				B								
Notes												

HCM 2010 Signalized Intersection Summary
 18: I-215 NB Ramps & 2nd Street

Existing (2017)
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑			↑↑↑↑	↗	↖	↕	↗			
Traffic Volume (veh/h)	183	563	0	0	289	178	128	136	880	0	0	0
Future Volume (veh/h)	183	563	0	0	289	178	128	136	880	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1600	1800	0	0	1800	1800	1700	1800	1800			
Adj Flow Rate, veh/h	201	619	0	0	318	196	141	0	1066			
Adj No. of Lanes	2	2	0	0	4	1	1	0	2			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	614	934	0	0	1690	418	923	0	1745			
Arrive On Green	0.27	0.27	0.00	0.00	0.27	0.27	0.57	0.00	0.57			
Sat Flow, veh/h	1553	3510	0	0	6444	1530	1619	0	3060			
Grp Volume(v), veh/h	201	619	0	0	318	196	141	0	1066			
Grp Sat Flow(s),veh/h/ln	777	1710	0	0	1548	1530	1619	0	1530			
Q Serve(g_s), s	6.5	9.2	0.0	0.0	2.3	6.1	2.4	0.0	13.2			
Cycle Q Clear(g_c), s	8.8	9.2	0.0	0.0	2.3	6.1	2.4	0.0	13.2			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	614	934	0	0	1690	418	923	0	1745			
V/C Ratio(X)	0.33	0.66	0.00	0.00	0.19	0.47	0.15	0.00	0.61			
Avail Cap(c_a), veh/h	685	1091	0	0	1976	488	923	0	1745			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	19.3	18.5	0.0	0.0	16.0	17.4	5.8	0.0	8.1			
Incr Delay (d2), s/veh	0.3	1.2	0.0	0.0	0.1	0.8	0.4	0.0	1.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4	4.5	0.0	0.0	1.0	2.7	1.1	0.0	5.9			
LnGrp Delay(d),s/veh	19.7	19.7	0.0	0.0	16.0	18.2	6.2	0.0	9.7			
LnGrp LOS	B	B			B	B	A		A			
Approach Vol, veh/h		820			514			1207				
Approach Delay, s/veh		19.7			16.9			9.3				
Approach LOS		B			B			A				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		37.2		20.2				20.2				
Change Period (Y+Rc), s		4.5		4.5				4.5				
Max Green Setting (Gmax), s		32.7		18.3				18.3				
Max Q Clear Time (g_c+l1), s		15.2		11.2				8.1				
Green Ext Time (p_c), s		5.2		4.4				5.8				
Intersection Summary												
HCM 2010 Ctrl Delay				14.2								
HCM 2010 LOS				B								
Notes												

HCM 2010 Signalized Intersection Summary
 19: H St & 5th Street

Existing (2017)
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	152	1368	126	5	484	32	52	49	28	46	77	143
Future Volume (veh/h)	152	1368	126	5	484	32	52	49	28	46	77	143
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	175	1572	145	6	556	37	60	56	32	53	89	164
Adj No. of Lanes	1	2	1	1	2	0	1	2	0	1	2	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	210	1666	878	25	1215	81	424	461	244	453	712	516
Arrive On Green	0.13	0.49	0.49	0.02	0.37	0.37	0.09	0.21	0.21	0.08	0.21	0.21
Sat Flow, veh/h	1619	3420	1530	1619	3256	216	1619	2163	1145	1619	3420	1530
Grp Volume(v), veh/h	175	1572	145	6	292	301	60	43	45	53	89	164
Grp Sat Flow(s),veh/h/ln	1619	1710	1530	1619	1710	1762	1619	1710	1598	1619	1710	1530
Q Serve(g_s), s	9.4	38.8	4.0	0.3	11.5	11.5	2.4	1.8	2.0	2.1	1.9	7.1
Cycle Q Clear(g_c), s	9.4	38.8	4.0	0.3	11.5	11.5	2.4	1.8	2.0	2.1	1.9	7.1
Prop In Lane	1.00		1.00	1.00		0.12	1.00		0.72	1.00		1.00
Lane Grp Cap(c), veh/h	210	1666	878	25	638	657	424	364	340	453	712	516
V/C Ratio(X)	0.84	0.94	0.17	0.24	0.46	0.46	0.14	0.12	0.13	0.12	0.13	0.32
Avail Cap(c_a), veh/h	359	1673	882	182	650	670	465	364	340	502	712	516
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	37.8	21.6	8.9	43.2	21.1	21.1	23.0	28.3	28.3	23.2	28.6	21.8
Incr Delay (d2), s/veh	8.4	11.3	0.1	4.8	0.5	0.5	0.2	0.7	0.8	0.1	0.4	1.6
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	4.7	20.7	1.7	0.2	5.5	5.7	1.1	0.9	1.0	1.0	0.9	3.2
LnGrp Delay(d),s/veh	46.2	33.0	9.0	48.1	21.6	21.6	23.1	28.9	29.1	23.3	29.0	23.5
LnGrp LOS	D	C	A	D	C	C	C	C	C	C	C	C
Approach Vol, veh/h	1892			599			148			306		
Approach Delay, s/veh	32.4			21.8			26.6			25.0		
Approach LOS	C			C			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.8	23.4	5.9	47.8	12.2	23.0	16.0	37.7				
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	10.0	18.5	10.0	43.5	10.0	18.5	19.7	33.8				
Max Q Clear Time (g_c+1),s	4.0	4.0	2.3	40.8	4.4	9.1	11.4	13.5				
Green Ext Time (p_c), s	0.0	1.4	0.0	2.5	0.0	1.1	0.3	15.7				
Intersection Summary												
HCM 2010 Ctrl Delay			29.2									
HCM 2010 LOS			C									

Intersection

Int Delay, s/veh 0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↕↔		↘	↕↕
Traffic Vol, veh/h	1	8	110	1	12	193
Future Vol, veh/h	1	8	110	1	12	193
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	0	-	-	110	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	10	138	1	15	241

























Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	289	69	0	0	139	0
Stage 1	138	-	-	-	-	-
Stage 2	151	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	684	986	-	-	1457	-
Stage 1	880	-	-	-	-	-
Stage 2	867	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	677	986	-	-	1457	-
Mov Cap-2 Maneuver	677	-	-	-	-	-
Stage 1	880	-	-	-	-	-
Stage 2	858	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	8.9		0		0.4
HCM LOS	A				

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	677	986	1457	-
HCM Lane V/C Ratio	-	-	0.002	0.01	0.01	-
HCM Control Delay (s)	-	-	10.3	8.7	7.5	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	0	-

HCM 2010 Signalized Intersection Summary
21: H St & 3rd St

Existing (2017)
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	14	300	186	29	25	2	48	97	30	20	142	9
Future Volume (veh/h)	14	300	186	29	25	2	48	97	30	20	142	9
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	17	357	221	35	30	2	57	115	36	24	169	11
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	66	471	287	118	855	56	587	906	273	565	990	64
Arrive On Green	0.04	0.23	0.23	0.07	0.26	0.26	0.10	0.35	0.35	0.05	0.30	0.30
Sat Flow, veh/h	1619	2045	1245	1619	3257	215	1619	2590	782	1619	3262	211
Grp Volume(v), veh/h	17	297	281	35	16	16	57	74	77	24	88	92
Grp Sat Flow(s),veh/h/ln	1619	1710	1580	1619	1710	1762	1619	1710	1662	1619	1710	1763
Q Serve(g_s), s	0.6	10.0	10.2	1.3	0.4	0.4	1.3	1.8	1.9	0.6	2.3	2.4
Cycle Q Clear(g_c), s	0.6	10.0	10.2	1.3	0.4	0.4	1.3	1.8	1.9	0.6	2.3	2.4
Prop In Lane	1.00		0.79	1.00		0.12	1.00		0.47	1.00		0.12
Lane Grp Cap(c), veh/h	66	394	364	118	449	462	587	598	581	565	519	535
V/C Ratio(X)	0.26	0.76	0.77	0.30	0.03	0.04	0.10	0.12	0.13	0.04	0.17	0.17
Avail Cap(c_a), veh/h	263	508	469	263	508	523	686	598	581	739	519	535
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	28.6	22.1	22.2	27.1	16.9	16.9	11.2	13.6	13.7	12.9	15.8	15.8
Incr Delay (d2), s/veh	2.0	4.7	5.8	1.4	0.0	0.0	0.1	0.4	0.5	0.0	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	5.2	5.0	0.6	0.2	0.2	0.6	0.9	0.9	0.3	1.2	1.3
LnGrp Delay(d),s/veh	30.7	26.8	28.0	28.4	16.9	17.0	11.2	14.0	14.1	12.9	16.5	16.5
LnGrp LOS	C	C	C	C	B	B	B	B	B	B	B	B
Approach Vol, veh/h		595			67			208			204	
Approach Delay, s/veh		27.5			22.9			13.3			16.1	
Approach LOS		C			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.9	26.1	9.0	18.7	10.7	23.2	7.0	20.7				
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	10.0	18.7	10.0	18.3	10.0	18.7	10.0	18.3				
Max Q Clear Time (g_c+I1), s	2.6	3.9	3.3	12.2	3.3	4.4	2.6	2.4				
Green Ext Time (p_c), s	0.0	1.6	0.0	2.0	0.0	1.6	0.0	3.5				
Intersection Summary												
HCM 2010 Ctrl Delay				22.3								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary
22: G St & 2nd Street

Existing (2017)
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵ ↑↑↑			↵ ↑↑↑			↵ ↑↑		↵ ↑↑			
Traffic Volume (veh/h)	31	1126	246	50	309	39	123	116	54	162	158	16
Future Volume (veh/h)	31	1126	246	50	309	39	123	116	54	162	158	16
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	36	1309	286	58	359	45	143	135	63	188	184	19
Adj No. of Lanes	1	3	0	1	3	0	1	2	0	1	2	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	109	1501	328	141	1738	213	458	501	223	458	688	70
Arrive On Green	0.07	0.37	0.37	0.09	0.39	0.39	0.11	0.22	0.22	0.11	0.22	0.22
Sat Flow, veh/h	1619	4039	882	1619	4435	545	1619	2305	1025	1619	3133	320
Grp Volume(v), veh/h	36	1062	533	58	263	141	143	98	100	188	100	103
Grp Sat Flow(s),veh/h/ln	1619	1638	1644	1619	1638	1704	1619	1710	1619	1619	1710	1744
Q Serve(g_s), s	1.8	25.9	26.0	2.9	4.6	4.7	5.6	4.1	4.4	7.6	4.2	4.2
Cycle Q Clear(g_c), s	1.8	25.9	26.0	2.9	4.6	4.7	5.6	4.1	4.4	7.6	4.2	4.2
Prop In Lane	1.00		0.54	1.00		0.32	1.00		0.63	1.00		0.18
Lane Grp Cap(c), veh/h	109	1218	611	141	1283	668	458	371	352	458	376	383
V/C Ratio(X)	0.33	0.87	0.87	0.41	0.21	0.21	0.31	0.27	0.28	0.41	0.26	0.27
Avail Cap(c_a), veh/h	190	1252	628	190	1283	668	466	371	352	466	376	383
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	38.3	25.1	25.1	37.2	17.3	17.4	21.3	28.0	28.1	21.9	27.8	27.9
Incr Delay (d2), s/veh	1.8	6.9	12.6	1.9	0.1	0.2	0.4	1.7	2.0	0.6	1.7	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	12.8	13.8	1.4	2.1	2.3	2.5	2.1	2.2	3.4	2.1	2.2
LnGrp Delay(d),s/veh	40.1	32.0	37.8	39.1	17.4	17.5	21.7	29.7	30.1	22.4	29.5	29.6
LnGrp LOS	D	C	D	D	B	B	C	C	C	C	C	C
Approach Vol, veh/h		1631			462			341			391	
Approach Delay, s/veh		34.1			20.2			26.5			26.1	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.4	23.2	12.0	36.5	14.2	23.4	10.3	38.2				
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	10.3	18.7	10.1	32.9	10.1	18.9	10.1	32.9				
Max Q Clear Time (g_c+I_T), s	10.3	6.4	4.9	28.0	7.6	6.2	3.8	6.7				
Green Ext Time (p_c), s	0.0	1.8	0.0	4.0	0.1	1.9	0.0	16.7				
Intersection Summary												
HCM 2010 Ctrl Delay					29.8							
HCM 2010 LOS					C							

HCM 2010 Signalized Intersection Summary
23: G St & Rialto Avenue

Existing (2017)
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	393	14	33	232	70	1	40	20	159	111	24
Future Volume (veh/h)	72	393	14	33	232	70	1	40	20	159	111	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	83	452	16	38	267	80	1	46	23	183	128	28
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	1	2	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	343	966	34	297	748	220	77	1199	546	814	1508	322
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.54	0.54	0.54	0.54	0.54	0.54
Sat Flow, veh/h	992	3370	119	887	2609	766	9	2230	1016	1278	2806	598
Grp Volume(v), veh/h	83	229	239	38	173	174	37	0	33	183	77	79
Grp Sat Flow(s),veh/h/ln	992	1710	1779	887	1710	1665	1796	0	1459	1278	1710	1694
Q Serve(g_s), s	3.7	5.6	5.7	1.9	4.1	4.3	0.0	0.0	0.5	4.0	1.1	1.2
Cycle Q Clear(g_c), s	8.0	5.6	5.7	7.6	4.1	4.3	0.5	0.0	0.5	4.6	1.1	1.2
Prop In Lane	1.00		0.07	1.00		0.46	0.03		0.70	1.00		0.35
Lane Grp Cap(c), veh/h	343	490	510	297	490	477	1038	0	784	814	919	911
V/C Ratio(X)	0.24	0.47	0.47	0.13	0.35	0.36	0.04	0.00	0.04	0.22	0.08	0.09
Avail Cap(c_a), veh/h	514	785	817	450	785	765	1038	0	784	814	919	911
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	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.7	15.0	15.0	18.1	14.5	14.5	5.6	0.0	5.6	6.7	5.7	5.7
Incr Delay (d2), s/veh	0.4	0.7	0.7	0.2	0.4	0.5	0.1	0.0	0.1	0.6	0.2	0.2
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	2.7	2.9	0.5	2.0	2.0	0.3	0.0	0.2	1.6	0.6	0.6
LnGrp Delay(d),s/veh	18.1	15.7	15.7	18.3	14.9	15.0	5.7	0.0	5.7	7.3	5.9	5.9
LnGrp LOS	B	B	B	B	B	B	A		A	A	A	A
Approach Vol, veh/h		551			385			70			339	
Approach Delay, s/veh		16.1			15.3			5.7			6.7	
Approach LOS		B			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		32.0		19.2		32.0		19.2				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		27.5		23.5		27.5		23.5				
Max Q Clear Time (g_c+l1), s		2.5		10.0		6.6		9.6				
Green Ext Time (p_c), s		1.9		4.7		1.8		4.8				
Intersection Summary												
HCM 2010 Ctrl Delay				12.9								
HCM 2010 LOS				B								

PM PEAK HOUR

Intersection

Int Delay, s/veh 38.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑	↑
Traffic Vol, veh/h	727	117	254	602	118	256
Future Vol, veh/h	727	117	254	602	118	256
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	225	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	749	121	262	621	122	264

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	870
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.1
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.2
Pot Cap-1 Maneuver	-	-	783
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	783
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.5	203.3
HCM LOS			F

























Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	61	575	-	-	783	-
HCM Lane V/C Ratio	1.994	0.459	-	-	0.334	-
HCM Control Delay (s)	\$ 608.7	16.5	-	-	11.9	-
HCM Lane LOS	F	C	-	-	B	-
HCM 95th %tile Q(veh)	11.5	2.4	-	-	1.5	-

Notes

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

HCM 2010 Signalized Intersection Summary
 2: Rialto Avenue & Rancho Ave

Existing (2017)
 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (veh/h)	52	280	119	110	393	53	149	235	113	97	216	54
Future Volume (veh/h)	52	280	119	110	393	53	149	235	113	97	216	54
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	57	308	131	121	432	58	164	258	124	107	237	59
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	328	795	331	345	1024	137	543	898	764	530	695	173
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.50	0.50	0.50	0.50	0.50	0.50
Sat Flow, veh/h	870	2356	981	911	3033	405	1039	1800	1530	960	1392	347
Grp Volume(v), veh/h	57	222	217	121	242	248	164	258	124	107	0	296
Grp Sat Flow(s),veh/h/ln	870	1710	1627	911	1710	1729	1039	1800	1530	960	0	1739
Q Serve(g_s), s	3.0	5.4	5.6	6.4	6.0	6.1	6.2	4.6	2.4	4.0	0.0	5.7
Cycle Q Clear(g_c), s	9.1	5.4	5.6	12.1	6.0	6.1	11.9	4.6	2.4	8.7	0.0	5.7
Prop In Lane	1.00		0.60	1.00		0.23	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	328	577	549	345	577	584	543	898	764	530	0	868
V/C Ratio(X)	0.17	0.38	0.40	0.35	0.42	0.42	0.30	0.29	0.16	0.20	0.00	0.34
Avail Cap(c_a), veh/h	405	729	694	426	729	737	543	898	764	530	0	868
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	0.00	1.00
Uniform Delay (d), s/veh	17.6	13.9	14.0	18.6	14.1	14.1	11.9	8.1	7.5	10.6	0.0	8.3
Incr Delay (d2), s/veh	0.2	0.4	0.5	0.6	0.5	0.5	1.4	0.8	0.5	0.9	0.0	1.1
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	2.6	2.5	1.7	2.9	3.0	2.0	2.5	1.1	1.2	0.0	3.0
LnGrp Delay(d),s/veh	17.9	14.3	14.4	19.2	14.6	14.6	13.4	8.9	8.0	11.5	0.0	9.4
LnGrp LOS	B	B	B	B	B	B	B	A	A	B		A
Approach Vol, veh/h		496			611			546			403	
Approach Delay, s/veh		14.8			15.5			10.0			9.9	
Approach LOS		B			B			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		32.0		23.1		32.0		23.1				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		27.5		23.5		27.5		23.5				
Max Q Clear Time (g_c+1), s		13.9		11.1		10.7		14.1				
Green Ext Time (p_c), s		4.4		5.4		4.9		4.5				
Intersection Summary												
HCM 2010 Ctrl Delay				12.8								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
3: 4th St & Foothill Blvd

Existing (2017)
PM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑		↵	↑↑	↵			
Traffic Volume (veh/h)	910	73	34	778	78	30		
Future Volume (veh/h)	910	73	34	778	78	30		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1800	1800	1700	1800	1800	1800		
Adj Flow Rate, veh/h	948	76	35	810	81	31		
Adj No. of Lanes	2	0	1	2	0	0		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96		
Percent Heavy Veh, %	0	0	0	0	0	0		
Cap, veh/h	1710	137	315	1824	351	134		
Arrive On Green	0.53	0.53	0.53	0.53	0.30	0.30		
Sat Flow, veh/h	3297	257	528	3510	1190	455		
Grp Volume(v), veh/h	505	519	35	810	113	0		
Grp Sat Flow(s),veh/h/ln	1710	1755	528	1710	1660	0		
Q Serve(g_s), s	10.3	10.3	2.5	7.6	2.7	0.0		
Cycle Q Clear(g_c), s	10.3	10.3	12.7	7.6	2.7	0.0		
Prop In Lane		0.15	1.00		0.72	0.27		
Lane Grp Cap(c), veh/h	912	936	315	1824	490	0		
V/C Ratio(X)	0.55	0.55	0.11	0.44	0.23	0.00		
Avail Cap(c_a), veh/h	1157	1187	391	2313	490	0		
HCM Platoon Ratio	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	0.00		
Uniform Delay (d), s/veh	8.1	8.1	12.3	7.5	14.0	0.0		
Incr Delay (d2), s/veh	0.5	0.5	0.2	0.2	1.1	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	4.9	5.0	0.4	3.5	1.4	0.0		
LnGrp Delay(d),s/veh	8.6	8.6	12.5	7.7	15.1	0.0		
LnGrp LOS	A	A	B	A	B			
Approach Vol, veh/h	1024			845	113			
Approach Delay, s/veh	8.6			7.9	15.1			
Approach LOS	A			A	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		20.0		32.5				32.5
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		15.5		35.5				35.5
Max Q Clear Time (g_c+l1), s		4.7		12.3				14.7
Green Ext Time (p_c), s		0.2		14.3				13.2
Intersection Summary								
HCM 2010 Ctrl Delay			8.7					
HCM 2010 LOS			A					
Notes								

HCM 2010 Signalized Intersection Summary
4: 5th Street & Medical Center Dr

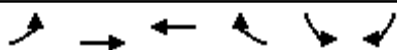
Existing (2017)
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	121	708	3	6	582	92	2	8	6	124	13	139
Future Volume (veh/h)	121	708	3	6	582	92	2	8	6	124	13	139
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	129	753	3	6	619	98	2	9	6	132	14	148
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	253	1413	6	26	781	123	101	331	196	559	53	466
Arrive On Green	0.16	0.40	0.40	0.02	0.26	0.26	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	1619	3494	14	1619	2960	468	84	989	586	1298	158	1392
Grp Volume(v), veh/h	129	369	387	6	357	360	17	0	0	146	0	148
Grp Sat Flow(s),veh/h/ln	1619	1710	1798	1619	1710	1717	1659	0	0	1456	0	1392
Q Serve(g_s), s	4.0	9.0	9.0	0.2	10.7	10.7	0.0	0.0	0.0	3.6	0.0	4.4
Cycle Q Clear(g_c), s	4.0	9.0	9.0	0.2	10.7	10.7	0.4	0.0	0.0	4.0	0.0	4.4
Prop In Lane	1.00		0.01	1.00		0.27	0.12		0.35	0.90		1.00
Lane Grp Cap(c), veh/h	253	691	727	26	451	453	628	0	0	612	0	466
V/C Ratio(X)	0.51	0.53	0.53	0.23	0.79	0.79	0.03	0.00	0.00	0.24	0.00	0.32
Avail Cap(c_a), veh/h	297	691	727	294	559	562	628	0	0	612	0	466
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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.3	12.4	12.4	26.7	18.8	18.9	12.3	0.0	0.0	13.5	0.0	13.6
Incr Delay (d2), s/veh	1.6	0.8	0.8	4.5	6.2	6.3	0.1	0.0	0.0	0.9	0.0	1.8
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	1.9	4.3	4.6	0.1	5.8	5.9	0.2	0.0	0.0	1.8	0.0	1.9
LnGrp Delay(d),s/veh	22.9	13.2	13.2	31.3	25.0	25.1	12.4	0.0	0.0	14.4	0.0	15.4
LnGrp LOS	C	B	B	C	C	C	B			B		B
Approach Vol, veh/h		885			723			17			294	
Approach Delay, s/veh		14.6			25.1			12.4			14.9	
Approach LOS		B			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.9	5.4	26.7		22.9	13.1	19.0				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.4	10.0	18.1		18.4	10.1	18.0				
Max Q Clear Time (g_c+l1), s		2.4	2.2	11.0		6.4	6.0	12.7				
Green Ext Time (p_c), s		1.6	0.0	4.7		1.4	0.1	1.8				
Intersection Summary												
HCM 2010 Ctrl Delay				18.6								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
5: Rialto Avenue & Santa Fe Ave

Existing (2017)
PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	33	375	466	30	127	34		
Future Volume (veh/h)	33	375	466	30	127	34		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1700	1800	1800	1800	1800	1800		
Adj Flow Rate, veh/h	35	395	491	32	134	36		
Adj No. of Lanes	1	2	2	1	0	0		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	0	0	0	0	0	0		
Cap, veh/h	314	1069	1069	478	659	177		
Arrive On Green	0.31	0.31	0.31	0.31	0.50	0.50		
Sat Flow, veh/h	844	3510	3510	1530	1310	352		
Grp Volume(v), veh/h	35	395	491	32	171	0		
Grp Sat Flow(s),veh/h/ln	844	1710	1710	1530	1672	0		
Q Serve(g_s), s	1.7	4.4	5.6	0.7	2.8	0.0		
Cycle Q Clear(g_c), s	7.3	4.4	5.6	0.7	2.8	0.0		
Prop In Lane	1.00			1.00	0.78	0.21		
Lane Grp Cap(c), veh/h	314	1069	1069	478	841	0		
V/C Ratio(X)	0.11	0.37	0.46	0.07	0.20	0.00		
Avail Cap(c_a), veh/h	509	1860	1860	832	841	0		
HCM Platoon Ratio	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	0.00		
Uniform Delay (d), s/veh	16.4	13.0	13.4	11.8	6.7	0.0		
Incr Delay (d2), s/veh	0.2	0.2	0.3	0.1	0.5	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	10.4	2.1	2.6	0.3	1.4	0.0		
LnGrp Delay(d),s/veh	16.5	13.2	13.8	11.8	7.3	0.0		
LnGrp LOS	B	B	B	B	A			
Approach Vol, veh/h		430	523		171			
Approach Delay, s/veh		13.5	13.6		7.3			
Approach LOS		B	B		A			
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				19.7		29.0		19.7
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				26.5		24.5		26.5
Max Q Clear Time (g_c+l1), s				9.3		4.8		7.6
Green Ext Time (p_c), s				5.9		0.4		6.2
Intersection Summary								
HCM 2010 Ctrl Delay			12.6					
HCM 2010 LOS			B					
Notes								

HCM 2010 Signalized Intersection Summary
6: Cabrera Ave & 5th Street

Existing (2017)
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	834	6	21	683	8	8	1	24	3	2	2
Future Volume (veh/h)	9	834	6	21	683	8	8	1	24	3	2	2
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	9	860	6	22	704	8	8	1	25	3	2	2
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	345	1519	11	292	1511	17	183	61	443	323	212	175
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	708	3481	24	613	3464	39	250	156	1130	574	541	446
Grp Volume(v), veh/h	9	422	444	22	348	364	34	0	0	7	0	0
Grp Sat Flow(s),veh/h/ln	708	1710	1796	613	1710	1793	1537	0	0	1561	0	0
Q Serve(g_s), s	0.5	9.7	9.7	1.5	7.5	7.5	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	8.0	9.7	9.7	11.1	7.5	7.5	0.7	0.0	0.0	0.1	0.0	0.0
Prop In Lane	1.00		0.01	1.00		0.02	0.24		0.74	0.43		0.29
Lane Grp Cap(c), veh/h	345	746	783	292	746	782	687	0	0	710	0	0
V/C Ratio(X)	0.03	0.57	0.57	0.08	0.47	0.47	0.05	0.00	0.00	0.01	0.00	0.00
Avail Cap(c_a), veh/h	448	997	1047	381	997	1045	687	0	0	710	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	13.3	11.0	11.0	15.2	10.4	10.4	9.9	0.0	0.0	9.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.6	0.1	0.5	0.4	0.1	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	4.6	4.8	0.3	3.6	3.7	0.3	0.0	0.0	0.1	0.0	0.0
LnGrp Delay(d),s/veh	13.3	11.7	11.7	15.3	10.9	10.9	10.0	0.0	0.0	9.7	0.0	0.0
LnGrp LOS	B	B	B	B	B	B	B			A		
Approach Vol, veh/h		875			734			34				7
Approach Delay, s/veh		11.7			11.0			10.0				9.7
Approach LOS		B			B			B				A
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		25.0		27.3		25.0		27.3				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		20.5		30.5		20.5		30.5				
Max Q Clear Time (g_c+1), s		2.7		11.7		2.1		13.1				
Green Ext Time (p_c), s		0.1		10.2		0.1		9.7				
Intersection Summary												
HCM 2010 Ctrl Delay				11.4								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 7: Mt. Vernon Avenue & 5th Street

Existing (2017)
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	582	102	74	586	113	136	514	81	122	403	85
Future Volume (veh/h)	91	582	102	74	586	113	136	514	81	122	403	85
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	94	600	105	76	604	116	140	530	84	126	415	88
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	117	1121	196	94	1062	204	309	1071	169	266	1018	214
Arrive On Green	0.07	0.38	0.38	0.06	0.37	0.37	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	1619	2912	508	1619	2864	549	859	2960	467	775	2814	592
Grp Volume(v), veh/h	94	352	353	76	360	360	140	305	309	126	251	252
Grp Sat Flow(s),veh/h/ln	1619	1710	1710	1619	1710	1703	859	1710	1718	775	1710	1696
Q Serve(g_s), s	4.4	12.2	12.3	3.6	12.9	13.0	11.2	10.7	10.7	11.6	8.4	8.6
Cycle Q Clear(g_c), s	4.4	12.2	12.3	3.6	12.9	13.0	19.8	10.7	10.7	22.3	8.4	8.6
Prop In Lane	1.00		0.30	1.00		0.32	1.00		0.27	1.00		0.35
Lane Grp Cap(c), veh/h	117	658	658	94	634	632	309	619	621	266	619	613
V/C Ratio(X)	0.80	0.53	0.54	0.81	0.57	0.57	0.45	0.49	0.50	0.47	0.41	0.41
Avail Cap(c_a), veh/h	147	658	658	126	634	632	328	656	659	283	656	651
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	35.1	18.3	18.3	35.8	19.3	19.3	25.8	19.1	19.1	27.8	18.3	18.4
Incr Delay (d2), s/veh	21.9	3.1	3.1	23.5	3.7	3.7	1.0	0.6	0.6	1.3	0.4	0.4
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	7.7	6.3	6.4	2.2	6.7	6.7	2.7	5.1	5.2	2.6	4.0	4.1
LnGrp Delay(d),s/veh	57.0	21.4	21.4	59.3	22.9	23.0	26.8	19.7	19.7	29.1	18.8	18.8
LnGrp LOS	E	C	C	E	C	C	C	B	B	C	B	B
Approach Vol, veh/h		799			796			754			629	
Approach Delay, s/veh		25.6			26.4			21.0			20.9	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.5	35.1		33.3	9.5	34.0		33.3				
Change Period (Y+Rc), s	4.0	5.5		5.5	4.0	5.5		5.5				
Max Green Setting (Gmax), s	29.5	29.5		29.5	7.0	28.5		29.5				
Max Q Clear Time (g_c+I_T), s	14.3	14.3		24.3	6.4	15.0		21.8				
Green Ext Time (p_c), s	0.0	8.0		3.5	0.0	7.4		4.8				
Intersection Summary												
HCM 2010 Ctrl Delay			23.7									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 8: Mt. Vernon Avenue & 2nd Street

Existing (2017)
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕			↕			↕	
Traffic Volume (veh/h)	11	6	20	188	2	195	13	528	169	127	444	16
Future Volume (veh/h)	11	6	20	188	2	195	13	528	169	127	444	16
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	12	6	21	199	0	0	14	556	0	134	467	17
Adj No. of Lanes	0	1	0	2	1	0	0	2	0	0	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	114	65	127	624	269	0	32	1331	0	174	643	24
Arrive On Green	0.15	0.15	0.15	0.15	0.00	0.00	0.39	0.39	0.00	0.24	0.24	0.24
Sat Flow, veh/h	294	434	849	2654	1800	0	82	3514	0	733	2709	102
Grp Volume(v), veh/h	39	0	0	199	0	0	305	265	0	322	0	296
Grp Sat Flow(s),veh/h/ln	1577	0	0	1327	1800	0	1796	1710	0	1763	0	1782
Q Serve(g_s), s	0.0	0.0	0.0	2.9	0.0	0.0	8.4	7.5	0.0	11.4	0.0	10.2
Cycle Q Clear(g_c), s	1.4	0.0	0.0	4.3	0.0	0.0	8.4	7.5	0.0	11.4	0.0	10.2
Prop In Lane	0.31		0.54	1.00		0.00	0.05		0.00	0.42		0.06
Lane Grp Cap(c), veh/h	306	0	0	624	269	0	698	665	0	418	0	423
V/C Ratio(X)	0.13	0.00	0.00	0.32	0.00	0.00	0.44	0.40	0.00	0.77	0.00	0.70
Avail Cap(c_a), veh/h	582	0	0	1101	592	0	698	665	0	580	0	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(l)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.8	0.0	0.0	25.9	0.0	0.0	15.0	14.8	0.0	23.8	0.0	23.3
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.3	0.0	0.0	2.0	1.8	0.0	4.2	0.0	2.2
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	10.6	0.0	0.0	1.7	0.0	0.0	4.5	3.9	0.0	6.0	0.0	5.2
LnGrp Delay(d),s/veh	25.0	0.0	0.0	26.2	0.0	0.0	17.0	16.6	0.0	28.0	0.0	25.5
LnGrp LOS	C			C			B	B		C		C
Approach Vol, veh/h		39			199			570			618	
Approach Delay, s/veh		25.0			26.2			16.8			26.8	
Approach LOS		C			C			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		31.0		15.0		20.9		15.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		26.0		22.0		22.0		22.0				
Max Q Clear Time (g_c+l1), s		10.4		3.4		13.4		6.3				
Green Ext Time (p_c), s		3.1		0.8		2.5		0.8				
Intersection Summary												
HCM 2010 Ctrl Delay				22.7								
HCM 2010 LOS				C								
Notes												

HCM 2010 Signalized Intersection Summary
 9: Mt. Vernon Avenue & Rialto Avenue

Existing (2017)
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔		↔	↔		↔	↔	
Traffic Volume (veh/h)	93	267	77	86	273	64	67	565	67	34	480	138
Future Volume (veh/h)	93	267	77	86	273	64	67	565	67	34	480	138
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	97	278	80	90	284	67	70	589	70	35	500	144
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	350	775	219	346	811	188	438	1571	186	434	1339	383
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.51	0.51	0.51	0.51	0.51	0.51
Sat Flow, veh/h	988	2635	744	982	2757	640	754	3080	365	744	2625	752
Grp Volume(v), veh/h	97	179	179	90	174	177	70	326	333	35	325	319
Grp Sat Flow(s),veh/h/ln	988	1710	1669	982	1710	1687	754	1710	1736	744	1710	1667
Q Serve(g_s), s	4.4	4.2	4.3	4.1	4.1	4.2	3.2	5.9	5.9	1.5	5.9	5.9
Cycle Q Clear(g_c), s	8.6	4.2	4.3	8.4	4.1	4.2	9.1	5.9	5.9	7.5	5.9	5.9
Prop In Lane	1.00		0.45	1.00		0.38	1.00		0.21	1.00		0.45
Lane Grp Cap(c), veh/h	350	503	491	346	503	496	438	872	885	434	872	850
V/C Ratio(X)	0.28	0.36	0.37	0.26	0.35	0.36	0.16	0.37	0.38	0.08	0.37	0.38
Avail Cap(c_a), veh/h	525	805	785	520	805	794	438	872	885	434	872	850
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	17.6	14.2	14.2	17.6	14.2	14.2	10.3	7.6	7.6	9.8	7.6	7.6
Incr Delay (d2), s/veh	0.4	0.4	0.5	0.4	0.4	0.4	0.8	1.2	1.2	0.4	1.2	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	2.0	2.1	1.1	1.9	2.0	0.8	3.0	3.1	0.4	3.0	3.0
LnGrp Delay(d),s/veh	18.0	14.6	14.7	18.0	14.6	14.6	11.1	8.8	8.8	10.2	8.8	8.8
LnGrp LOS	B	B	B	B	B	B	B	A	A	B	A	A
Approach Vol, veh/h		455			441			729			679	
Approach Delay, s/veh		15.4			15.3			9.0			8.9	
Approach LOS		B			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		31.0		20.0		31.0		20.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		26.0		24.0		26.0		24.0				
Max Q Clear Time (g_c+I1), s		11.1		10.6		9.5		10.4				
Green Ext Time (p_c), s		7.8		4.4		8.3		4.4				
Intersection Summary												
HCM 2010 Ctrl Delay				11.4								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 10: L St & 5th Street

Existing (2017)
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	793	0	3	756	76	13	3	22	93	0	18
Future Volume (veh/h)	11	793	0	3	756	76	13	3	22	93	0	18
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	11	818	0	3	779	78	13	3	23	96	0	19
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	274	1439	0	285	1321	132	259	88	373	607	11	98
Arrive On Green	0.42	0.42	0.00	0.42	0.42	0.42	0.41	0.41	0.41	0.41	0.00	0.41
Sat Flow, veh/h	618	3510	0	641	3140	314	414	213	901	1173	26	237
Grp Volume(v), veh/h	11	818	0	3	424	433	39	0	0	115	0	0
Grp Sat Flow(s),veh/h/ln	618	1710	0	641	1710	1745	1528	0	0	1436	0	0
Q Serve(g_s), s	0.8	9.9	0.0	0.2	10.4	10.4	0.0	0.0	0.0	1.8	0.0	0.0
Cycle Q Clear(g_c), s	11.2	9.9	0.0	10.1	10.4	10.4	0.8	0.0	0.0	2.6	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.18	0.33		0.59	0.83		0.17
Lane Grp Cap(c), veh/h	274	1439	0	285	720	734	721	0	0	716	0	0
V/C Ratio(X)	0.04	0.57	0.00	0.01	0.59	0.59	0.05	0.00	0.00	0.16	0.00	0.00
Avail Cap(c_a), veh/h	338	1792	0	352	896	914	721	0	0	716	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.4	12.0	0.0	15.8	12.1	12.1	9.6	0.0	0.0	10.1	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.4	0.0	0.0	0.8	0.8	0.1	0.0	0.0	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	4.7	0.0	0.0	5.0	5.1	0.4	0.0	0.0	1.2	0.0	0.0
LnGrp Delay(d),s/veh	16.5	12.3	0.0	15.8	12.9	12.9	9.7	0.0	0.0	10.6	0.0	0.0
LnGrp LOS	B	B		B	B	B	A			B		
Approach Vol, veh/h		829			860			39			115	
Approach Delay, s/veh		12.4			12.9			9.7			10.6	
Approach LOS		B			B			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		27.0		27.4		27.0		27.4				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		22.5		28.5		22.5		28.5				
Max Q Clear Time (g_c+l1), s		2.8		13.2		4.6		12.4				
Green Ext Time (p_c), s		0.8		9.7		0.7		10.1				
Intersection Summary												
HCM 2010 Ctrl Delay				12.5								
HCM 2010 LOS				B								

Intersection

Intersection Delay, s/veh 12
Intersection LOS B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations		↵	↵↵			↵	↵↵				↕			↵	↵	
Traffic Vol, veh/h	0	2	269	35	0	48	288	33	0	60	6	31	0	102	6	4
Future Vol, veh/h	0	2	269	35	0	48	288	33	0	60	6	31	0	102	6	4
Peak Hour Factor	0.95	0.89	0.89	0.89	0.95	0.89	0.89	0.89	0.95	0.89	0.89	0.89	0.95	0.89	0.89	0.89
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	2	302	39	0	54	324	37	0	67	7	35	0	115	7	4
Number of Lanes	0	1	2	0	0	1	2	0	0	0	1	0	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	3	3
HCM Control Delay	12	11.9	11.9	12.4
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	62%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	6%	0%	100%	72%	0%	100%	74%	0%	60%
Vol Right, %	32%	0%	0%	28%	0%	0%	26%	0%	40%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	97	2	179	125	48	192	129	102	10
LT Vol	60	2	0	0	48	0	0	102	0
Through Vol	6	0	179	90	0	192	96	0	6
RT Vol	31	0	0	35	0	0	33	0	4
Lane Flow Rate	109	2	201	140	54	216	145	115	11
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.216	0.004	0.361	0.243	0.102	0.378	0.247	0.24	0.021
Departure Headway (Hd)	7.148	6.951	6.444	6.244	6.815	6.309	6.127	7.529	6.744
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	499	513	556	573	524	567	583	474	528
Service Time	4.932	4.72	4.213	4.014	4.583	4.076	3.894	5.312	4.527
HCM Lane V/C Ratio	0.218	0.004	0.362	0.244	0.103	0.381	0.249	0.243	0.021
HCM Control Delay	11.9	9.7	12.8	11	10.4	12.9	10.9	12.7	9.7
HCM Lane LOS	B	A	B	B	B	B	B	B	A
HCM 95th-tile Q	0.8	0	1.6	0.9	0.3	1.8	1	0.9	0.1

HCM 2010 Signalized Intersection Summary
 12: K St & Rialto Avenue

Existing (2017)
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (veh/h)	20	351	37	72	395	15	52	70	111	11	49	44
Future Volume (veh/h)	20	351	37	72	395	15	52	70	111	11	49	44
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	21	373	39	77	420	16	55	74	118	12	52	47
Adj No. of Lanes	0	2	0	0	2	0	0	1	0	0	1	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	86	842	86	157	734	29	126	170	271	25	110	100
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.35	0.35	0.35	0.14	0.14	0.14
Sat Flow, veh/h	70	2953	301	273	2572	101	366	492	785	180	781	706
Grp Volume(v), veh/h	228	0	205	256	0	257	247	0	0	111	0	0
Grp Sat Flow(s),veh/h/ln	740	0	1585	1326	0	1620	1643	0	0	1666	0	0
Q Serve(g_s), s	0.0	0.0	6.3	4.5	0.0	8.0	6.9	0.0	0.0	3.6	0.0	0.0
Cycle Q Clear(g_c), s	6.1	0.0	6.3	10.8	0.0	8.0	6.9	0.0	0.0	3.6	0.0	0.0
Prop In Lane	0.09		0.19	0.30		0.06	0.22		0.48	0.11		0.42
Lane Grp Cap(c), veh/h	563	0	452	457	0	462	568	0	0	236	0	0
V/C Ratio(X)	0.41	0.00	0.45	0.56	0.00	0.56	0.43	0.00	0.00	0.47	0.00	0.00
Avail Cap(c_a), veh/h	720	0	601	593	0	615	568	0	0	520	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.3	0.0	17.4	18.8	0.0	18.0	14.9	0.0	0.0	23.4	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.7	1.1	0.0	1.1	2.4	0.0	0.0	1.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/l	8.1	0.0	2.8	3.8	0.0	3.7	3.5	0.0	0.0	1.8	0.0	0.0
LnGrp Delay(d),s/veh	17.8	0.0	18.1	19.8	0.0	19.1	17.4	0.0	0.0	24.9	0.0	0.0
LnGrp LOS	B		B	B		B	B			C		
Approach Vol, veh/h		433			513			247			111	
Approach Delay, s/veh		18.0			19.4			17.4			24.9	
Approach LOS		B			B			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		25.0		21.4		12.9		21.4				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		20.5		22.5		18.5		22.5				
Max Q Clear Time (g_c+I1), s		8.9		8.3		5.6		12.8				
Green Ext Time (p_c), s		1.1		5.1		0.4		4.1				
Intersection Summary												
HCM 2010 Ctrl Delay				19.0								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 13: I St & 2nd Street

Existing (2017)
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	515	4	16	448	6	4	1	48	7	0	3
Future Volume (veh/h)	0	515	4	16	448	6	4	1	48	7	0	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	0	572	4	18	498	7	4	1	53	8	0	3
Adj No. of Lanes	1	2	0	1	2	0	0	1	1	0	1	1
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	153	966	7	72	1441	20	535	119	600	611	0	600
Arrive On Green	0.00	0.28	0.28	0.04	0.42	0.42	0.39	0.39	0.39	0.39	0.00	0.39
Sat Flow, veh/h	858	3481	24	1619	3453	49	1015	302	1530	1169	0	1530
Grp Volume(v), veh/h	0	281	295	18	246	259	5	0	53	8	0	3
Grp Sat Flow(s),veh/h/ln	858	1710	1796	1619	1710	1791	1317	0	1530	1169	0	1530
Q Serve(g_s), s	0.0	6.7	6.7	0.5	4.6	4.6	0.0	0.0	1.0	0.2	0.0	0.1
Cycle Q Clear(g_c), s	0.0	6.7	6.7	0.5	4.6	4.6	2.8	0.0	1.0	2.9	0.0	0.1
Prop In Lane	1.00		0.01	1.00		0.03	0.80		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	153	474	498	72	713	747	654	0	600	611	0	600
V/C Ratio(X)	0.00	0.59	0.59	0.25	0.35	0.35	0.01	0.00	0.09	0.01	0.00	0.01
Avail Cap(c_a), veh/h	242	652	685	343	1178	1234	654	0	600	611	0	600
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	14.7	14.7	21.8	9.4	9.4	8.8	0.0	9.0	10.5	0.0	8.7
Incr Delay (d2), s/veh	0.0	1.2	1.1	1.8	0.3	0.3	0.0	0.0	0.3	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.3	3.4	0.3	2.2	2.4	0.0	0.0	0.5	0.1	0.0	0.0
LnGrp Delay(d),s/veh	0.0	15.9	15.9	23.6	9.6	9.6	8.8	0.0	9.3	10.6	0.0	8.8
LnGrp LOS		B	B	C	A	A	A		A	B		A
Approach Vol, veh/h		576			523			58			11	
Approach Delay, s/veh		15.9			10.1			9.3			10.1	
Approach LOS		B			B			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		23.0	6.6	17.6		23.0		24.2				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.5	10.0	18.0		18.5		32.5				
Max Q Clear Time (g_c+1), s		4.8	2.5	8.7		4.9		6.6				
Green Ext Time (p_c), s		0.1	0.0	4.4		0.1		7.3				
Intersection Summary												
HCM 2010 Ctrl Delay				12.9								
HCM 2010 LOS				B								

Intersection

Int Delay, s/veh 0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	392	485	37	0	17
Future Vol, veh/h	0	392	485	37	0	17
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	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	413	511	39	0	18



















Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	- 0	- 0	- 275
Stage 1	- -	- -	- -
Stage 2	- -	- -	- -
Critical Hdwy	- -	- -	- 6.9
Critical Hdwy Stg 1	- -	- -	- -
Critical Hdwy Stg 2	- -	- -	- -
Follow-up Hdwy	- -	- -	- 3.3
Pot Cap-1 Maneuver	0 -	- -	0 729
Stage 1	0 -	- -	0 -
Stage 2	0 -	- -	0 -
Platoon blocked, %	- -	- -	- -
Mov Cap-1 Maneuver	- -	- -	- 729
Mov Cap-2 Maneuver	- -	- -	- -
Stage 1	- -	- -	- -
Stage 2	- -	- -	- -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	729
HCM Lane V/C Ratio	-	-	-	0.025
HCM Control Delay (s)	-	-	-	10.1
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.1

HCM 2010 Signalized Intersection Summary
 15: I-215 SB Ramps & 5th Street

Existing (2017)
 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	604	376	484	810	0	0	0	0	211	2	174
Future Volume (veh/h)	0	604	376	484	810	0	0	0	0	211	2	174
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1800	1800	1600	1800	0				1700	1800	1800
Adj Flow Rate, veh/h	0	657	409	526	880	0				289	0	127
Adj No. of Lanes	0	4	0	2	2	0				2	0	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1253	413	673	1988	0				814	0	384
Arrive On Green	0.00	0.27	0.27	0.23	0.58	0.00				0.25	0.00	0.25
Sat Flow, veh/h	0	4896	1530	2956	3510	0				3238	0	1530
Grp Volume(v), veh/h	0	657	409	526	880	0				289	0	127
Grp Sat Flow(s),veh/h/ln	0	1548	1530	1478	1710	0				1619	0	1530
Q Serve(g_s), s	0.0	6.5	14.3	9.0	7.8	0.0				3.9	0.0	3.6
Cycle Q Clear(g_c), s	0.0	6.5	14.3	9.0	7.8	0.0				3.9	0.0	3.6
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1253	413	673	1988	0				814	0	384
V/C Ratio(X)	0.00	0.52	0.99	0.78	0.44	0.00				0.36	0.00	0.33
Avail Cap(c_a), veh/h	0	1253	413	1018	2387	0				814	0	384
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	16.7	19.6	19.5	6.3	0.0				16.5	0.0	16.4
Incr Delay (d2), s/veh	0.0	0.4	41.7	2.3	0.2	0.0				1.2	0.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.8	10.7	3.9	3.6	0.0				1.9	0.0	1.8
LnGrp Delay(d),s/veh	0.0	17.1	61.3	21.8	6.5	0.0				17.8	0.0	18.7
LnGrp LOS		B	E	C	A					B		B
Approach Vol, veh/h		1066			1406						416	
Approach Delay, s/veh		34.0			12.2						18.0	
Approach LOS		C			B						B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			16.7	19.0		18.0		35.7				
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s			18.5	14.5		13.5		37.5				
Max Q Clear Time (g_c+I1), s			11.0	16.3		5.9		9.8				
Green Ext Time (p_c), s			1.3	0.0		0.9		16.9				
Intersection Summary												
HCM 2010 Ctrl Delay			21.1									
HCM 2010 LOS			C									
Notes												

HCM 2010 Signalized Intersection Summary
 16: I-215 SB Ramps & 2nd Street

Existing (2017)
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑					↑	↑↑	
Traffic Volume (veh/h)	0	377	193	657	282	0	0	0	0	152	183	188
Future Volume (veh/h)	0	377	193	657	282	0	0	0	0	152	183	188
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1800	1800	1600	1800	0				1700	1800	1800
Adj Flow Rate, veh/h	0	419	214	730	313	0				169	203	209
Adj No. of Lanes	0	3	1	2	2	0				1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1181	368	876	2137	0				321	357	303
Arrive On Green	0.00	0.24	0.24	0.30	0.62	0.00				0.20	0.20	0.20
Sat Flow, veh/h	0	5076	1530	2956	3510	0				1619	1800	1530
Grp Volume(v), veh/h	0	419	214	730	313	0				169	203	209
Grp Sat Flow(s),veh/h/ln	0	1638	1530	1478	1710	0				1619	1800	1530
Q Serve(g_s), s	0.0	3.6	6.3	11.8	1.9	0.0				4.8	5.2	6.5
Cycle Q Clear(g_c), s	0.0	3.6	6.3	11.8	1.9	0.0				4.8	5.2	6.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1181	368	876	2137	0				321	357	303
V/C Ratio(X)	0.00	0.35	0.58	0.83	0.15	0.00				0.53	0.57	0.69
Avail Cap(c_a), veh/h	0	1737	541	1068	2747	0				321	357	303
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	16.1	17.1	16.7	3.9	0.0				18.3	18.4	19.0
Incr Delay (d2), s/veh	0.0	0.2	1.5	4.9	0.0	0.0				6.1	6.4	12.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.6	2.8	5.4	0.9	0.0				2.7	3.2	3.7
LnGrp Delay(d),s/veh	0.0	16.2	18.6	21.6	4.0	0.0				24.3	24.9	31.0
LnGrp LOS		B	B	C	A					C	C	C
Approach Vol, veh/h		633			1043						581	
Approach Delay, s/veh		17.0			16.3						26.9	
Approach LOS		B			B						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			19.6	16.7		14.6		36.3				
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s			18.4	18.0		10.1		40.9				
Max Q Clear Time (g_c+I1), s			13.8	8.3		8.5		3.9				
Green Ext Time (p_c), s			1.3	3.9		0.5		6.6				
Intersection Summary												
HCM 2010 Ctrl Delay			19.2									
HCM 2010 LOS			B									
Notes												

HCM 2010 Signalized Intersection Summary
 17: I-215 NB Ramps & 5th Street

Existing (2017)
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑			↑↑↑↑	↔	↔	↔	↔			
Traffic Volume (veh/h)	209	606	0	0	915	633	379	3	434	0	0	0
Future Volume (veh/h)	209	606	0	0	915	633	379	3	434	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1600	1800	0	0	1800	1800	1700	1800	1800			
Adj Flow Rate, veh/h	230	666	0	0	1005	696	575	0	309			
Adj No. of Lanes	2	2	0	0	4	1	2	0	1			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	487	2122	0	0	2350	581	738	0	348			
Arrive On Green	0.16	0.62	0.00	0.00	0.38	0.38	0.23	0.00	0.23			
Sat Flow, veh/h	2956	3510	0	0	6444	1530	3238	0	1530			
Grp Volume(v), veh/h	230	666	0	0	1005	696	575	0	309			
Grp Sat Flow(s),veh/h/ln	1478	1710	0	0	1548	1530	1619	0	1530			
Q Serve(g_s), s	4.2	5.4	0.0	0.0	7.1	22.5	9.9	0.0	11.6			
Cycle Q Clear(g_c), s	4.2	5.4	0.0	0.0	7.1	22.5	9.9	0.0	11.6			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	487	2122	0	0	2350	581	738	0	348			
V/C Ratio(X)	0.47	0.31	0.00	0.00	0.43	1.20	0.78	0.00	0.89			
Avail Cap(c_a), veh/h	524	2164	0	0	2350	581	738	0	348			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	22.4	5.3	0.0	0.0	13.6	18.4	21.5	0.0	22.1			
Incr Delay (d2), s/veh	0.7	0.1	0.0	0.0	0.1	105.2	8.0	0.0	26.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.7	2.5	0.0	0.0	3.0	26.3	5.2	0.0	7.5			
LnGrp Delay(d),s/veh	23.1	5.4	0.0	0.0	13.7	123.6	29.5	0.0	48.7			
LnGrp LOS	C	A			B	F	C		D			
Approach Vol, veh/h		896			1701			884				
Approach Delay, s/veh		9.9			58.7			36.2				
Approach LOS		A			E			D				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		18.0		41.3			14.3	27.0				
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5				
Max Green Setting (Gmax), s		13.5		37.5			10.5	22.5				
Max Q Clear Time (g_c+l1), s		13.6		7.4			6.2	24.5				
Green Ext Time (p_c), s		0.0		19.3			0.3	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				40.4								
HCM 2010 LOS				D								
Notes												

HCM 2010 Signalized Intersection Summary
 18: I-215 NB Ramps & 2nd Street

Existing (2017)
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	206	323	0	0	814	470	125	37	387	0	0	0
Future Volume (veh/h)	206	323	0	0	814	470	125	37	387	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1600	1800	0	0	1800	1800	1700	1800	1800			
Adj Flow Rate, veh/h	217	340	0	0	857	495	101	0	466			
Adj No. of Lanes	2	2	0	0	4	1	1	0	2			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	564	1781	0	0	3224	797	522	0	987			
Arrive On Green	0.52	0.52	0.00	0.00	0.52	0.52	0.32	0.00	0.32			
Sat Flow, veh/h	706	3510	0	0	6444	1530	1619	0	3060			
Grp Volume(v), veh/h	217	340	0	0	857	495	101	0	466			
Grp Sat Flow(s),veh/h/ln	353	1710	0	0	1548	1530	1619	0	1530			
Q Serve(g_s), s	14.2	3.0	0.0	0.0	4.4	13.2	2.6	0.0	7.0			
Cycle Q Clear(g_c), s	18.6	3.0	0.0	0.0	4.4	13.2	2.6	0.0	7.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	564	1781	0	0	3224	797	522	0	987			
V/C Ratio(X)	0.38	0.19	0.00	0.00	0.27	0.62	0.19	0.00	0.47			
Avail Cap(c_a), veh/h	597	1937	0	0	3508	867	522	0	987			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	12.8	7.3	0.0	0.0	7.6	9.7	14.0	0.0	15.5			
Incr Delay (d2), s/veh	0.4	0.1	0.0	0.0	0.0	1.2	0.8	0.0	1.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.4	1.4	0.0	0.0	1.9	5.8	1.3	0.0	3.1			
LnGrp Delay(d),s/veh	13.2	7.4	0.0	0.0	7.7	10.9	14.9	0.0	17.2			
LnGrp LOS	B	A			A	B	B		B			
Approach Vol, veh/h		557			1352			567				
Approach Delay, s/veh		9.7			8.9			16.7				
Approach LOS		A			A			B				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		23.0		34.4				34.4				
Change Period (Y+Rc), s		4.5		4.5				4.5				
Max Green Setting (Gmax), s		18.5		32.5				32.5				
Max Q Clear Time (g_c+l1), s		9.0		20.6				15.2				
Green Ext Time (p_c), s		1.6		9.3				12.6				
Intersection Summary												
HCM 2010 Ctrl Delay				10.9								
HCM 2010 LOS				B								
Notes												

HCM 2010 Signalized Intersection Summary
 19: H St & 5th Street

Existing (2017)
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	751	89	5	1033	17	221	135	24	21	70	294
Future Volume (veh/h)	200	751	89	5	1033	17	221	135	24	21	70	294
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	217	816	97	5	1123	18	240	147	26	23	76	320
Adj No. of Lanes	1	2	1	1	2	0	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	236	1574	876	21	1129	18	448	811	141	408	733	551
Arrive On Green	0.15	0.46	0.46	0.01	0.33	0.33	0.11	0.28	0.28	0.05	0.21	0.21
Sat Flow, veh/h	1619	3420	1530	1619	3445	55	1619	2915	506	1619	3420	1530
Grp Volume(v), veh/h	217	816	97	5	557	584	240	85	88	23	76	320
Grp Sat Flow(s),veh/h/ln	1619	1710	1530	1619	1710	1790	1619	1710	1711	1619	1710	1530
Q Serve(g_s), s	11.9	15.2	2.6	0.3	29.3	29.3	10.1	3.4	3.5	1.0	1.6	15.2
Cycle Q Clear(g_c), s	11.9	15.2	2.6	0.3	29.3	29.3	10.1	3.4	3.5	1.0	1.6	15.2
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.30	1.00		1.00
Lane Grp Cap(c), veh/h	236	1574	876	21	561	587	448	476	476	408	733	551
V/C Ratio(X)	0.92	0.52	0.11	0.24	0.99	0.99	0.54	0.18	0.18	0.06	0.10	0.58
Avail Cap(c_a), veh/h	236	1574	876	180	561	587	448	476	476	509	733	551
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	37.9	17.2	8.8	44.0	30.2	30.2	22.5	24.7	24.7	24.8	28.4	23.3
Incr Delay (d2), s/veh	37.8	0.3	0.1	5.6	36.5	35.7	1.3	0.8	0.9	0.1	0.3	4.4
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	7.8	7.2	1.1	0.2	19.5	20.2	4.6	1.7	1.8	0.4	0.8	7.0
LnGrp Delay(d),s/veh	75.7	17.5	8.8	49.6	66.7	65.9	23.8	25.5	25.6	24.8	28.7	27.7
LnGrp LOS	E	B	A	D	E	E	C	C	C	C	C	C
Approach Vol, veh/h		1130			1146			413			419	
Approach Delay, s/veh		27.9			66.2			24.5			27.7	
Approach LOS		C			E			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.9	29.5	5.7	45.9	14.6	23.8	17.6	34.0				
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	10.0	19.4	10.0	32.6	10.1	19.3	13.1	29.5				
Max Q Clear Time (g_c+I), s	10.0	5.5	2.3	17.2	12.1	17.2	13.9	31.3				
Green Ext Time (p_c), s	0.0	2.3	0.0	11.2	0.0	0.6	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			41.6									
HCM 2010 LOS			D									

Intersection

Int Delay, s/veh 1.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↕↕		↘	↕↕
Traffic Vol, veh/h	1	65	276	4	9	133
Future Vol, veh/h	1	65	276	4	9	133
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	0	-	-	110	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	80	341	5	11	164





















Major/Minor	Minor1	Minor2	Major1	Major2	Major3	Major4
Conflicting Flow All	447	173	0	0	346	0
Stage 1	343	-	-	-	-	-
Stage 2	104	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	545	847	-	-	1224	-
Stage 1	696	-	-	-	-	-
Stage 2	915	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	540	847	-	-	1224	-
Mov Cap-2 Maneuver	540	-	-	-	-	-
Stage 1	696	-	-	-	-	-
Stage 2	907	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.7	0	0.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	540	847	1224	-
HCM Lane V/C Ratio	-	-	0.002	0.095	0.009	-
HCM Control Delay (s)	-	-	11.7	9.7	8	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0.3	0	-

HCM 2010 Signalized Intersection Summary
 21: H St & 3rd St

Existing (2017)
 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	80	46	55	335	4	116	219	58	5	101	31
Future Volume (veh/h)	15	80	46	55	335	4	116	219	58	5	101	31
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	16	85	49	59	356	4	123	233	62	5	107	33
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	63	346	186	166	778	9	674	1165	304	455	795	236
Arrive On Green	0.04	0.16	0.16	0.10	0.22	0.22	0.14	0.43	0.43	0.01	0.31	0.31
Sat Flow, veh/h	1619	2150	1156	1619	3464	39	1619	2687	700	1619	2601	773
Grp Volume(v), veh/h	16	66	68	59	176	184	123	146	149	5	69	71
Grp Sat Flow(s),veh/h/ln	1619	1710	1596	1619	1710	1793	1619	1710	1677	1619	1710	1664
Q Serve(g_s), s	0.6	2.1	2.3	2.1	5.5	5.5	2.7	3.3	3.4	0.1	1.8	1.9
Cycle Q Clear(g_c), s	0.6	2.1	2.3	2.1	5.5	5.5	2.7	3.3	3.4	0.1	1.8	1.9
Prop In Lane	1.00		0.72	1.00		0.02	1.00		0.42	1.00		0.46
Lane Grp Cap(c), veh/h	63	275	257	166	384	403	674	742	727	455	522	508
V/C Ratio(X)	0.25	0.24	0.26	0.35	0.46	0.46	0.18	0.20	0.20	0.01	0.13	0.14
Avail Cap(c_a), veh/h	260	495	462	260	495	519	705	742	727	694	522	508
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	22.8	22.9	26.0	20.8	20.8	9.3	10.9	10.9	14.5	15.6	15.7
Incr Delay (d2), s/veh	2.1	0.4	0.5	1.3	0.8	0.8	0.1	0.6	0.6	0.0	0.5	0.6
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	1.0	1.1	1.0	2.7	2.8	1.2	1.7	1.7	0.1	0.9	1.0
LnGrp Delay(d),s/veh	31.1	23.2	23.4	27.3	21.7	21.6	9.4	11.5	11.6	14.5	16.2	16.2
LnGrp LOS	C	C	C	C	C	C	A	B	B	B	B	B
Approach Vol, veh/h		150			419			418			145	
Approach Delay, s/veh		24.2			22.5			10.9			16.1	
Approach LOS		C			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.3	31.5	10.9	14.5	13.3	23.5	6.9	18.5				
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	10.0	19.0	10.0	18.0	10.0	19.0	10.0	18.0				
Max Q Clear Time (g_c+1), s	2.1	5.4	4.1	4.3	4.7	3.9	2.6	7.5				
Green Ext Time (p_c), s	0.0	2.1	0.0	2.4	0.1	2.2	0.0	2.1				
Intersection Summary												
HCM 2010 Ctrl Delay			17.6									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
22: G St & 2nd Street

Existing (2017)
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵ ↑↑↑			↵ ↑↑↑			↵ ↑↑		↵ ↑↑			
Traffic Volume (veh/h)	73	499	68	70	991	82	188	248	65	51	136	47
Future Volume (veh/h)	73	499	68	70	991	82	188	248	65	51	136	47
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	78	531	72	74	1054	87	200	264	69	54	145	50
Adj No. of Lanes	1	3	0	1	3	0	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	177	1123	150	173	1173	97	554	803	206	468	640	213
Arrive On Green	0.11	0.26	0.26	0.11	0.25	0.25	0.14	0.30	0.30	0.09	0.25	0.25
Sat Flow, veh/h	1619	4387	586	1619	4627	381	1619	2696	692	1619	2523	839
Grp Volume(v), veh/h	78	395	208	74	746	395	200	166	167	54	97	98
Grp Sat Flow(s),veh/h/ln	1619	1638	1697	1619	1638	1733	1619	1710	1678	1619	1710	1652
Q Serve(g_s), s	3.3	7.4	7.6	3.1	16.0	16.0	6.1	5.5	5.6	1.6	3.2	3.4
Cycle Q Clear(g_c), s	3.3	7.4	7.6	3.1	16.0	16.0	6.1	5.5	5.6	1.6	3.2	3.4
Prop In Lane	1.00		0.35	1.00		0.22	1.00		0.41	1.00		0.51
Lane Grp Cap(c), veh/h	177	839	434	173	831	439	554	509	499	468	434	419
V/C Ratio(X)	0.44	0.47	0.48	0.43	0.90	0.90	0.36	0.33	0.34	0.12	0.22	0.23
Avail Cap(c_a), veh/h	223	839	434	223	835	442	560	509	499	543	434	419
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	30.2	22.8	22.9	30.3	26.2	26.2	15.1	19.8	19.9	16.1	21.4	21.5
Incr Delay (d2), s/veh	1.7	0.4	0.8	1.7	12.4	20.9	0.4	1.7	1.8	0.1	1.2	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	3.4	3.6	1.5	8.6	10.1	2.7	2.8	2.9	0.7	1.7	1.7
LnGrp Delay(d),s/veh	32.0	23.2	23.7	32.0	38.6	47.1	15.5	21.5	21.7	16.2	22.6	22.8
LnGrp LOS	C	C	C	C	D	D	B	C	C	B	C	C
Approach Vol, veh/h		681			1215			533			249	
Approach Delay, s/veh		24.4			41.0			19.3			21.3	
Approach LOS		C			D			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.1	26.1	12.2	23.1	14.3	22.9	12.4	22.9				
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	10.0	18.5	10.0	18.5	10.1	18.4	10.0	18.5				
Max Q Clear Time (g_c+I), s	10.0	7.6	5.1	9.6	8.1	5.4	5.3	18.0				
Green Ext Time (p_c), s	0.0	2.3	0.1	6.5	0.1	2.6	0.1	0.4				
Intersection Summary												
HCM 2010 Ctrl Delay				30.6								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary
23: G St & Rialto Avenue

Existing (2017)
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	295	20	38	426	154	19	151	33	65	89	48
Future Volume (veh/h)	60	295	20	38	426	154	19	151	33	65	89	48
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	64	314	21	40	453	164	20	161	35	69	95	51
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	303	1167	78	428	885	318	171	1192	249	629	1034	521
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.47	0.47	0.47	0.47	0.47	0.47
Sat Flow, veh/h	773	3255	217	1003	2468	886	191	2540	531	1139	2203	1111
Grp Volume(v), veh/h	64	164	171	40	313	304	114	0	102	69	72	74
Grp Sat Flow(s),veh/h/ln	773	1710	1762	1003	1710	1644	1718	0	1544	1139	1710	1604
Q Serve(g_s), s	3.7	3.6	3.6	1.5	7.5	7.6	0.0	0.0	2.0	1.9	1.2	1.3
Cycle Q Clear(g_c), s	11.3	3.6	3.6	5.1	7.5	7.6	1.9	0.0	2.0	3.9	1.2	1.3
Prop In Lane	1.00		0.12	1.00		0.54	0.18		0.34	1.00		0.69
Lane Grp Cap(c), veh/h	303	613	632	428	613	589	887	0	724	629	802	752
V/C Ratio(X)	0.21	0.27	0.27	0.09	0.51	0.52	0.13	0.00	0.14	0.11	0.09	0.10
Avail Cap(c_a), veh/h	418	868	894	578	868	834	887	0	724	629	802	752
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	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.6	11.9	11.9	13.7	13.1	13.2	7.9	0.0	7.9	9.0	7.7	7.7
Incr Delay (d2), s/veh	0.3	0.2	0.2	0.1	0.7	0.7	0.3	0.0	0.4	0.4	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.8	1.7	1.7	0.4	3.6	3.5	1.0	0.0	0.9	0.7	0.6	0.6
LnGrp Delay(d),s/veh	18.0	12.1	12.1	13.8	13.8	13.9	8.2	0.0	8.3	9.3	7.9	8.0
LnGrp LOS	B	B	B	B	B	B	A		A	A	A	A
Approach Vol, veh/h		399			657			216			215	
Approach Delay, s/veh		13.1			13.8			8.2			8.4	
Approach LOS		B			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		29.0		23.2		29.0		23.2				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		24.5		26.5		24.5		26.5				
Max Q Clear Time (g_c+l1), s		4.0		13.3		5.9		9.6				
Green Ext Time (p_c), s		2.3		5.4		2.2		6.2				
Intersection Summary												
HCM 2010 Ctrl Delay				12.0								
HCM 2010 LOS				B								

Year 2021

Without Detour Conditions

AM PEAK HOUR

Intersection

Int Delay, s/veh 18.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑	↑
Traffic Vol, veh/h	578	155	247	453	93	238
Future Vol, veh/h	578	155	247	453	93	238
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	225	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	628	168	268	492	101	259

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	1496
Stage 1	-	-	713
Stage 2	-	-	783
Critical Hdwy	-	4.1	6.8
Critical Hdwy Stg 1	-	-	5.8
Critical Hdwy Stg 2	-	-	5.8
Follow-up Hdwy	-	2.2	3.5
Pot Cap-1 Maneuver	-	834	116
Stage 1	-	-	452
Stage 2	-	-	416
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	834	~ 79
Mov Cap-2 Maneuver	-	-	~ 79
Stage 1	-	-	452
Stage 2	-	-	282

Approach	EB	WB	NB
HCM Control Delay, s	0	4	91.7
HCM LOS			F

























Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	79	607	-	-	834	-
HCM Lane V/C Ratio	1.28	0.426	-	-	0.322	-
HCM Control Delay (s)	287.2	15.3	-	-	11.4	-
HCM Lane LOS	F	C	-	-	B	-
HCM 95th %tile Q(veh)	7.7	2.1	-	-	1.4	-

Notes

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

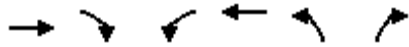
HCM 2010 Signalized Intersection Summary
2: Rialto Avenue & Rancho Ave

Year 2021 Without Detour
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (veh/h)	40	369	135	67	210	73	68	176	173	106	225	44
Future Volume (veh/h)	40	369	135	67	210	73	68	176	173	106	225	44
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	42	388	142	71	221	77	72	185	182	112	237	46
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	405	803	290	303	818	277	565	906	770	571	737	143
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.50	0.50	0.50	0.50	0.50	0.50
Sat Flow, veh/h	1037	2463	890	838	2509	850	1052	1800	1530	974	1465	284
Grp Volume(v), veh/h	42	268	262	71	149	149	72	185	182	112	0	283
Grp Sat Flow(s),veh/h/ln	1037	1710	1643	838	1710	1650	1052	1800	1530	974	0	1750
Q Serve(g_s), s	1.6	6.6	6.7	3.9	3.4	3.5	2.3	3.0	3.5	3.8	0.0	5.0
Cycle Q Clear(g_c), s	5.2	6.6	6.7	10.6	3.4	3.5	7.3	3.0	3.5	6.8	0.0	5.0
Prop In Lane	1.00		0.54	1.00		0.52	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	405	557	535	303	557	538	565	906	770	571	0	881
V/C Ratio(X)	0.10	0.48	0.49	0.23	0.27	0.28	0.13	0.20	0.24	0.20	0.00	0.32
Avail Cap(c_a), veh/h	550	796	764	419	796	768	565	906	770	571	0	881
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	0.00	1.00
Uniform Delay (d), s/veh	15.1	14.2	14.2	18.5	13.1	13.2	9.9	7.2	7.4	9.1	0.0	7.8
Incr Delay (d2), s/veh	0.1	0.6	0.7	0.4	0.3	0.3	0.5	0.5	0.7	0.8	0.0	1.0
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	3.2	3.2	0.9	1.6	1.6	0.7	1.6	1.6	1.1	0.0	2.7
LnGrp Delay(d),s/veh	15.2	14.8	14.9	18.9	13.4	13.4	10.4	7.8	8.1	9.9	0.0	8.7
LnGrp LOS	B	B	B	B	B	B	B	A	A	A		A
Approach Vol, veh/h		572			369			439			395	
Approach Delay, s/veh		14.9			14.5			8.3			9.0	
Approach LOS		B			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		31.0		21.7		31.0		21.7				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		26.5		24.5		26.5		24.5				
Max Q Clear Time (g_c+11), s		9.3		8.7		8.8		12.6				
Green Ext Time (p_c), s		4.1		5.2		4.2		4.5				
Intersection Summary												
HCM 2010 Ctrl Delay				11.9								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 3: 4th St & Foothill Blvd

Year 2021 Without Detour
 AM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑		↵	↑↑	↵			
Traffic Volume (veh/h)	731	85	51	612	88	25		
Future Volume (veh/h)	731	85	51	612	88	25		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1800	1800	1700	1800	1800	1800		
Adj Flow Rate, veh/h	786	91	55	658	95	27		
Adj No. of Lanes	2	0	1	2	0	0		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	0	0	0	0	0	0		
Cap, veh/h	1536	178	339	1700	420	119		
Arrive On Green	0.50	0.50	0.50	0.50	0.33	0.33		
Sat Flow, veh/h	3179	358	607	3510	1290	367		
Grp Volume(v), veh/h	435	442	55	658	123	0		
Grp Sat Flow(s),veh/h/ln	1710	1737	607	1710	1671	0		
Q Serve(g_s), s	8.7	8.7	3.4	6.1	2.7	0.0		
Cycle Q Clear(g_c), s	8.7	8.7	12.1	6.1	2.7	0.0		
Prop In Lane		0.21	1.00		0.77	0.22		
Lane Grp Cap(c), veh/h	850	864	339	1700	544	0		
V/C Ratio(X)	0.51	0.51	0.16	0.39	0.23	0.00		
Avail Cap(c_a), veh/h	1163	1182	451	2327	544	0		
HCM Platoon Ratio	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	0.00		
Uniform Delay (d), s/veh	8.6	8.6	12.7	7.9	12.5	0.0		
Incr Delay (d2), s/veh	0.5	0.5	0.2	0.1	1.0	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	4.1	4.2	0.6	2.9	1.4	0.0		
LnGrp Delay(d),s/veh	9.1	9.1	12.9	8.1	13.4	0.0		
LnGrp LOS	A	A	B	A	B			
Approach Vol, veh/h	877			713	123			
Approach Delay, s/veh	9.1			8.5	13.4			
Approach LOS	A			A	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		21.0		29.7				29.7
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		16.5		34.5				34.5
Max Q Clear Time (g_c+l1), s		4.7		10.7				14.1
Green Ext Time (p_c), s		0.2		12.1				11.1
Intersection Summary								
HCM 2010 Ctrl Delay			9.1					
HCM 2010 LOS			A					
Notes								

HCM 2010 Signalized Intersection Summary
4: 5th Street & Medical Center Dr

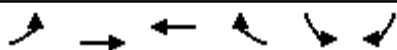
Year 2021 Without Detour
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	584	8	5	425	154	2	6	8	99	10	132
Future Volume (veh/h)	118	584	8	5	425	154	2	6	8	99	10	132
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	126	621	9	5	452	164	2	6	9	105	11	140
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	258	1354	20	22	608	219	103	231	290	571	53	473
Arrive On Green	0.16	0.39	0.39	0.01	0.25	0.25	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	1619	3451	50	1619	2466	887	81	679	855	1299	157	1392
Grp Volume(v), veh/h	126	308	322	5	312	304	17	0	0	116	0	140
Grp Sat Flow(s),veh/h/ln	1619	1710	1791	1619	1710	1643	1614	0	0	1456	0	1392
Q Serve(g_s), s	3.8	7.1	7.1	0.2	8.9	9.1	0.0	0.0	0.0	2.6	0.0	3.9
Cycle Q Clear(g_c), s	3.8	7.1	7.1	0.2	8.9	9.1	0.4	0.0	0.0	3.0	0.0	3.9
Prop In Lane	1.00		0.03	1.00		0.54	0.12		0.53	0.91		1.00
Lane Grp Cap(c), veh/h	258	671	703	22	421	405	624	0	0	624	0	473
V/C Ratio(X)	0.49	0.46	0.46	0.23	0.74	0.75	0.03	0.00	0.00	0.19	0.00	0.30
Avail Cap(c_a), veh/h	321	671	703	305	581	558	624	0	0	624	0	473
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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.3	11.9	11.9	25.9	18.4	18.5	11.7	0.0	0.0	12.5	0.0	12.8
Incr Delay (d2), s/veh	1.4	0.5	0.5	5.3	3.3	3.7	0.1	0.0	0.0	0.7	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	3.4	3.6	0.1	4.5	4.5	0.2	0.0	0.0	1.3	0.0	1.7
LnGrp Delay(d),s/veh	21.8	12.4	12.4	31.2	21.7	22.1	11.8	0.0	0.0	13.2	0.0	14.4
LnGrp LOS	C	B	B	C	C	C	B			B		B
Approach Vol, veh/h		756			621			17			256	
Approach Delay, s/veh		14.0			22.0			11.8			13.9	
Approach LOS		B			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.5	5.2	25.3		22.5	12.9	17.6				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.0	10.0	18.5		18.0	10.5	18.0				
Max Q Clear Time (g_c+1), s		2.4	2.2	9.1		5.9	5.8	11.1				
Green Ext Time (p_c), s		1.4	0.0	5.1		1.2	0.1	2.0				
Intersection Summary												
HCM 2010 Ctrl Delay				16.9								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
5: Rialto Avenue & Santa Fe Ave

Year 2021 Without Detour
AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	22	540	247	39	62	33		
Future Volume (veh/h)	22	540	247	39	62	33		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1700	1800	1800	1800	1800	1800		
Adj Flow Rate, veh/h	26	628	287	45	72	38		
Adj No. of Lanes	1	2	2	1	0	0		
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86		
Percent Heavy Veh, %	0	0	0	0	0	0		
Cap, veh/h	456	1195	1195	535	476	251		
Arrive On Green	0.35	0.35	0.35	0.35	0.45	0.45		
Sat Flow, veh/h	1006	3510	3510	1530	1068	564		
Grp Volume(v), veh/h	26	628	287	45	111	0		
Grp Sat Flow(s),veh/h/ln	1006	1710	1710	1530	1647	0		
Q Serve(g_s), s	0.8	6.4	2.6	0.9	1.8	0.0		
Cycle Q Clear(g_c), s	3.4	6.4	2.6	0.9	1.8	0.0		
Prop In Lane	1.00			1.00	0.65	0.34		
Lane Grp Cap(c), veh/h	456	1195	1195	535	733	0		
V/C Ratio(X)	0.06	0.53	0.24	0.08	0.15	0.00		
Avail Cap(c_a), veh/h	827	2459	2459	1100	733	0		
HCM Platoon Ratio	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	0.00		
Uniform Delay (d), s/veh	11.3	11.4	10.1	9.6	7.2	0.0		
Incr Delay (d2), s/veh	0.1	0.4	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		
%ile BackOfQ(50%),veh/ln	0.2	3.0	1.3	0.4	0.9	0.0		
LnGrp Delay(d),s/veh	11.4	11.7	10.2	9.6	7.7	0.0		
LnGrp LOS	B	B	B	A	A			
Approach Vol, veh/h		654	332		111			
Approach Delay, s/veh		11.7	10.1		7.7			
Approach LOS		B	B		A			
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				19.8		24.0		19.8
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				31.5		19.5		31.5
Max Q Clear Time (g_c+l1), s				8.4		3.8		4.6
Green Ext Time (p_c), s				6.9		0.2		7.2
Intersection Summary								
HCM 2010 Ctrl Delay			10.8					
HCM 2010 LOS			B					
Notes								

HCM 2010 Signalized Intersection Summary
6: Cabrera Ave & 5th Street

Year 2021 Without Detour
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	707	16	24	549	5	11	7	24	12	4	3
Future Volume (veh/h)	7	707	16	24	549	5	11	7	24	12	4	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	8	768	17	26	597	5	12	8	26	13	4	3
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	362	1390	31	295	1412	12	214	159	371	499	149	94
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.42	0.42	0.42	0.42	0.42	0.42
Sat Flow, veh/h	784	3421	76	661	3476	29	300	381	885	915	356	224
Grp Volume(v), veh/h	8	384	401	26	294	308	46	0	0	20	0	0
Grp Sat Flow(s),veh/h/ln	784	1710	1787	661	1710	1795	1566	0	0	1496	0	0
Q Serve(g_s), s	0.4	8.8	8.8	1.6	6.3	6.3	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	6.7	8.8	8.8	10.4	6.3	6.3	0.9	0.0	0.0	0.3	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.02	0.26		0.57	0.65		0.15
Lane Grp Cap(c), veh/h	362	695	726	295	695	729	744	0	0	742	0	0
V/C Ratio(X)	0.02	0.55	0.55	0.09	0.42	0.42	0.06	0.00	0.00	0.03	0.00	0.00
Avail Cap(c_a), veh/h	494	982	1026	406	982	1031	744	0	0	742	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	13.3	11.7	11.7	15.7	10.9	10.9	8.9	0.0	0.0	8.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.7	0.1	0.4	0.4	0.2	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	4.3	4.5	0.3	3.0	3.2	0.4	0.0	0.0	0.2	0.0	0.0
LnGrp Delay(d),s/veh	13.4	12.4	12.3	15.8	11.3	11.3	9.1	0.0	0.0	8.9	0.0	0.0
LnGrp LOS	B	B	B	B	B	B	A			A		
Approach Vol, veh/h		793			628			46			20	
Approach Delay, s/veh		12.4			11.5			9.1			8.9	
Approach LOS		B			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		26.0		25.4		26.0		25.4				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		21.5		29.5		21.5		29.5				
Max Q Clear Time (g_c+I1), s		2.9		10.8		2.3		12.4				
Green Ext Time (p_c), s		0.2		8.9		0.2		8.4				
Intersection Summary												
HCM 2010 Ctrl Delay				11.9								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 7: Mt. Vernon Avenue & 5th Street

Year 2021 Without Detour
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	653	106	46	529	67	68	301	45	133	374	52
Future Volume (veh/h)	54	653	106	46	529	67	68	301	45	133	374	52
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	56	680	110	48	551	70	71	314	47	139	390	54
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	77	1263	204	71	1295	164	293	928	138	328	938	129
Arrive On Green	0.05	0.43	0.43	0.04	0.42	0.42	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1619	2949	477	1619	3055	387	907	2989	443	979	3021	415
Grp Volume(v), veh/h	56	394	396	48	308	313	71	178	183	139	220	224
Grp Sat Flow(s),veh/h/ln	1619	1710	1716	1619	1710	1732	907	1710	1722	979	1710	1727
Q Serve(g_s), s	2.4	11.8	11.8	2.0	8.7	8.8	4.6	5.5	5.6	8.8	7.0	7.1
Cycle Q Clear(g_c), s	2.4	11.8	11.8	2.0	8.7	8.8	11.7	5.5	5.6	14.4	7.0	7.1
Prop In Lane	1.00		0.28	1.00		0.22	1.00		0.26	1.00		0.24
Lane Grp Cap(c), veh/h	77	732	735	71	725	734	293	531	535	328	531	536
V/C Ratio(X)	0.72	0.54	0.54	0.68	0.42	0.43	0.24	0.34	0.34	0.42	0.41	0.42
Avail Cap(c_a), veh/h	165	732	735	141	725	734	400	732	737	444	732	739
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	32.4	14.6	14.6	32.5	13.9	13.9	23.5	18.3	18.3	23.9	18.8	18.8
Incr Delay (d2), s/veh	12.1	2.8	2.8	10.9	1.8	1.8	0.4	0.4	0.4	0.9	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	6.0	6.1	1.1	4.5	4.5	1.2	2.7	2.7	2.4	3.4	3.4
LnGrp Delay(d),s/veh	44.4	17.5	17.5	43.3	15.8	15.8	23.9	18.7	18.7	24.8	19.3	19.3
LnGrp LOS	D	B	B	D	B	B	C	B	B	C	B	B
Approach Vol, veh/h		846			669			432			583	
Approach Delay, s/veh		19.2			17.7			19.5			20.6	
Approach LOS		B			B			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.0	35.0		26.9	7.3	34.7		26.9				
Change Period (Y+Rc), s	4.0	5.5		5.5	4.0	5.5		5.5				
Max Green Setting (Gmax), s	29.5	29.5		29.5	7.0	28.5		29.5				
Max Q Clear Time (g_c+1), s	13.8	13.8		16.4	4.4	10.8		13.7				
Green Ext Time (p_c), s	0.0	8.0		5.0	0.0	8.6		5.5				
Intersection Summary												
HCM 2010 Ctrl Delay				19.2								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
8: Mt. Vernon Avenue & 2nd Street

Year 2021 Without Detour
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕			↕			↕	
Traffic Volume (veh/h)	5	11	6	149	5	84	7	328	137	98	423	12
Future Volume (veh/h)	5	11	6	149	5	84	7	328	137	98	423	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	6	12	7	173	0	0	8	373	0	111	481	14
Adj No. of Lanes	0	1	0	2	1	0	0	2	0	0	2	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	99	152	71	635	275	0	27	1311	0	147	675	20
Arrive On Green	0.15	0.15	0.15	0.15	0.00	0.00	0.38	0.38	0.00	0.24	0.24	0.24
Sat Flow, veh/h	205	994	467	2674	1800	0	70	3526	0	621	2846	86
Grp Volume(v), veh/h	25	0	0	173	0	0	204	177	0	316	0	290
Grp Sat Flow(s),veh/h/ln	666	0	0	1337	1800	0	1796	1710	0	1769	0	1785
Q Serve(g_s), s	0.0	0.0	0.0	2.8	0.0	0.0	5.2	4.7	0.0	10.9	0.0	9.7
Cycle Q Clear(g_c), s	0.8	0.0	0.0	3.7	0.0	0.0	5.2	4.7	0.0	10.9	0.0	9.7
Prop In Lane	0.24		0.28	1.00		0.00	0.04		0.00	0.35		0.05
Lane Grp Cap(c), veh/h	322	0	0	635	275	0	685	652	0	420	0	423
V/C Ratio(X)	0.08	0.00	0.00	0.27	0.00	0.00	0.30	0.27	0.00	0.75	0.00	0.68
Avail Cap(c_a), veh/h	619	0	0	1124	604	0	685	652	0	621	0	626
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	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.9	0.0	0.0	25.0	0.0	0.0	14.1	14.0	0.0	23.2	0.0	22.8
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.2	0.0	0.0	1.1	1.0	0.0	2.9	0.0	2.0
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	10.4	0.0	0.0	1.4	0.0	0.0	2.8	2.4	0.0	5.6	0.0	5.0
LnGrp Delay(d),s/veh	24.0	0.0	0.0	25.3	0.0	0.0	15.3	15.0	0.0	26.2	0.0	24.7
LnGrp LOS	C			C			B	B		C		C
Approach Vol, veh/h		25			173			381			606	
Approach Delay, s/veh		24.0			25.3			15.1			25.5	
Approach LOS		C			C			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		30.0		15.0		20.5		15.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		25.0		22.0		23.0		22.0				
Max Q Clear Time (g_c+I1), s		7.2		2.8		12.9		5.7				
Green Ext Time (p_c), s		2.0		0.7		2.7		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay				22.1								
HCM 2010 LOS				C								
Notes												

HCM 2010 Signalized Intersection Summary
 9: Mt. Vernon Avenue & Rialto Avenue

Year 2021 Without Detour
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	115	326	51	69	126	35	54	299	41	32	435	122
Future Volume (veh/h)	115	326	51	69	126	35	54	299	41	32	435	122
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	137	388	61	82	150	42	64	356	49	38	518	145
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	435	895	140	317	803	218	423	1525	208	551	1333	371
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.50	0.50	0.50	0.50	0.50	0.50
Sat Flow, veh/h	1143	2966	463	903	2660	723	741	3024	413	940	2644	736
Grp Volume(v), veh/h	137	222	227	82	95	97	64	200	205	38	334	329
Grp Sat Flow(s),veh/h/ln	143	1710	1718	903	1710	1672	741	1710	1727	940	1710	1670
Q Serve(g_s), s	5.2	5.4	5.5	4.1	2.1	2.2	3.0	3.4	3.4	1.2	6.2	6.3
Cycle Q Clear(g_c), s	7.4	5.4	5.5	9.6	2.1	2.2	9.3	3.4	3.4	4.7	6.2	6.3
Prop In Lane	1.00		0.27	1.00		0.43	1.00		0.24	1.00		0.44
Lane Grp Cap(c), veh/h	435	516	519	317	516	505	423	862	871	551	862	842
V/C Ratio(X)	0.31	0.43	0.44	0.26	0.18	0.19	0.15	0.23	0.24	0.07	0.39	0.39
Avail Cap(c_a), veh/h	622	796	800	464	796	778	423	862	871	551	862	842
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	16.1	14.4	14.5	18.3	13.3	13.3	10.8	7.2	7.2	8.5	7.9	7.9
Incr Delay (d2), s/veh	0.4	0.6	0.6	0.4	0.2	0.2	0.8	0.6	0.6	0.2	1.3	1.4
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	1.7	2.6	2.7	1.1	1.0	1.1	0.7	1.7	1.7	0.4	3.2	3.2
LnGrp Delay(d),s/veh	16.5	15.0	15.1	18.8	13.5	13.5	11.5	7.8	7.8	8.7	9.2	9.3
LnGrp LOS	B	B	B	B	B	B	B	A	A	A	A	A
Approach Vol, veh/h		586			274			469			701	
Approach Delay, s/veh		15.4			15.1			8.3			9.2	
Approach LOS		B			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		31.0		20.6		31.0		20.6				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		26.0		24.0		26.0		24.0				
Max Q Clear Time (g_c+I1), s		11.3		9.4		8.3		11.6				
Green Ext Time (p_c), s		6.4		4.3		7.1		4.0				
Intersection Summary												
HCM 2010 Ctrl Delay				11.6								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 10: L St & 5th Street

Year 2021 Without Detour
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	723	16	15	605	37	9	2	11	68	5	20
Future Volume (veh/h)	8	723	16	15	605	37	9	2	11	68	5	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	9	822	18	17	688	42	10	2	12	77	6	23
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	312	1408	31	276	1348	82	324	89	318	547	53	134
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.42	0.42	0.42	0.42	0.42	0.42
Sat Flow, veh/h	696	3422	75	628	3275	200	545	212	756	1026	125	319
Grp Volume(v), veh/h	9	411	429	17	359	371	24	0	0	106	0	0
Grp Sat Flow(s),veh/h/ln	696	1710	1787	628	1710	1765	1512	0	0	1471	0	0
Q Serve(g_s), s	0.5	10.0	10.0	1.2	8.4	8.4	0.0	0.0	0.0	1.5	0.0	0.0
Cycle Q Clear(g_c), s	8.9	10.0	10.0	11.1	8.4	8.4	0.5	0.0	0.0	2.3	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.11	0.42		0.50	0.73		0.22
Lane Grp Cap(c), veh/h	312	704	735	276	704	726	731	0	0	734	0	0
V/C Ratio(X)	0.03	0.58	0.58	0.06	0.51	0.51	0.03	0.00	0.00	0.14	0.00	0.00
Avail Cap(c_a), veh/h	396	910	951	352	910	940	731	0	0	734	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.1	12.2	12.2	16.5	11.7	11.7	9.1	0.0	0.0	9.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.7	0.1	0.6	0.6	0.1	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	4.8	5.0	0.2	4.0	4.1	0.2	0.0	0.0	1.1	0.0	0.0
LnGrp Delay(d),s/veh	15.1	13.0	12.9	16.6	12.3	12.3	9.2	0.0	0.0	10.0	0.0	0.0
LnGrp LOS	B	B	B	B	B	B	A			B		
Approach Vol, veh/h		849			747			24			106	
Approach Delay, s/veh		13.0			12.4			9.2			10.0	
Approach LOS		B			B			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		27.0		26.5		27.0		26.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		22.5		28.5		22.5		28.5				
Max Q Clear Time (g_c+I1), s		2.5		12.0		4.3		13.1				
Green Ext Time (p_c), s		0.6		9.3		0.6		8.9				
Intersection Summary												
HCM 2010 Ctrl Delay				12.5								
HCM 2010 LOS				B								

Intersection

Intersection Delay, s/veh 9.8
Intersection LOS A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations		↙	↕			↙	↕				↕			↙	↕	
Traffic Vol, veh/h	0	6	181	25	0	45	240	60	0	31	2	32	0	17	3	5
Future Vol, veh/h	0	6	181	25	0	45	240	60	0	31	2	32	0	17	3	5
Peak Hour Factor	0.95	0.84	0.84	0.84	0.95	0.84	0.84	0.84	0.95	0.84	0.84	0.84	0.95	0.84	0.84	0.84
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	7	215	30	0	54	286	71	0	37	2	38	0	20	4	6
Number of Lanes	0	1	2	0	0	1	2	0	0	0	1	0	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	3	3
HCM Control Delay	9.7	9.8	9.9	9.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	48%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	3%	0%	100%	71%	0%	100%	57%	0%	38%
Vol Right, %	49%	0%	0%	29%	0%	0%	43%	0%	62%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	65	6	121	85	45	160	140	17	8
LT Vol	31	6	0	0	45	0	0	17	0
Through Vol	2	0	121	60	0	160	80	0	3
RT Vol	32	0	0	25	0	0	60	0	5
Lane Flow Rate	77	7	144	102	54	190	167	20	10
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.133	0.012	0.225	0.153	0.088	0.285	0.235	0.039	0.016
Departure Headway (Hd)	6.201	6.146	5.644	5.438	5.882	5.379	5.078	6.945	6.006
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	582	577	629	652	604	661	700	518	599
Service Time	3.902	3.944	3.441	3.235	3.667	3.165	2.863	4.649	3.71
HCM Lane V/C Ratio	0.132	0.012	0.229	0.156	0.089	0.287	0.239	0.039	0.017
HCM Control Delay	9.9	9	10.1	9.2	9.2	10.3	9.4	9.9	8.8
HCM Lane LOS	A	A	B	A	A	B	A	A	A
HCM 95th-tile Q	0.5	0	0.9	0.5	0.3	1.2	0.9	0.1	0

HCM 2010 Signalized Intersection Summary
 12: K St & Rialto Avenue

Year 2021 Without Detour
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕			↕			↕	
Traffic Volume (veh/h)	20	463	48	88	203	7	52	40	126	10	69	24
Future Volume (veh/h)	20	463	48	88	203	7	52	40	126	10	69	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	24	558	58	106	245	8	63	48	152	12	83	29
Adj No. of Lanes	0	2	0	0	2	0	0	1	0	0	1	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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	79	997	102	215	601	21	124	94	299	23	159	55
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.32	0.32	0.32	0.14	0.14	0.14
Sat Flow, veh/h	58	2988	305	361	1799	63	387	295	934	167	1152	402
Grp Volume(v), veh/h	338	0	302	153	0	206	263	0	0	124	0	0
Grp Sat Flow(s),veh/h/ln	767	0	1584	597	0	1627	1616	0	0	1721	0	0
Q Serve(g_s), s	0.0	0.0	10.1	7.9	0.0	6.2	8.6	0.0	0.0	4.3	0.0	0.0
Cycle Q Clear(g_c), s	10.0	0.0	10.1	18.0	0.0	6.2	8.6	0.0	0.0	4.3	0.0	0.0
Prop In Lane	0.07		0.19	0.69		0.04	0.24		0.58	0.10		0.23
Lane Grp Cap(c), veh/h	649	0	529	293	0	543	517	0	0	237	0	0
V/C Ratio(X)	0.52	0.00	0.57	0.52	0.00	0.38	0.51	0.00	0.00	0.52	0.00	0.00
Avail Cap(c_a), veh/h	678	0	556	310	0	570	517	0	0	481	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.7	0.0	17.7	23.0	0.0	16.4	17.9	0.0	0.0	25.9	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	1.3	1.4	0.0	0.4	3.6	0.0	0.0	1.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	4.6	2.7	0.0	2.9	4.3	0.0	0.0	2.2	0.0	0.0
LnGrp Delay(d),s/veh	18.3	0.0	19.0	24.4	0.0	16.9	21.4	0.0	0.0	27.7	0.0	0.0
LnGrp LOS	B		B	C		B	C			C		
Approach Vol, veh/h		640			359			263			124	
Approach Delay, s/veh		18.7			20.1			21.4			27.7	
Approach LOS		B			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		25.2		26.1		13.4		26.1				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		20.7		22.7		18.1		22.7				
Max Q Clear Time (g_c+l1), s		10.6		12.1		6.3		20.0				
Green Ext Time (p_c), s		1.1		4.7		0.4		1.6				
Intersection Summary												
HCM 2010 Ctrl Delay				20.4								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary
 13: I St & 2nd Street

Year 2021 Without Detour
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	367	8	17	418	5	2	0	10	5	2	2
Future Volume (veh/h)	2	367	8	17	418	5	2	0	10	5	2	2
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	2	417	9	19	475	6	2	0	11	6	2	2
Adj No. of Lanes	1	2	0	1	2	0	0	1	1	0	1	1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	372	829	18	76	1346	17	702	0	629	566	169	629
Arrive On Green	0.24	0.24	0.24	0.05	0.39	0.39	0.41	0.00	0.41	0.41	0.41	0.41
Sat Flow, veh/h	877	3423	74	1619	3459	44	1320	0	1530	1037	410	1530
Grp Volume(v), veh/h	2	208	218	19	235	246	2	0	11	8	0	2
Grp Sat Flow(s),veh/h/ln	877	1710	1787	1619	1710	1792	1320	0	1530	1447	0	1530
Q Serve(g_s), s	0.1	4.7	4.7	0.5	4.4	4.4	0.0	0.0	0.2	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	4.7	4.7	0.5	4.4	4.4	1.5	0.0	0.2	1.5	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.02	1.00		1.00	0.75		1.00
Lane Grp Cap(c), veh/h	372	414	433	76	665	697	703	0	629	735	0	629
V/C Ratio(X)	0.01	0.50	0.50	0.25	0.35	0.35	0.00	0.00	0.02	0.01	0.00	0.00
Avail Cap(c_a), veh/h	511	684	715	360	1235	1294	703	0	629	735	0	629
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.0	14.7	14.7	20.7	9.7	9.7	8.7	0.0	7.9	7.9	0.0	7.8
Incr Delay (d2), s/veh	0.0	0.9	0.9	1.7	0.3	0.3	0.0	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.3	2.4	0.3	2.1	2.2	0.0	0.0	0.1	0.1	0.0	0.0
LnGrp Delay(d),s/veh	13.0	15.7	15.6	22.4	10.1	10.0	8.7	0.0	7.9	7.9	0.0	7.8
LnGrp LOS	B	B	B	C	B	B	A		A	A		A
Approach Vol, veh/h		428			500			13			10	
Approach Delay, s/veh		15.6			10.5			8.0			7.9	
Approach LOS		B			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		23.0	6.6	15.4		23.0		22.0				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.5	10.0	18.0		18.5		32.5				
Max Q Clear Time (g_c+1), s		3.5	2.5	6.7		3.5		6.4				
Green Ext Time (p_c), s		0.0	0.0	4.2		0.0		5.9				
Intersection Summary												
HCM 2010 Ctrl Delay				12.8								
HCM 2010 LOS				B								

Intersection

Int Delay, s/veh 0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	508	260	7	0	14
Future Vol, veh/h	0	508	260	7	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	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	605	310	8	0	17



















Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	159
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	6.9
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	3.3
Pot Cap-1 Maneuver	0	-	864
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	864
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	864
HCM Lane V/C Ratio	-	-	-	0.019
HCM Control Delay (s)	-	-	-	9.2
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0.1

HCM 2010 Signalized Intersection Summary
 15: I-215 SB Ramps & 5th Street

Year 2021 Without Detour
 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	574	425	296	541	0	0	0	0	667	11	185
Future Volume (veh/h)	0	574	425	296	541	0	0	0	0	667	11	185
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1800	1800	1600	1800	0				1700	1800	1800
Adj Flow Rate, veh/h	0	604	447	312	569	0				768	0	134
Adj No. of Lanes	0	4	0	2	2	0				2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1289	425	494	1780	0				1062	0	502
Arrive On Green	0.00	0.28	0.28	0.17	0.52	0.00				0.33	0.00	0.33
Sat Flow, veh/h	0	4896	1530	2956	3510	0				3238	0	1530
Grp Volume(v), veh/h	0	604	447	312	569	0				768	0	134
Grp Sat Flow(s),veh/h/ln	0	1548	1530	1478	1710	0				1619	0	1530
Q Serve(g_s), s	0.0	6.4	16.5	5.8	5.7	0.0				12.4	0.0	3.8
Cycle Q Clear(g_c), s	0.0	6.4	16.5	5.8	5.7	0.0				12.4	0.0	3.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1289	425	494	1780	0				1062	0	502
V/C Ratio(X)	0.00	0.47	1.05	0.63	0.32	0.00				0.72	0.00	0.27
Avail Cap(c_a), veh/h	0	1289	425	522	1812	0				1062	0	502
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	17.8	21.5	23.0	8.2	0.0				17.6	0.0	14.7
Incr Delay (d2), s/veh	0.0	0.3	58.2	2.3	0.1	0.0				4.3	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.8	13.7	2.5	2.6	0.0				6.2	0.0	1.8
LnGrp Delay(d),s/veh	0.0	18.1	79.6	25.3	8.3	0.0				21.9	0.0	16.0
LnGrp LOS		B	F	C	A					C		B
Approach Vol, veh/h		1051			881						902	
Approach Delay, s/veh		44.3			14.3						21.0	
Approach LOS		D			B						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			14.4	21.0		24.0		35.4				
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s			10.5	16.5		19.5		31.5				
Max Q Clear Time (g_c+I1), s			7.8	18.5		14.4		7.7				
Green Ext Time (p_c), s			0.3	0.0		1.8		12.7				
Intersection Summary												
HCM 2010 Ctrl Delay			27.6									
HCM 2010 LOS			C									
Notes												

HCM 2010 Signalized Intersection Summary
 16: I-215 SB Ramps & 2nd Street

Year 2021 Without Detour
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑					↑	↑↑	
Traffic Volume (veh/h)	0	279	103	225	211	0	0	0	0	500	52	229
Future Volume (veh/h)	0	279	103	225	211	0	0	0	0	500	52	229
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1800	1800	1600	1800	0				1700	1800	1800
Adj Flow Rate, veh/h	0	340	126	274	257	0				610	63	279
Adj No. of Lanes	0	3	1	2	2	0				2	1	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82				0.82	0.82	0.82
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	949	295	560	1605	0				1156	104	458
Arrive On Green	0.00	0.19	0.19	0.19	0.47	0.00				0.36	0.36	0.36
Sat Flow, veh/h	0	5076	1530	2956	3510	0				3238	290	1284
Grp Volume(v), veh/h	0	340	126	274	257	0				610	0	342
Grp Sat Flow(s),veh/h/ln	0	1638	1530	1478	1710	0				1619	0	1573
Q Serve(g_s), s	0.0	3.1	3.8	4.3	2.2	0.0				7.7	0.0	9.2
Cycle Q Clear(g_c), s	0.0	3.1	3.8	4.3	2.2	0.0				7.7	0.0	9.2
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.82
Lane Grp Cap(c), veh/h	0	949	295	560	1605	0				1156	0	562
V/C Ratio(X)	0.00	0.36	0.43	0.49	0.16	0.00				0.53	0.00	0.61
Avail Cap(c_a), veh/h	0	1707	532	571	2146	0				1156	0	562
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	18.1	18.4	18.8	7.9	0.0				13.2	0.0	13.7
Incr Delay (d2), s/veh	0.0	0.2	1.0	0.7	0.0	0.0				1.7	0.0	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.4	1.7	1.8	1.0	0.0				3.7	0.0	4.7
LnGrp Delay(d),s/veh	0.0	18.4	19.4	19.4	7.9	0.0				14.9	0.0	18.5
LnGrp LOS		B	B	B	A					B		B
Approach Vol, veh/h		466			531						952	
Approach Delay, s/veh		18.6			13.9						16.2	
Approach LOS		B			B						B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			14.3	14.5		23.0		28.8				
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s			10.0	18.0		18.5		32.5				
Max Q Clear Time (g_c+I1), s			6.3	5.8		11.2		4.2				
Green Ext Time (p_c), s			0.3	3.5		2.8		4.8				
Intersection Summary												
HCM 2010 Ctrl Delay			16.2									
HCM 2010 LOS			B									
Notes												

HCM 2010 Signalized Intersection Summary
 17: I-215 NB Ramps & 5th Street

Year 2021 Without Detour
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑			↑↑↑↑	↔	↔	↔	↔			
Traffic Volume (veh/h)	173	1068	0	0	558	150	279	6	646	0	0	0
Future Volume (veh/h)	173	1068	0	0	558	150	279	6	646	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1600	1800	0	0	1800	1800	1700	1800	1800			
Adj Flow Rate, veh/h	197	1214	0	0	634	170	214	0	849			
Adj No. of Lanes	2	2	0	0	4	1	1	0	2			
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	494	1777	0	0	1696	419	523	0	989			
Arrive On Green	0.17	0.52	0.00	0.00	0.27	0.27	0.32	0.00	0.32			
Sat Flow, veh/h	2956	3510	0	0	6444	1530	1619	0	3060			
Grp Volume(v), veh/h	197	1214	0	0	634	170	214	0	849			
Grp Sat Flow(s),veh/h/ln	1478	1710	0	0	1548	1530	1619	0	1530			
Q Serve(g_s), s	3.4	15.1	0.0	0.0	4.7	5.2	5.9	0.0	14.9			
Cycle Q Clear(g_c), s	3.4	15.1	0.0	0.0	4.7	5.2	5.9	0.0	14.9			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	494	1777	0	0	1696	419	523	0	989			
V/C Ratio(X)	0.40	0.68	0.00	0.00	0.37	0.41	0.41	0.00	0.86			
Avail Cap(c_a), veh/h	516	1942	0	0	1947	481	523	0	989			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	21.3	10.2	0.0	0.0	16.8	17.0	15.1	0.0	18.1			
Incr Delay (d2), s/veh	0.5	0.9	0.0	0.0	0.1	0.6	2.4	0.0	9.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4	7.3	0.0	0.0	2.0	2.2	3.0	0.0	7.6			
LnGrp Delay(d),s/veh	21.8	11.1	0.0	0.0	16.9	17.6	17.5	0.0	27.7			
LnGrp LOS	C	B			B	B	B		C			
Approach Vol, veh/h		1411			804			1063				
Approach Delay, s/veh		12.6			17.1			25.7				
Approach LOS		B			B			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		23.0		34.2			14.1	20.2				
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5				
Max Green Setting (Gmax), s		18.5		32.5			10.0	18.0				
Max Q Clear Time (g_c+l1), s		16.9		17.1			5.4	7.2				
Green Ext Time (p_c), s		0.8		11.3			0.3	8.5				
Intersection Summary												
HCM 2010 Ctrl Delay				17.9								
HCM 2010 LOS				B								
Notes												

HCM 2010 Signalized Intersection Summary
 18: I-215 NB Ramps & 2nd Street

Year 2021 Without Detour
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑			↑↑↑↑	↗	↖	↕	↗			
Traffic Volume (veh/h)	191	588	0	0	302	186	134	142	916	0	0	0
Future Volume (veh/h)	191	588	0	0	302	186	134	142	916	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1600	1800	0	0	1800	1800	1700	1800	1800			
Adj Flow Rate, veh/h	210	646	0	0	332	204	147	0	1111			
Adj No. of Lanes	2	2	0	0	4	1	1	0	2			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	610	950	0	0	1720	425	917	0	1733			
Arrive On Green	0.28	0.28	0.00	0.00	0.28	0.28	0.57	0.00	0.57			
Sat Flow, veh/h	1522	3510	0	0	6444	1530	1619	0	3060			
Grp Volume(v), veh/h	210	646	0	0	332	204	147	0	1111			
Grp Sat Flow(s),veh/h/ln	761	1710	0	0	1548	1530	1619	0	1530			
Q Serve(g_s), s	7.1	9.7	0.0	0.0	2.4	6.4	2.5	0.0	14.3			
Cycle Q Clear(g_c), s	9.4	9.7	0.0	0.0	2.4	6.4	2.5	0.0	14.3			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	610	950	0	0	1720	425	917	0	1733			
V/C Ratio(X)	0.34	0.68	0.00	0.00	0.19	0.48	0.16	0.00	0.64			
Avail Cap(c_a), veh/h	669	1084	0	0	1962	485	917	0	1733			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	19.5	18.6	0.0	0.0	15.9	17.4	6.0	0.0	8.5			
Incr Delay (d2), s/veh	0.3	1.5	0.0	0.0	0.1	0.8	0.4	0.0	1.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.5	4.8	0.0	0.0	1.0	2.8	1.2	0.0	6.3			
LnGrp Delay(d),s/veh	19.8	20.0	0.0	0.0	16.0	18.2	6.3	0.0	10.4			
LnGrp LOS	B	C			B	B	A		B			
Approach Vol, veh/h		856			536			1258				
Approach Delay, s/veh		20.0			16.8			9.9				
Approach LOS		B			B			A				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		37.2		20.5				20.5				
Change Period (Y+Rc), s		4.5		4.5				4.5				
Max Green Setting (Gmax), s		32.7		18.3				18.3				
Max Q Clear Time (g_c+l1), s		16.3		11.7				8.4				
Green Ext Time (p_c), s		5.4		4.3				5.9				
Intersection Summary												
HCM 2010 Ctrl Delay				14.6								
HCM 2010 LOS				B								
Notes												

HCM 2010 Signalized Intersection Summary
 19: H St & 5th Street

Year 2021 Without Detour
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	1423	132	6	504	34	55	51	30	48	81	149
Future Volume (veh/h)	159	1423	132	6	504	34	55	51	30	48	81	149
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	183	1636	152	7	579	39	63	59	34	55	93	171
Adj No. of Lanes	1	2	1	1	2	0	1	2	0	1	2	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	218	1662	879	29	1201	81	421	457	244	450	707	522
Arrive On Green	0.13	0.49	0.49	0.02	0.37	0.37	0.09	0.21	0.21	0.08	0.21	0.21
Sat Flow, veh/h	1619	3420	1530	1619	3253	219	1619	2156	1151	1619	3420	1530
Grp Volume(v), veh/h	183	1636	152	7	304	314	63	46	47	55	93	171
Grp Sat Flow(s),veh/h/ln	1619	1710	1530	1619	1710	1761	1619	1710	1597	1619	1710	1530
Q Serve(g_s), s	9.9	42.2	4.2	0.4	12.2	12.2	2.6	1.9	2.1	2.2	2.0	7.4
Cycle Q Clear(g_c), s	9.9	42.2	4.2	0.4	12.2	12.2	2.6	1.9	2.1	2.2	2.0	7.4
Prop In Lane	1.00		1.00	1.00		0.12	1.00		0.72	1.00		1.00
Lane Grp Cap(c), veh/h	218	1662	879	29	631	650	421	362	338	450	707	522
V/C Ratio(X)	0.84	0.98	0.17	0.24	0.48	0.48	0.15	0.13	0.14	0.12	0.13	0.33
Avail Cap(c_a), veh/h	365	1662	879	181	636	655	459	362	338	496	707	522
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	37.8	22.7	9.0	43.4	21.7	21.7	23.2	28.6	28.6	23.4	29.0	21.9
Incr Delay (d2), s/veh	8.4	18.4	0.1	4.3	0.6	0.6	0.2	0.7	0.9	0.1	0.4	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	24.0	1.8	0.2	5.8	6.0	1.2	1.0	1.0	1.0	1.0	3.4
LnGrp Delay(d),s/veh	46.2	41.1	9.1	47.6	22.2	22.2	23.3	29.3	29.5	23.5	29.3	23.5
LnGrp LOS	D	D	A	D	C	C	C	C	C	C	C	C
Approach Vol, veh/h		1971			625			156			319	
Approach Delay, s/veh		39.1			22.5			26.9			25.2	
Approach LOS		D			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	23.5	6.1	48.0	12.4	23.0	16.5	37.6				
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	10.0	18.5	10.0	43.5	10.0	18.5	20.2	33.3				
Max Q Clear Time (g_c+1), s	11.2	4.1	2.4	44.2	4.6	9.4	11.9	14.2				
Green Ext Time (p_c), s	0.0	1.4	0.0	0.0	0.0	1.1	0.3	15.4				
Intersection Summary												
HCM 2010 Ctrl Delay			33.6									
HCM 2010 LOS			C									

Intersection

Int Delay, s/veh 0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↕↔		↘	↕↕
Traffic Vol, veh/h	2	9	115	2	13	201
Future Vol, veh/h	2	9	115	2	13	201
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	0	-	-	110	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	11	144	3	16	251





















Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	303	73	0	0	146	0
Stage 1	145	-	-	-	-	-
Stage 2	158	-	-	-	-	-
Critical Hdwy	7.5	6.9	-	-	4.1	-
Critical Hdwy Stg 1	6.5	-	-	-	-	-
Critical Hdwy Stg 2	6.5	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	632	981	-	-	1448	-
Stage 1	849	-	-	-	-	-
Stage 2	834	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	627	981	-	-	1448	-
Mov Cap-2 Maneuver	627	-	-	-	-	-
Stage 1	849	-	-	-	-	-
Stage 2	825	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	9.1		0		0.5
HCM LOS	A				

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	627	981	1448	-
HCM Lane V/C Ratio	-	-	0.004	0.011	0.011	-
HCM Control Delay (s)	-	-	10.8	8.7	7.5	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	0	-

HCM 2010 Signalized Intersection Summary
21: H St & 3rd St

Year 2021 Without Detour
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	312	194	31	26	3	50	101	32	21	148	10
Future Volume (veh/h)	15	312	194	31	26	3	50	101	32	21	148	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	18	371	231	37	31	4	60	120	38	25	176	12
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	70	486	298	123	829	105	572	876	267	551	948	64
Arrive On Green	0.04	0.24	0.24	0.08	0.27	0.27	0.10	0.34	0.34	0.06	0.29	0.29
Sat Flow, veh/h	1619	2039	1250	1619	3055	386	1619	2582	788	1619	3251	220
Grp Volume(v), veh/h	18	310	292	37	17	18	60	78	80	25	92	96
Grp Sat Flow(s),veh/h/ln	1619	1710	1579	1619	1710	1732	1619	1710	1661	1619	1710	1761
Q Serve(g_s), s	0.7	10.5	10.7	1.3	0.5	0.5	1.4	2.0	2.1	0.6	2.5	2.5
Cycle Q Clear(g_c), s	0.7	10.5	10.7	1.3	0.5	0.5	1.4	2.0	2.1	0.6	2.5	2.5
Prop In Lane	1.00		0.79	1.00		0.22	1.00		0.47	1.00		0.12
Lane Grp Cap(c), veh/h	70	408	376	123	464	470	572	580	563	551	499	514
V/C Ratio(X)	0.26	0.76	0.78	0.30	0.04	0.04	0.10	0.13	0.14	0.05	0.18	0.19
Avail Cap(c_a), veh/h	261	521	481	261	521	528	665	580	563	721	499	514
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	28.7	22.0	22.1	27.1	16.6	16.6	11.6	14.2	14.2	13.4	16.4	16.5
Incr Delay (d2), s/veh	1.9	4.9	6.0	1.4	0.0	0.0	0.1	0.5	0.5	0.0	0.8	0.8
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	0.3	5.5	5.2	0.6	0.2	0.2	0.6	1.0	1.0	0.3	1.3	1.3
LnGrp Delay(d),s/veh	30.7	26.9	28.0	28.5	16.7	16.7	11.6	14.7	14.8	13.4	17.3	17.3
LnGrp LOS	C	C	C	C	B	B	B	B	B	B	B	B
Approach Vol, veh/h		620			72			218			213	
Approach Delay, s/veh		27.6			22.7			13.9			16.8	
Approach LOS		C			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.0	25.5	9.2	19.3	10.9	22.6	7.2	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	10.0	18.1	10.0	18.9	10.0	18.1	10.0	18.9				
Max Q Clear Time (g_c+1), s	2.6	4.1	3.3	12.7	3.4	4.5	2.7	2.5				
Green Ext Time (p_c), s	0.0	1.6	0.0	2.1	0.0	1.6	0.0	3.7				
Intersection Summary												
HCM 2010 Ctrl Delay				22.6								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary
22: G St & 2nd Street

Year 2021 Without Detour
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔ ↑↑↑			↔ ↑↑↑			↔ ↑↑		↔ ↑↑			
Traffic Volume (veh/h)	33	1172	256	52	322	41	128	121	57	169	165	17
Future Volume (veh/h)	33	1172	256	52	322	41	128	121	57	169	165	17
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	38	1363	298	60	374	48	149	141	66	197	192	20
Adj No. of Lanes	1	3	0	1	3	0	1	2	0	1	2	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	112	1491	325	143	1716	216	457	508	227	457	697	72
Arrive On Green	0.07	0.37	0.37	0.09	0.39	0.39	0.11	0.22	0.22	0.11	0.22	0.22
Sat Flow, veh/h	1619	4039	882	1619	4422	556	1619	2301	1027	1619	3130	323
Grp Volume(v), veh/h	38	1105	556	60	275	147	149	103	104	197	104	108
Grp Sat Flow(s),veh/h/ln	1619	1638	1644	1619	1638	1702	1619	1710	1619	1619	1710	1743
Q Serve(g_s), s	1.9	27.8	27.9	3.0	4.9	5.0	5.9	4.3	4.6	8.0	4.4	4.5
Cycle Q Clear(g_c), s	1.9	27.8	27.9	3.0	4.9	5.0	5.9	4.3	4.6	8.0	4.4	4.5
Prop In Lane	1.00		0.54	1.00		0.33	1.00		0.63	1.00		0.19
Lane Grp Cap(c), veh/h	112	1209	607	143	1271	660	457	377	357	457	381	388
V/C Ratio(X)	0.34	0.91	0.92	0.42	0.22	0.22	0.33	0.27	0.29	0.43	0.27	0.28
Avail Cap(c_a), veh/h	189	1229	617	189	1271	660	464	377	357	464	381	388
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	38.4	26.0	26.0	37.4	17.7	17.8	21.4	28.0	28.1	22.0	27.9	27.9
Incr Delay (d2), s/veh	1.8	10.5	18.3	2.0	0.1	0.2	0.4	1.8	2.1	0.6	1.8	1.8
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	0.9	14.4	15.7	1.4	2.2	2.4	2.6	2.2	2.3	3.6	2.2	2.3
LnGrp Delay(d),s/veh	40.2	36.5	44.4	39.4	17.8	17.9	21.8	29.8	30.2	22.6	29.6	29.7
LnGrp LOS	D	D	D	D	B	B	C	C	C	C	C	C
Approach Vol, veh/h	1699			482			356			409		
Approach Delay, s/veh	39.2			20.5			26.5			26.3		
Approach LOS	D			C			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.4	23.6	12.1	36.5	14.2	23.8	10.5	38.1				
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	10.3	19.1	10.1	32.5	10.1	19.3	10.1	32.5				
Max Q Clear Time (g_c+I), s	10.0	6.6	5.0	29.9	7.9	6.5	3.9	7.0				
Green Ext Time (p_c), s	0.0	1.9	0.0	2.1	0.1	2.0	0.0	17.1				
Intersection Summary												
HCM 2010 Ctrl Delay	32.8											
HCM 2010 LOS	C											

HCM 2010 Signalized Intersection Summary
23: G St & Rialto Avenue

Year 2021 Without Detour
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	409	15	35	242	73	2	42	21	166	116	25
Future Volume (veh/h)	75	409	15	35	242	73	2	42	21	166	116	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	86	470	17	40	278	84	2	48	24	191	133	29
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	1	2	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	343	992	36	296	767	227	88	1178	534	802	1492	317
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.53	0.53	0.53	0.53	0.53	0.53
Sat Flow, veh/h	978	3367	122	872	2603	771	28	2216	1005	1274	2808	597
Grp Volume(v), veh/h	86	238	249	40	181	181	39	0	35	191	80	82
Grp Sat Flow(s),veh/h/ln	978	1710	1779	872	1710	1664	1788	0	1461	1274	1710	1695
Q Serve(g_s), s	3.9	5.9	5.9	2.0	4.3	4.5	0.0	0.0	0.6	4.4	1.2	1.2
Cycle Q Clear(g_c), s	8.4	5.9	5.9	8.0	4.3	4.5	0.5	0.0	0.6	5.0	1.2	1.2
Prop In Lane	1.00		0.07	1.00		0.46	0.05		0.69	1.00		0.35
Lane Grp Cap(c), veh/h	343	504	524	296	504	490	1023	0	776	802	909	901
V/C Ratio(X)	0.25	0.47	0.47	0.14	0.36	0.37	0.04	0.00	0.04	0.24	0.09	0.09
Avail Cap(c_a), veh/h	499	777	808	435	777	756	1023	0	776	802	909	901
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	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.8	15.0	15.0	18.2	14.4	14.4	5.8	0.0	5.8	7.0	6.0	6.0
Incr Delay (d2), s/veh	0.4	0.7	0.7	0.2	0.4	0.5	0.1	0.0	0.1	0.7	0.2	0.2
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	2.9	3.0	0.5	2.1	2.1	0.3	0.0	0.3	1.7	0.6	0.6
LnGrp Delay(d),s/veh	18.2	15.7	15.6	18.4	14.8	14.9	5.9	0.0	5.9	7.7	6.1	6.2
LnGrp LOS	B	B	B	B	B	B	A		A	A	A	A
Approach Vol, veh/h		573			402			74			353	
Approach Delay, s/veh		16.0			15.2			5.9			7.0	
Approach LOS		B			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		32.0		19.7		32.0		19.7				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		27.5		23.5		27.5		23.5				
Max Q Clear Time (g_c+I1), s		2.6		10.4		7.0		10.0				
Green Ext Time (p_c), s		2.0		4.8		1.9		4.9				
Intersection Summary												
HCM 2010 Ctrl Delay				13.0								
HCM 2010 LOS				B								

PM PEAK HOUR

Intersection

Int Delay, s/veh 49.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑	↑
Traffic Vol, veh/h	757	122	265	627	123	267
Future Vol, veh/h	757	122	265	627	123	267
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	225	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	780	126	273	646	127	275

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	906	0	1713	453
Stage 1	-	-	-	-	843	-
Stage 2	-	-	-	-	870	-
Critical Hdwy	-	-	4.1	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	759	-	~ 83	559
Stage 1	-	-	-	-	388	-
Stage 2	-	-	-	-	375	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	759	-	~ 53	559
Mov Cap-2 Maneuver	-	-	-	-	~ 53	-
Stage 1	-	-	-	-	388	-
Stage 2	-	-	-	-	240	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.7	264.3
HCM LOS			F























Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	53	559	-	-	759	-
HCM Lane V/C Ratio	2.393	0.492	-	-	0.36	-
HCM Control Delay (s)	\$ 800.1	17.5	-	-	12.4	-
HCM Lane LOS	F	C	-	-	B	-
HCM 95th %tile Q(veh)	12.9	2.7	-	-	1.6	-

Notes

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

HCM 2010 Signalized Intersection Summary
2: Rialto Avenue & Rancho Ave

Year 2021 Without Detour
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	292	124	115	409	56	155	245	118	101	225	57
Future Volume (veh/h)	55	292	124	115	409	56	155	245	118	101	225	57
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	60	321	136	126	449	62	170	269	130	111	247	63
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	326	815	338	344	1044	143	522	888	754	511	683	174
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.49	0.49	0.49	0.49	0.49	0.49
Sat Flow, veh/h	853	2358	979	896	3022	415	1026	1800	1530	946	1385	353
Grp Volume(v), veh/h	60	231	226	126	253	258	170	269	130	111	0	310
Grp Sat Flow(s),veh/h/ln	853	1710	1627	896	1710	1727	1026	1800	1530	946	0	1738
Q Serve(g_s), s	3.2	5.7	5.9	6.9	6.3	6.4	6.8	5.0	2.6	4.4	0.0	6.1
Cycle Q Clear(g_c), s	9.7	5.7	5.9	12.8	6.3	6.4	13.0	5.0	2.6	9.4	0.0	6.1
Prop In Lane	1.00		0.60	1.00		0.24	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	326	591	562	344	591	597	522	888	754	511	0	857
V/C Ratio(X)	0.18	0.39	0.40	0.37	0.43	0.43	0.33	0.30	0.17	0.22	0.00	0.36
Avail Cap(c_a), veh/h	390	721	686	412	721	728	522	888	754	511	0	857
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	0.00	1.00
Uniform Delay (d), s/veh	17.8	13.8	13.9	18.7	14.0	14.0	12.7	8.4	7.8	11.2	0.0	8.7
Incr Delay (d2), s/veh	0.3	0.4	0.5	0.7	0.5	0.5	1.7	0.9	0.5	1.0	0.0	1.2
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	2.8	2.7	1.8	3.0	3.1	2.2	2.7	1.2	1.3	0.0	3.2
LnGrp Delay(d),s/veh	18.0	14.2	14.3	19.4	14.5	14.5	14.4	9.3	8.3	12.2	0.0	9.9
LnGrp LOS	B	B	B	B	B	B	B	A	A	B		A
Approach Vol, veh/h		517			637			569				421
Approach Delay, s/veh		14.7			15.5			10.6				10.5
Approach LOS		B			B			B				B
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		32.0		23.8		32.0		23.8				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		27.5		23.5		27.5		23.5				
Max Q Clear Time (g_c+I1), s		15.0		11.7		11.4		14.8				
Green Ext Time (p_c), s		4.4		5.5		5.0		4.5				
Intersection Summary												
HCM 2010 Ctrl Delay				13.0								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
3: 4th St & Foothill Blvd

Year 2021 Without Detour
PM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑		↵	↑↑	↵			
Traffic Volume (veh/h)	948	76	36	810	82	32		
Future Volume (veh/h)	948	76	36	810	82	32		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1800	1800	1700	1800	1800	1800		
Adj Flow Rate, veh/h	988	79	38	844	85	33		
Adj No. of Lanes	2	0	1	2	0	0		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96		
Percent Heavy Veh, %	0	0	0	0	0	0		
Cap, veh/h	1779	142	317	1897	326	126		
Arrive On Green	0.55	0.55	0.55	0.55	0.27	0.27		
Sat Flow, veh/h	3298	256	507	3510	1185	460		
Grp Volume(v), veh/h	527	540	38	844	119	0		
Grp Sat Flow(s),veh/h/ln	1710	1755	507	1710	1660	0		
Q Serve(g_s), s	10.5	10.5	2.7	7.7	3.0	0.0		
Cycle Q Clear(g_c), s	10.5	10.5	13.2	7.7	3.0	0.0		
Prop In Lane		0.15	1.00		0.71	0.28		
Lane Grp Cap(c), veh/h	948	973	317	1897	456	0		
V/C Ratio(X)	0.56	0.56	0.12	0.44	0.26	0.00		
Avail Cap(c_a), veh/h	1183	1214	387	2366	456	0		
HCM Platoon Ratio	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	0.00		
Uniform Delay (d), s/veh	7.6	7.6	11.8	6.9	14.9	0.0		
Incr Delay (d2), s/veh	0.5	0.5	0.2	0.2	1.4	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	5.0	5.1	0.4	3.6	1.5	0.0		
LnGrp Delay(d),s/veh	8.1	8.1	12.0	7.1	16.3	0.0		
LnGrp LOS	A	A	B	A	B			
Approach Vol, veh/h	1067			882	119			
Approach Delay, s/veh	8.1			7.3	16.3			
Approach LOS	A			A	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		19.0		33.8				33.8
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		14.5		36.5				36.5
Max Q Clear Time (g_c+l1), s		5.0		12.5				15.2
Green Ext Time (p_c), s		0.2		15.3				14.1
Intersection Summary								
HCM 2010 Ctrl Delay			8.2					
HCM 2010 LOS			A					
Notes								

HCM 2010 Signalized Intersection Summary
4: 5th Street & Medical Center Dr

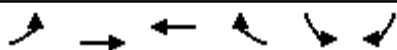
Year 2021 Without Detour
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	737	4	7	606	96	3	9	7	129	14	145
Future Volume (veh/h)	126	737	4	7	606	96	3	9	7	129	14	145
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	134	784	4	7	645	102	3	10	7	137	15	154
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	254	1424	7	30	798	126	116	312	190	551	54	461
Arrive On Green	0.16	0.41	0.41	0.02	0.27	0.27	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	1619	3489	18	1619	2960	467	125	942	575	1293	163	1392
Grp Volume(v), veh/h	134	384	404	7	372	375	20	0	0	152	0	154
Grp Sat Flow(s),veh/h/ln	1619	1710	1797	1619	1710	1718	1642	0	0	1456	0	1392
Q Serve(g_s), s	4.2	9.5	9.5	0.2	11.3	11.3	0.0	0.0	0.0	3.8	0.0	4.6
Cycle Q Clear(g_c), s	4.2	9.5	9.5	0.2	11.3	11.3	0.4	0.0	0.0	4.3	0.0	4.6
Prop In Lane	1.00		0.01	1.00		0.27	0.15		0.35	0.90		1.00
Lane Grp Cap(c), veh/h	254	698	733	30	461	463	617	0	0	605	0	461
V/C Ratio(X)	0.53	0.55	0.55	0.23	0.81	0.81	0.03	0.00	0.00	0.25	0.00	0.33
Avail Cap(c_a), veh/h	294	698	733	291	553	556	617	0	0	605	0	461
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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.5	12.6	12.6	26.9	19.0	19.0	12.6	0.0	0.0	13.8	0.0	14.0
Incr Delay (d2), s/veh	1.7	0.9	0.9	3.9	7.4	7.5	0.1	0.0	0.0	1.0	0.0	2.0
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	4.7	4.9	0.1	6.2	6.3	0.2	0.0	0.0	1.9	0.0	2.0
LnGrp Delay(d),s/veh	23.2	13.5	13.5	30.9	26.3	26.4	12.7	0.0	0.0	14.8	0.0	16.0
LnGrp LOS	C	B	B	C	C	C	B			B		B
Approach Vol, veh/h		922			754			20			306	
Approach Delay, s/veh		14.9			26.4			12.7			15.4	
Approach LOS		B			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.9	5.5	27.2		22.9	13.2	19.5				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.4	10.0	18.1		18.4	10.1	18.0				
Max Q Clear Time (g_c+l1), s		2.4	2.2	11.5		6.6	6.2	13.3				
Green Ext Time (p_c), s		1.7	0.0	4.5		1.5	0.1	1.6				
Intersection Summary												
HCM 2010 Ctrl Delay				19.3								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
5: Rialto Avenue & Santa Fe Ave

Year 2021 Without Detour
PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	35	390	485	32	133	36		
Future Volume (veh/h)	35	390	485	32	133	36		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1700	1800	1800	1800	1800	1800		
Adj Flow Rate, veh/h	37	411	511	34	140	38		
Adj No. of Lanes	1	2	2	1	0	0		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	0	0	0	0	0	0		
Cap, veh/h	313	1098	1098	491	649	176		
Arrive On Green	0.32	0.32	0.32	0.32	0.50	0.50		
Sat Flow, veh/h	827	3510	3510	1530	1308	355		
Grp Volume(v), veh/h	37	411	511	34	179	0		
Grp Sat Flow(s),veh/h/ln	827	1710	1710	1530	1672	0		
Q Serve(g_s), s	1.8	4.6	5.9	0.8	3.0	0.0		
Cycle Q Clear(g_c), s	7.7	4.6	5.9	0.8	3.0	0.0		
Prop In Lane	1.00			1.00	0.78	0.21		
Lane Grp Cap(c), veh/h	313	1098	1098	491	830	0		
V/C Ratio(X)	0.12	0.37	0.47	0.07	0.22	0.00		
Avail Cap(c_a), veh/h	491	1837	1837	822	830	0		
HCM Platoon Ratio	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	0.00		
Uniform Delay (d), s/veh	16.5	12.9	13.4	11.6	7.0	0.0		
Incr Delay (d2), s/veh	0.2	0.2	0.3	0.1	0.6	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	10.4	2.1	2.8	0.3	1.5	0.0		
LnGrp Delay(d),s/veh	16.6	13.1	13.7	11.7	7.6	0.0		
LnGrp LOS	B	B	B	B	A			
Approach Vol, veh/h		448	545		179			
Approach Delay, s/veh		13.4	13.6		7.6			
Approach LOS		B	B		A			
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				20.3		29.0		20.3
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				26.5		24.5		26.5
Max Q Clear Time (g_c+l1), s				9.7		5.0		7.9
Green Ext Time (p_c), s				6.1		0.5		6.4
Intersection Summary								
HCM 2010 Ctrl Delay			12.6					
HCM 2010 LOS			B					
Notes								

HCM 2010 Signalized Intersection Summary
6: Cabrera Ave & 5th Street

Year 2021 Without Detour
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	868	7	22	711	9	9	2	25	4	3	3
Future Volume (veh/h)	10	868	7	22	711	9	9	2	25	4	3	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	10	895	7	23	733	9	9	2	26	4	3	3
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	339	1549	12	285	1541	19	186	75	417	298	220	181
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	688	3478	27	593	3460	42	263	195	1083	528	570	470
Grp Volume(v), veh/h	10	440	462	23	362	380	37	0	0	10	0	0
Grp Sat Flow(s),veh/h/ln	688	1710	1795	593	1710	1793	1541	0	0	1568	0	0
Q Serve(g_s), s	0.6	10.2	10.2	1.6	7.9	7.9	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	8.5	10.2	10.2	11.8	7.9	7.9	0.8	0.0	0.0	0.2	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.02	0.24		0.70	0.40		0.30
Lane Grp Cap(c), veh/h	339	762	800	285	762	798	678	0	0	699	0	0
V/C Ratio(X)	0.03	0.58	0.58	0.08	0.48	0.48	0.05	0.00	0.00	0.01	0.00	0.00
Avail Cap(c_a), veh/h	427	981	1029	361	981	1028	678	0	0	699	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	13.4	11.0	11.0	15.4	10.4	10.4	10.3	0.0	0.0	10.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.7	0.1	0.5	0.4	0.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	4.9	5.2	0.3	3.8	4.0	0.4	0.0	0.0	0.1	0.0	0.0
LnGrp Delay(d),s/veh	13.4	11.7	11.7	15.6	10.8	10.8	10.4	0.0	0.0	10.1	0.0	0.0
LnGrp LOS	B	B	B	B	B	B	B			B		
Approach Vol, veh/h		912			765			37			10	
Approach Delay, s/veh		11.7			11.0			10.4			10.1	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		25.0		28.2		25.0		28.2				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		20.5		30.5		20.5		30.5				
Max Q Clear Time (g_c+I1), s		2.8		12.2		2.2		13.8				
Green Ext Time (p_c), s		0.1		10.5		0.2		9.9				
Intersection Summary												
HCM 2010 Ctrl Delay				11.3								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
7: Mt. Vernon Avenue & 5th Street

Year 2021 Without Detour
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	606	107	77	610	118	142	535	85	127	420	89
Future Volume (veh/h)	95	606	107	77	610	118	142	535	85	127	420	89
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	98	625	110	79	629	122	146	552	88	131	433	92
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	122	1106	194	98	1046	202	303	1084	172	259	1031	217
Arrive On Green	0.08	0.38	0.38	0.06	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1619	2909	511	1619	2859	554	842	2957	470	757	2812	593
Grp Volume(v), veh/h	98	367	368	79	376	375	146	318	322	131	262	263
Grp Sat Flow(s),veh/h/ln	1619	1710	1710	1619	1710	1702	842	1710	1717	757	1710	1695
Q Serve(g_s), s	4.6	13.2	13.2	3.8	13.9	14.0	12.3	11.3	11.4	12.7	8.9	9.1
Cycle Q Clear(g_c), s	4.6	13.2	13.2	3.8	13.9	14.0	21.3	11.3	11.4	24.1	8.9	9.1
Prop In Lane	1.00		0.30	1.00		0.33	1.00		0.27	1.00		0.35
Lane Grp Cap(c), veh/h	122	650	650	98	625	623	303	627	629	259	627	621
V/C Ratio(X)	0.81	0.56	0.57	0.81	0.60	0.60	0.48	0.51	0.51	0.50	0.42	0.42
Avail Cap(c_a), veh/h	145	650	650	125	625	623	313	647	650	269	647	642
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	35.5	19.0	19.1	36.1	20.1	20.1	26.5	19.2	19.2	28.6	18.5	18.5
Incr Delay (d2), s/veh	23.6	3.5	3.5	25.2	4.2	4.3	1.2	0.6	0.6	1.5	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	6.9	6.9	2.4	7.3	7.3	2.9	5.4	5.5	2.8	4.3	4.3
LnGrp Delay(d),s/veh	59.1	22.6	22.6	61.4	24.3	24.4	27.7	19.8	19.9	30.1	18.9	19.0
LnGrp LOS	E	C	C	E	C	C	C	B	B	C	B	B
Approach Vol, veh/h		833			830			786			656	
Approach Delay, s/veh		26.9			27.9			21.3			21.2	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.0	35.1		34.1	9.9	34.0		34.1				
Change Period (Y+Rc), s	4.0	5.5		5.5	4.0	5.5		5.5				
Max Green Setting (Gmax), s	29.5	29.5		29.5	7.0	28.5		29.5				
Max Q Clear Time (g_c+I), s	15.2	15.2		26.1	6.6	16.0		23.3				
Green Ext Time (p_c), s	0.0	8.0		2.5	0.0	7.3		4.2				
Intersection Summary												
HCM 2010 Ctrl Delay				24.5								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary
 8: Mt. Vernon Avenue & 2nd Street

Year 2021 Without Detour
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕			↕			↕	
Traffic Volume (veh/h)	12	7	21	196	3	203	14	550	176	133	462	17
Future Volume (veh/h)	12	7	21	196	3	203	14	550	176	133	462	17
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	13	7	22	208	0	0	15	579	0	140	486	18
Adj No. of Lanes	0	1	0	2	1	0	0	2	0	0	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	114	67	123	619	267	0	33	1319	0	179	660	25
Arrive On Green	0.15	0.15	0.15	0.15	0.00	0.00	0.39	0.39	0.00	0.24	0.24	0.24
Sat Flow, veh/h	297	455	827	2650	1800	0	85	3511	0	735	2706	104
Grp Volume(v), veh/h	42	0	0	208	0	0	318	276	0	336	0	308
Grp Sat Flow(s),veh/h/ln	580	0	0	1325	1800	0	1796	1710	0	1763	0	1782
Q Serve(g_s), s	0.0	0.0	0.0	3.0	0.0	0.0	8.9	8.0	0.0	12.0	0.0	10.7
Cycle Q Clear(g_c), s	1.5	0.0	0.0	4.5	0.0	0.0	8.9	8.0	0.0	12.0	0.0	10.7
Prop In Lane	0.31		0.52	1.00		0.00	0.05		0.00	0.42		0.06
Lane Grp Cap(c), veh/h	304	0	0	619	267	0	692	659	0	430	0	435
V/C Ratio(X)	0.14	0.00	0.00	0.34	0.00	0.00	0.46	0.42	0.00	0.78	0.00	0.71
Avail Cap(c_a), veh/h	578	0	0	1091	587	0	692	659	0	575	0	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(l)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.1	0.0	0.0	26.3	0.0	0.0	15.5	15.2	0.0	23.8	0.0	23.3
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.3	0.0	0.0	2.2	1.9	0.0	4.9	0.0	2.6
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	10.7	0.0	0.0	1.8	0.0	0.0	4.8	4.1	0.0	6.4	0.0	5.5
LnGrp Delay(d),s/veh	25.3	0.0	0.0	26.6	0.0	0.0	17.7	17.1	0.0	28.7	0.0	25.9
LnGrp LOS	C			C			B	B		C		C
Approach Vol, veh/h		42			208			594			644	
Approach Delay, s/veh		25.3			26.6			17.4			27.4	
Approach LOS		C			C			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		31.0		15.0		21.5		15.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		26.0		22.0		22.0		22.0				
Max Q Clear Time (g_c+l1), s		10.9		3.5		14.0		6.5				
Green Ext Time (p_c), s		3.2		0.9		2.5		0.8				
Intersection Summary												
HCM 2010 Ctrl Delay				23.2								
HCM 2010 LOS				C								
Notes												

HCM 2010 Signalized Intersection Summary
 9: Mt. Vernon Avenue & Rialto Avenue

Year 2021 Without Detour
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	97	278	81	90	284	67	70	588	70	36	500	144
Future Volume (veh/h)	97	278	81	90	284	67	70	588	70	36	500	144
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	101	290	84	94	296	70	73	612	73	38	521	150
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	351	796	226	347	834	194	419	1551	185	416	1322	379
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.50	0.50	0.50	0.50	0.50	0.50
Sat Flow, veh/h	975	2630	748	968	2755	642	735	3079	367	726	2625	752
Grp Volume(v), veh/h	101	187	187	94	182	184	73	339	346	38	339	332
Grp Sat Flow(s),veh/h/ln	975	1710	1668	968	1710	1687	735	1710	1735	726	1710	1667
Q Serve(g_s), s	4.7	4.4	4.6	4.4	4.3	4.4	3.5	6.3	6.4	1.8	6.3	6.4
Cycle Q Clear(g_c), s	9.1	4.4	4.6	8.9	4.3	4.4	9.9	6.3	6.4	8.1	6.3	6.4
Prop In Lane	1.00		0.45	1.00		0.38	1.00		0.21	1.00		0.45
Lane Grp Cap(c), veh/h	351	517	505	347	517	510	419	861	874	416	861	840
V/C Ratio(X)	0.29	0.36	0.37	0.27	0.35	0.36	0.17	0.39	0.40	0.09	0.39	0.40
Avail Cap(c_a), veh/h	509	795	776	504	795	784	419	861	874	416	861	840
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	17.6	14.1	14.1	17.6	14.0	14.1	11.0	7.9	7.9	10.5	7.9	7.9
Incr Delay (d2), s/veh	0.4	0.4	0.5	0.4	0.4	0.4	0.9	1.4	1.3	0.4	1.3	1.4
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	1.3	2.1	2.1	1.2	2.1	2.1	0.8	3.2	3.3	0.4	3.2	3.2
LnGrp Delay(d),s/veh	18.1	14.5	14.6	18.1	14.5	14.5	11.9	9.3	9.3	10.9	9.3	9.3
LnGrp LOS	B	B	B	B	B	B	B	A	A	B	A	A
Approach Vol, veh/h		475			460			758			709	
Approach Delay, s/veh		15.3			15.2			9.5			9.4	
Approach LOS		B			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		31.0		20.6		31.0		20.6				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		26.0		24.0		26.0		24.0				
Max Q Clear Time (g_c+I1), s		11.9		11.1		10.1		10.9				
Green Ext Time (p_c), s		7.9		4.5		8.5		4.6				
Intersection Summary												
HCM 2010 Ctrl Delay				11.7								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 10: L St & 5th Street

Year 2021 Without Detour
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	825	0	4	787	80	14	4	23	97	0	19
Future Volume (veh/h)	12	825	0	4	787	80	14	4	23	97	0	19
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	12	851	0	4	811	82	14	4	24	100	0	20
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	278	1502	0	290	1378	139	251	97	346	584	11	95
Arrive On Green	0.44	0.44	0.00	0.44	0.44	0.44	0.40	0.40	0.40	0.40	0.00	0.40
Sat Flow, veh/h	598	3510	0	622	3137	317	411	246	876	1170	27	239
Grp Volume(v), veh/h	12	851	0	4	442	451	42	0	0	120	0	0
Grp Sat Flow(s),veh/h/ln	598	1710	0	622	1710	1744	1533	0	0	1436	0	0
Q Serve(g_s), s	0.8	10.1	0.0	0.3	10.6	10.6	0.0	0.0	0.0	2.0	0.0	0.0
Cycle Q Clear(g_c), s	11.5	10.1	0.0	10.4	10.6	10.6	0.9	0.0	0.0	2.8	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.18	0.33		0.57	0.83		0.17
Lane Grp Cap(c), veh/h	278	1502	0	290	751	766	694	0	0	689	0	0
V/C Ratio(X)	0.04	0.57	0.00	0.01	0.59	0.59	0.06	0.00	0.00	0.17	0.00	0.00
Avail Cap(c_a), veh/h	340	1855	0	354	927	946	694	0	0	689	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.9	11.4	0.0	15.3	11.5	11.5	10.2	0.0	0.0	10.8	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.3	0.0	0.0	0.7	0.7	0.2	0.0	0.0	0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	4.8	0.0	0.0	5.1	5.2	0.4	0.0	0.0	1.3	0.0	0.0
LnGrp Delay(d),s/veh	15.9	11.7	0.0	15.3	12.3	12.3	10.4	0.0	0.0	11.3	0.0	0.0
LnGrp LOS	B	B		B	B	B	B			B		
Approach Vol, veh/h		863			897			42			120	
Approach Delay, s/veh		11.8			12.3			10.4			11.3	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		26.0		28.4		26.0		28.4				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		21.5		29.5		21.5		29.5				
Max Q Clear Time (g_c+1), s		2.9		13.5		4.8		12.6				
Green Ext Time (p_c), s		0.8		10.4		0.7		10.8				
Intersection Summary												
HCM 2010 Ctrl Delay				12.0								
HCM 2010 LOS				B								

Intersection																
Intersection Delay, s/veh	12.5															
Intersection LOS	B															

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations		↖	↕			↖	↕				↕			↖	↕	
Traffic Vol, veh/h	0	3	280	37	0	50	300	35	0	63	7	33	0	107	7	5
Future Vol, veh/h	0	3	280	37	0	50	300	35	0	63	7	33	0	107	7	5
Peak Hour Factor	0.95	0.89	0.89	0.89	0.95	0.89	0.89	0.89	0.95	0.89	0.89	0.89	0.95	0.89	0.89	0.89
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	3	315	42	0	56	337	39	0	71	8	37	0	120	8	6
Number of Lanes	0	1	2	0	0	1	2	0	0	0	1	0	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	3	3
HCM Control Delay	12.6	12.4	12.3	12.8
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	61%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	7%	0%	100%	72%	0%	100%	74%	0%	58%
Vol Right, %	32%	0%	0%	28%	0%	0%	26%	0%	42%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	103	3	187	130	50	200	135	107	12
LT Vol	63	3	0	0	50	0	0	107	0
Through Vol	7	0	187	93	0	200	100	0	7
RT Vol	33	0	0	37	0	0	35	0	5
Lane Flow Rate	116	3	210	146	56	225	152	120	13
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.234	0.007	0.383	0.259	0.108	0.402	0.263	0.256	0.026
Departure Headway (Hd)	7.29	7.082	6.574	6.373	6.942	6.434	6.25	7.676	6.879
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	490	503	545	561	514	557	572	465	517
Service Time	5.085	4.859	4.351	4.149	4.718	4.21	4.026	5.47	4.673
HCM Lane V/C Ratio	0.237	0.006	0.385	0.26	0.109	0.404	0.266	0.258	0.025
HCM Control Delay	12.3	9.9	13.4	11.4	10.6	13.5	11.3	13.1	9.9
HCM Lane LOS	B	A	B	B	B	B	B	B	A
HCM 95th-tile Q	0.9	0	1.8	1	0.4	1.9	1	1	0.1

HCM 2010 Signalized Intersection Summary
 12: K St & Rialto Avenue

Year 2021 Without Detour
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (veh/h)	21	366	39	75	411	16	55	73	116	12	51	46
Future Volume (veh/h)	21	366	39	75	411	16	55	73	116	12	51	46
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	22	389	41	80	437	17	59	78	123	13	54	49
Adj No. of Lanes	0	2	0	0	2	0	0	1	0	0	1	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	86	872	90	158	755	30	126	166	262	27	110	100
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.34	0.34	0.34	0.14	0.14	0.14
Sat Flow, veh/h	71	2947	303	272	2551	102	373	493	778	187	776	704
Grp Volume(v), veh/h	238	0	214	265	0	269	260	0	0	116	0	0
Grp Sat Flow(s),veh/h/ln	737	0	1585	1305	0	1620	1644	0	0	1666	0	0
Q Serve(g_s), s	0.0	0.0	6.6	4.9	0.0	8.4	7.5	0.0	0.0	3.9	0.0	0.0
Cycle Q Clear(g_c), s	6.4	0.0	6.6	11.6	0.0	8.4	7.5	0.0	0.0	3.9	0.0	0.0
Prop In Lane	0.09		0.19	0.30		0.06	0.23		0.47	0.11		0.42
Lane Grp Cap(c), veh/h	579	0	469	464	0	479	555	0	0	237	0	0
V/C Ratio(X)	0.41	0.00	0.46	0.57	0.00	0.56	0.47	0.00	0.00	0.49	0.00	0.00
Avail Cap(c_a), veh/h	726	0	608	590	0	622	555	0	0	501	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.2	0.0	17.2	18.7	0.0	17.9	15.7	0.0	0.0	23.8	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.7	1.1	0.0	1.0	2.8	0.0	0.0	1.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	0.0	2.9	4.0	0.0	3.9	3.8	0.0	0.0	1.9	0.0	0.0
LnGrp Delay(d),s/veh	17.6	0.0	17.9	19.9	0.0	18.9	18.5	0.0	0.0	25.3	0.0	0.0
LnGrp LOS	B		B	B		B	B			C		
Approach Vol, veh/h		452			534			260			116	
Approach Delay, s/veh		17.8			19.4			18.5			25.3	
Approach LOS		B			B			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.8		22.3		13.1		22.3				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		20.3		23.1		18.1		23.1				
Max Q Clear Time (g_c+1), s		9.5		8.6		5.9		13.6				
Green Ext Time (p_c), s		1.1		5.4		0.4		4.2				
Intersection Summary												
HCM 2010 Ctrl Delay				19.2								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
 13: I St & 2nd Street

Year 2021 Without Detour
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	536	5	17	466	7	5	2	50	8	0	4
Future Volume (veh/h)	0	536	5	17	466	7	5	2	50	8	0	4
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	0	596	6	19	518	8	6	2	56	9	0	4
Adj No. of Lanes	1	2	0	1	2	0	0	1	1	0	1	1
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	151	983	10	76	1462	23	496	147	593	593	0	593
Arrive On Green	0.00	0.28	0.28	0.05	0.42	0.42	0.39	0.39	0.39	0.39	0.00	0.39
Sat Flow, veh/h	841	3469	35	1619	3447	53	941	379	1530	1142	0	1530
Grp Volume(v), veh/h	0	294	308	19	257	269	8	0	56	9	0	4
Grp Sat Flow(s),veh/h/ln	841	1710	1794	1619	1710	1791	1320	0	1530	1142	0	1530
Q Serve(g_s), s	0.0	7.1	7.1	0.5	4.9	4.9	0.0	0.0	1.1	0.2	0.0	0.1
Cycle Q Clear(g_c), s	0.0	7.1	7.1	0.5	4.9	4.9	3.2	0.0	1.1	3.3	0.0	0.1
Prop In Lane	1.00		0.02	1.00		0.03	0.75		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	151	484	508	76	725	760	643	0	593	593	0	593
V/C Ratio(X)	0.00	0.61	0.61	0.25	0.35	0.35	0.01	0.00	0.09	0.02	0.00	0.01
Avail Cap(c_a), veh/h	229	644	676	339	1164	1219	643	0	593	593	0	593
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	14.8	14.8	22.0	9.3	9.3	9.1	0.0	9.3	11.0	0.0	9.0
Incr Delay (d2), s/veh	0.0	1.2	1.2	1.7	0.3	0.3	0.0	0.0	0.3	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.5	3.7	0.3	2.3	2.5	0.1	0.0	0.5	0.1	0.0	0.0
LnGrp Delay(d),s/veh	0.0	16.0	16.0	23.7	9.6	9.6	9.1	0.0	9.6	11.0	0.0	9.0
LnGrp LOS		B	B	C	A	A	A		A	B		A
Approach Vol, veh/h		602			545			64			13	
Approach Delay, s/veh		16.0			10.1			9.6			10.4	
Approach LOS		B			B			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		23.0	6.7	18.0		23.0		24.8				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.5	10.0	18.0		18.5		32.5				
Max Q Clear Time (g_c+1), s		5.2	2.5	9.1		5.3		6.9				
Green Ext Time (p_c), s		0.2	0.0	4.4		0.2		7.7				
Intersection Summary												
HCM 2010 Ctrl Delay				13.0								
HCM 2010 LOS				B								

Intersection

Int Delay, s/veh 0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	408	505	39	0	18
Future Vol, veh/h	0	408	505	39	0	18
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	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	429	532	41	0	19



















Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	286
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	6.9
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	3.3
Pot Cap-1 Maneuver	0	-	717
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	717
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

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

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	717
HCM Lane V/C Ratio	-	-	-	0.026
HCM Control Delay (s)	-	-	-	10.2
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.1

HCM 2010 Signalized Intersection Summary
 15: I-215 SB Ramps & 5th Street

Year 2021 Without Detour
 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	629	392	504	843	0	0	0	0	220	3	181
Future Volume (veh/h)	0	629	392	504	843	0	0	0	0	220	3	181
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1800	1800	1600	1800	0				1700	1800	1800
Adj Flow Rate, veh/h	0	684	426	548	916	0				301	0	132
Adj No. of Lanes	0	4	0	2	2	0				2	0	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1249	412	690	1999	0				812	0	384
Arrive On Green	0.00	0.27	0.27	0.23	0.58	0.00				0.25	0.00	0.25
Sat Flow, veh/h	0	4896	1530	2956	3510	0				3238	0	1530
Grp Volume(v), veh/h	0	684	426	548	916	0				301	0	132
Grp Sat Flow(s),veh/h/ln	0	1548	1530	1478	1710	0				1619	0	1530
Q Serve(g_s), s	0.0	6.9	14.7	9.5	8.3	0.0				4.2	0.0	3.9
Cycle Q Clear(g_c), s	0.0	6.9	14.7	9.5	8.3	0.0				4.2	0.0	3.9
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1249	412	690	1999	0				812	0	384
V/C Ratio(X)	0.00	0.55	1.04	0.79	0.46	0.00				0.37	0.00	0.34
Avail Cap(c_a), veh/h	0	1249	412	979	2334	0				812	0	384
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	17.1	20.0	19.7	6.4	0.0				16.9	0.0	16.8
Incr Delay (d2), s/veh	0.0	0.5	53.7	3.0	0.2	0.0				1.3	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.0	12.2	4.2	3.9	0.0				2.0	0.0	1.9
LnGrp Delay(d),s/veh	0.0	17.6	73.7	22.7	6.6	0.0				18.2	0.0	19.2
LnGrp LOS		B	F	C	A					B		B
Approach Vol, veh/h		1110			1464						433	
Approach Delay, s/veh		39.1			12.6						18.5	
Approach LOS		D			B						B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			17.2	19.2		18.2		36.4				
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s			18.1	14.7		13.7		37.3				
Max Q Clear Time (g_c+I1), s			11.5	16.7		6.2		10.3				
Green Ext Time (p_c), s			1.2	0.0		1.0		17.3				
Intersection Summary												
HCM 2010 Ctrl Delay			23.3									
HCM 2010 LOS			C									
Notes												

HCM 2010 Signalized Intersection Summary
 16: I-215 SB Ramps & 2nd Street

Year 2021 Without Detour
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑					↑	↑↑	
Traffic Volume (veh/h)	0	393	201	684	294	0	0	0	0	159	191	196
Future Volume (veh/h)	0	393	201	684	294	0	0	0	0	159	191	196
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1800	1800	1600	1800	0				1700	1800	1800
Adj Flow Rate, veh/h	0	437	223	760	327	0				177	212	218
Adj No. of Lanes	0	3	1	2	2	0				1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1200	374	897	2170	0				312	346	294
Arrive On Green	0.00	0.24	0.24	0.30	0.63	0.00				0.19	0.19	0.19
Sat Flow, veh/h	0	5076	1530	2956	3510	0				1619	1800	1530
Grp Volume(v), veh/h	0	437	223	760	327	0				177	212	218
Grp Sat Flow(s),veh/h/ln	0	1638	1530	1478	1710	0				1619	1800	1530
Q Serve(g_s), s	0.0	3.8	6.7	12.5	2.0	0.0				5.2	5.6	7.0
Cycle Q Clear(g_c), s	0.0	3.8	6.7	12.5	2.0	0.0				5.2	5.6	7.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1200	374	897	2170	0				312	346	294
V/C Ratio(X)	0.00	0.36	0.60	0.85	0.15	0.00				0.57	0.61	0.74
Avail Cap(c_a), veh/h	0	1702	530	1052	2698	0				312	346	294
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	16.3	17.4	17.0	3.8	0.0				19.0	19.2	19.8
Incr Delay (d2), s/veh	0.0	0.2	1.5	5.8	0.0	0.0				7.3	7.8	15.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.8	2.9	5.8	0.9	0.0				2.9	3.5	4.2
LnGrp Delay(d),s/veh	0.0	16.5	18.9	22.8	3.9	0.0				26.3	27.1	35.2
LnGrp LOS		B	B	C	A					C	C	D
Approach Vol, veh/h		660			1087						607	
Approach Delay, s/veh		17.3			17.1						29.8	
Approach LOS		B			B						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			20.3	17.2		14.5		37.5				
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s			18.5	18.0		10.0		41.0				
Max Q Clear Time (g_c+I1), s			14.5	8.7		9.0		4.0				
Green Ext Time (p_c), s			1.2	4.0		0.4		7.0				
Intersection Summary												
HCM 2010 Ctrl Delay			20.4									
HCM 2010 LOS			C									
Notes												

HCM 2010 Signalized Intersection Summary
 17: I-215 NB Ramps & 5th Street

Year 2021 Without Detour
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	218	631	0	0	952	659	395	4	452	0	0	0
Future Volume (veh/h)	218	631	0	0	952	659	395	4	452	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1600	1800	0	0	1800	1800	1700	1800	1800			
Adj Flow Rate, veh/h	240	693	0	0	1046	724	600	0	322			
Adj No. of Lanes	2	2	0	0	4	1	2	0	1			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	489	2123	0	0	2349	580	737	0	348			
Arrive On Green	0.17	0.62	0.00	0.00	0.38	0.38	0.23	0.00	0.23			
Sat Flow, veh/h	2956	3510	0	0	6444	1530	3238	0	1530			
Grp Volume(v), veh/h	240	693	0	0	1046	724	600	0	322			
Grp Sat Flow(s),veh/h/ln	1478	1710	0	0	1548	1530	1619	0	1530			
Q Serve(g_s), s	4.4	5.7	0.0	0.0	7.5	22.5	10.4	0.0	12.2			
Cycle Q Clear(g_c), s	4.4	5.7	0.0	0.0	7.5	22.5	10.4	0.0	12.2			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	489	2123	0	0	2349	580	737	0	348			
V/C Ratio(X)	0.49	0.33	0.00	0.00	0.45	1.25	0.81	0.00	0.92			
Avail Cap(c_a), veh/h	523	2162	0	0	2349	580	737	0	348			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	22.5	5.4	0.0	0.0	13.7	18.4	21.7	0.0	22.4			
Incr Delay (d2), s/veh	0.8	0.1	0.0	0.0	0.1	125.2	9.6	0.0	32.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.8	2.6	0.0	0.0	3.2	29.5	5.6	0.0	8.2			
LnGrp Delay(d),s/veh	23.2	5.4	0.0	0.0	13.9	143.6	31.3	0.0	54.8			
LnGrp LOS	C	A			B	F	C		D			
Approach Vol, veh/h		933			1770			922				
Approach Delay, s/veh		10.0			66.9			39.5				
Approach LOS		B			E			D				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		18.0		41.3			14.3	27.0				
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5				
Max Green Setting (Gmax), s		13.5		37.5			10.5	22.5				
Max Q Clear Time (g_c+I1), s		14.2		7.7			6.4	24.5				
Green Ext Time (p_c), s		0.0		20.1			0.3	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				45.3								
HCM 2010 LOS				D								
Notes												

HCM 2010 Signalized Intersection Summary
 18: I-215 NB Ramps & 2nd Street

Year 2021 Without Detour
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑			↑↑↑↑	↗	↖	↕	↗			
Traffic Volume (veh/h)	215	337	0	0	848	489	130	39	403	0	0	0
Future Volume (veh/h)	215	337	0	0	848	489	130	39	403	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1600	1800	0	0	1800	1800	1700	1800	1800			
Adj Flow Rate, veh/h	226	355	0	0	893	515	105	0	486			
Adj No. of Lanes	2	2	0	0	4	1	1	0	2			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	548	1809	0	0	3275	809	513	0	970			
Arrive On Green	0.53	0.53	0.00	0.00	0.53	0.53	0.32	0.00	0.32			
Sat Flow, veh/h	670	3510	0	0	6444	1530	1619	0	3060			
Grp Volume(v), veh/h	226	355	0	0	893	515	105	0	486			
Grp Sat Flow(s),veh/h/ln	335	1710	0	0	1548	1530	1619	0	1530			
Q Serve(g_s), s	16.4	3.2	0.0	0.0	4.6	14.0	2.8	0.0	7.5			
Cycle Q Clear(g_c), s	21.0	3.2	0.0	0.0	4.6	14.0	2.8	0.0	7.5			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	548	1809	0	0	3275	809	513	0	970			
V/C Ratio(X)	0.41	0.20	0.00	0.00	0.27	0.64	0.20	0.00	0.50			
Avail Cap(c_a), veh/h	566	1904	0	0	3447	852	513	0	970			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	13.4	7.2	0.0	0.0	7.6	9.8	14.6	0.0	16.2			
Incr Delay (d2), s/veh	0.5	0.1	0.0	0.0	0.0	1.5	0.9	0.0	1.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.5	1.5	0.0	0.0	1.9	6.1	1.4	0.0	3.4			
LnGrp Delay(d),s/veh	13.8	7.3	0.0	0.0	7.6	11.2	15.5	0.0	18.0			
LnGrp LOS	B	A			A	B	B		B			
Approach Vol, veh/h		581			1408			591				
Approach Delay, s/veh		9.8			8.9			17.6				
Approach LOS		A			A			B				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		23.0		35.4				35.4				
Change Period (Y+Rc), s		4.5		4.5				4.5				
Max Green Setting (Gmax), s		18.5		32.5				32.5				
Max Q Clear Time (g_c+l1), s		9.5		23.0				16.0				
Green Ext Time (p_c), s		1.7		7.9				12.6				
Intersection Summary												
HCM 2010 Ctrl Delay				11.1								
HCM 2010 LOS				B								
Notes												

HCM 2010 Signalized Intersection Summary
 19: H St & 5th Street

Year 2021 Without Detour
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	208	782	93	6	1075	18	230	141	25	22	73	306
Future Volume (veh/h)	208	782	93	6	1075	18	230	141	25	22	73	306
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	226	850	101	7	1168	20	250	153	27	24	79	333
Adj No. of Lanes	1	2	1	1	2	0	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	243	1596	886	29	1151	20	434	774	134	396	695	541
Arrive On Green	0.15	0.47	0.47	0.02	0.33	0.33	0.11	0.27	0.27	0.05	0.20	0.20
Sat Flow, veh/h	1619	3420	1530	1619	3441	59	1619	2916	505	1619	3420	1530
Grp Volume(v), veh/h	226	850	101	7	580	608	250	88	92	24	79	333
Grp Sat Flow(s),veh/h/ln	1619	1710	1530	1619	1710	1790	1619	1710	1711	1619	1710	1530
Q Serve(g_s), s	12.4	15.9	2.7	0.4	30.1	30.1	10.1	3.6	3.7	1.0	1.7	16.2
Cycle Q Clear(g_c), s	12.4	15.9	2.7	0.4	30.1	30.1	10.1	3.6	3.7	1.0	1.7	16.2
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	243	1596	886	29	572	599	434	454	454	396	695	541
V/C Ratio(X)	0.93	0.53	0.11	0.24	1.01	1.02	0.58	0.19	0.20	0.06	0.11	0.62
Avail Cap(c_a), veh/h	243	1596	886	180	572	599	434	454	454	495	695	541
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	37.8	17.0	8.5	43.6	30.0	30.0	23.7	25.6	25.7	25.5	29.2	24.1
Incr Delay (d2), s/veh	39.2	0.3	0.1	4.3	41.4	40.6	1.9	1.0	1.0	0.1	0.3	5.2
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	18.2	7.5	1.1	0.2	20.7	21.6	0.9	1.8	1.9	0.5	0.8	7.5
LnGrp Delay(d),s/veh	77.0	17.4	8.6	47.9	71.4	70.6	25.6	26.6	26.7	25.5	29.6	29.2
LnGrp LOS	E	B	A	D	F	F	C	C	C	C	C	C
Approach Vol, veh/h		1177			1195			430			436	
Approach Delay, s/veh		28.1			70.8			26.0			29.1	
Approach LOS		C			E			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.0	28.4	6.1	46.5	14.6	22.8	18.0	34.6				
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	10.0	18.4	10.0	33.6	10.1	18.3	13.5	30.1				
Max Q Clear Time (g_c+I), s	10.0	5.7	2.4	17.9	12.1	18.2	14.4	32.1				
Green Ext Time (p_c), s	0.0	2.3	0.0	11.8	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			43.7									
HCM 2010 LOS			D									

Intersection

Int Delay, s/veh 1.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↕↔		↘	↕↕
Traffic Vol, veh/h	2	68	288	5	10	139
Future Vol, veh/h	2	68	288	5	10	139
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	0	-	-	110	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	84	356	6	12	172

























Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	469	181	0	0	362	0
Stage 1	359	-	-	-	-	-
Stage 2	110	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	528	837	-	-	1208	-
Stage 1	683	-	-	-	-	-
Stage 2	908	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	523	837	-	-	1208	-
Mov Cap-2 Maneuver	523	-	-	-	-	-
Stage 1	683	-	-	-	-	-
Stage 2	899	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	9.9		0		0.5
HCM LOS	A				

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	523	837	1208	-
HCM Lane V/C Ratio	-	-	0.005	0.1	0.01	-
HCM Control Delay (s)	-	-	11.9	9.8	8	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0.3	0	-

HCM 2010 Signalized Intersection Summary
21: H St & 3rd St

Year 2021 Without Detour
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	16	84	48	58	349	5	121	228	61	6	106	33
Future Volume (veh/h)	16	84	48	58	349	5	121	228	61	6	106	33
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	17	89	51	62	371	5	129	243	65	6	113	35
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	66	344	184	171	776	10	669	1156	303	453	789	236
Arrive On Green	0.04	0.16	0.16	0.11	0.22	0.22	0.14	0.43	0.43	0.02	0.30	0.30
Sat Flow, veh/h	1619	2154	1153	1619	3455	47	1619	2683	703	1619	2598	776
Grp Volume(v), veh/h	17	69	71	62	183	193	129	153	155	6	73	75
Grp Sat Flow(s),veh/h/ln	1619	1710	1597	1619	1710	1792	1619	1710	1676	1619	1710	1663
Q Serve(g_s), s	0.6	2.2	2.4	2.2	5.8	5.8	2.8	3.5	3.6	0.2	1.9	2.1
Cycle Q Clear(g_c), s	0.6	2.2	2.4	2.2	5.8	5.8	2.8	3.5	3.6	0.2	1.9	2.1
Prop In Lane	1.00		0.72	1.00		0.03	1.00		0.42	1.00		0.47
Lane Grp Cap(c), veh/h	66	273	255	171	384	402	669	737	722	453	520	505
V/C Ratio(X)	0.26	0.25	0.28	0.36	0.48	0.48	0.19	0.21	0.21	0.01	0.14	0.15
Avail Cap(c_a), veh/h	259	492	460	259	492	516	696	737	722	686	520	505
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	29.1	23.0	23.1	26.0	21.1	21.1	9.4	11.1	11.2	14.5	15.8	15.9
Incr Delay (d2), s/veh	2.0	0.5	0.6	1.3	0.9	0.9	0.1	0.6	0.7	0.0	0.6	0.6
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	1.1	1.1	1.1	2.9	3.0	1.2	1.8	1.8	0.1	1.0	1.0
LnGrp Delay(d),s/veh	31.1	23.5	23.7	27.3	22.0	22.0	9.5	11.8	11.8	14.5	16.4	16.5
LnGrp LOS	C	C	C	C	C	C	A	B	B	B	B	B
Approach Vol, veh/h		157			438			437			154	
Approach Delay, s/veh		24.4			22.7			11.1			16.4	
Approach LOS		C			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.5	31.4	11.1	14.5	13.4	23.5	7.1	18.5				
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	10.0	19.0	10.0	18.0	10.0	19.0	10.0	18.0				
Max Q Clear Time (g_c+1), s	2.2	5.6	4.2	4.4	4.8	4.1	2.6	7.8				
Green Ext Time (p_c), s	0.0	2.2	0.0	2.5	0.1	2.3	0.0	2.2				
Intersection Summary												
HCM 2010 Ctrl Delay			17.8									
HCM 2010 LOS			B									

HCM 2010 Signalized Intersection Summary
22: G St & 2nd Street

Year 2021 Without Detour
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵ ↑↑↑			↵ ↑↑↑			↵ ↑↑		↵ ↑↑			
Traffic Volume (veh/h)	76	519	71	73	1031	86	196	258	68	54	142	49
Future Volume (veh/h)	76	519	71	73	1031	86	196	258	68	54	142	49
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	81	552	76	78	1097	91	209	274	72	57	151	52
Adj No. of Lanes	1	3	0	1	3	0	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	179	1119	152	176	1175	97	548	792	204	462	638	212
Arrive On Green	0.11	0.26	0.26	0.11	0.25	0.25	0.14	0.29	0.29	0.09	0.25	0.25
Sat Flow, veh/h	1619	4377	594	1619	4625	383	1619	2693	695	1619	2523	839
Grp Volume(v), veh/h	81	411	217	78	777	411	209	172	174	57	101	102
Grp Sat Flow(s),veh/h/ln	1619	1638	1695	1619	1638	1732	1619	1710	1677	1619	1710	1652
Q Serve(g_s), s	3.4	7.8	7.9	3.3	16.9	16.9	6.5	5.8	5.9	1.7	3.4	3.6
Cycle Q Clear(g_c), s	3.4	7.8	7.9	3.3	16.9	16.9	6.5	5.8	5.9	1.7	3.4	3.6
Prop In Lane	1.00		0.35	1.00		0.22	1.00		0.41	1.00		0.51
Lane Grp Cap(c), veh/h	179	838	434	176	832	440	548	503	493	462	432	417
V/C Ratio(X)	0.45	0.49	0.50	0.44	0.93	0.93	0.38	0.34	0.35	0.12	0.23	0.25
Avail Cap(c_a), veh/h	222	838	434	222	832	440	553	503	493	532	432	417
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	30.3	23.1	23.1	30.4	26.6	26.6	15.4	20.2	20.2	16.2	21.6	21.7
Incr Delay (d2), s/veh	1.8	0.4	0.9	1.7	17.2	27.2	0.4	1.9	2.0	0.1	1.3	1.4
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	1.6	3.5	3.8	1.6	9.5	11.4	2.9	3.0	3.0	0.8	1.7	1.8
LnGrp Delay(d),s/veh	32.1	23.5	24.0	32.1	43.7	53.8	15.9	22.0	22.2	16.3	22.9	23.1
LnGrp LOS	C	C	C	C	D	D	B	C	C	B	C	C
Approach Vol, veh/h		709			1266			555			260	
Approach Delay, s/veh		24.6			46.3			19.8			21.5	
Approach LOS		C			D			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.3	25.9	12.4	23.1	14.4	22.9	12.6	23.0				
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	10.0	18.5	10.0	18.5	10.1	18.4	10.0	18.5				
Max Q Clear Time (g_c+I), s	10.0	7.9	5.3	9.9	8.5	5.6	5.4	18.9				
Green Ext Time (p_c), s	0.0	2.4	0.1	6.5	0.1	2.7	0.1	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				33.2								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary
 23: G St & Rialto Avenue

Year 2021 Without Detour
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	295	20	38	426	154	19	151	33	65	89	48
Future Volume (veh/h)	60	295	20	38	426	154	19	151	33	65	89	48
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	64	314	21	40	453	164	20	161	35	69	95	51
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	303	1167	78	428	885	318	171	1192	249	629	1034	521
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.47	0.47	0.47	0.47	0.47	0.47
Sat Flow, veh/h	773	3255	217	1003	2468	886	191	2540	531	1139	2203	1111
Grp Volume(v), veh/h	64	164	171	40	313	304	114	0	102	69	72	74
Grp Sat Flow(s),veh/h/ln	773	1710	1762	1003	1710	1644	1718	0	1544	1139	1710	1604
Q Serve(g_s), s	3.7	3.6	3.6	1.5	7.5	7.6	0.0	0.0	2.0	1.9	1.2	1.3
Cycle Q Clear(g_c), s	11.3	3.6	3.6	5.1	7.5	7.6	1.9	0.0	2.0	3.9	1.2	1.3
Prop In Lane	1.00		0.12	1.00		0.54	0.18		0.34	1.00		0.69
Lane Grp Cap(c), veh/h	303	613	632	428	613	589	887	0	724	629	802	752
V/C Ratio(X)	0.21	0.27	0.27	0.09	0.51	0.52	0.13	0.00	0.14	0.11	0.09	0.10
Avail Cap(c_a), veh/h	418	868	894	578	868	834	887	0	724	629	802	752
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	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.6	11.9	11.9	13.7	13.1	13.2	7.9	0.0	7.9	9.0	7.7	7.7
Incr Delay (d2), s/veh	0.3	0.2	0.2	0.1	0.7	0.7	0.3	0.0	0.4	0.4	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.8	1.7	1.7	0.4	3.6	3.5	1.0	0.0	0.9	0.7	0.6	0.6
LnGrp Delay(d),s/veh	18.0	12.1	12.1	13.8	13.8	13.9	8.2	0.0	8.3	9.3	7.9	8.0
LnGrp LOS	B	B	B	B	B	B	A		A	A	A	A
Approach Vol, veh/h		399			657			216			215	
Approach Delay, s/veh		13.1			13.8			8.2			8.4	
Approach LOS		B			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		29.0		23.2		29.0		23.2				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		24.5		26.5		24.5		26.5				
Max Q Clear Time (g_c+l1), s		4.0		13.3		5.9		9.6				
Green Ext Time (p_c), s		2.3		5.4		2.2		6.2				
Intersection Summary												
HCM 2010 Ctrl Delay				12.0								
HCM 2010 LOS				B								

Year 2021 With Detour Conditions

AM PEAK HOUR

Intersection

Int Delay, s/veh 24.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑	↑
Traffic Vol, veh/h	578	155	260	453	100	238
Future Vol, veh/h	578	155	260	453	100	238
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	225	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	628	168	283	492	109	259

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	797
Stage 1	-	-	713
Stage 2	-	-	811
Critical Hdwy	-	-	4.1
Critical Hdwy Stg 1	-	-	5.8
Critical Hdwy Stg 2	-	-	5.8
Follow-up Hdwy	-	-	2.2
Pot Cap-1 Maneuver	-	-	834
Stage 1	-	-	452
Stage 2	-	-	403
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	834
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	452
Stage 2	-	-	266

Approach	EB	WB	NB
HCM Control Delay, s	0	4.2	122.3
HCM LOS			F























Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	73	607	-	-	834	-
HCM Lane V/C Ratio	1.489	0.426	-	-	0.339	-
HCM Control Delay (s)	\$ 376.8	15.3	-	-	11.5	-
HCM Lane LOS	F	C	-	-	B	-
HCM 95th %tile Q(veh)	9	2.1	-	-	1.5	-

Notes

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

HCM 2010 Signalized Intersection Summary
2: Rialto Avenue & Rancho Ave

Year 2021 With Detour
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	369	135	67	210	80	68	176	173	106	225	57
Future Volume (veh/h)	40	369	135	67	210	80	68	176	173	106	225	57
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	42	388	142	71	221	84	72	185	182	112	237	60
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	402	804	290	303	799	295	552	905	769	571	697	177
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.50	0.50	0.50	0.50	0.50	0.50
Sat Flow, veh/h	1031	2463	890	838	2447	903	1038	1800	1530	974	1387	351
Grp Volume(v), veh/h	42	268	262	71	152	153	72	185	182	112	0	297
Grp Sat Flow(s),veh/h/ln	1031	1710	1643	838	1710	1641	1038	1800	1530	974	0	1738
Q Serve(g_s), s	1.7	6.6	6.7	3.9	3.5	3.6	2.4	3.0	3.5	3.8	0.0	5.4
Cycle Q Clear(g_c), s	5.3	6.6	6.7	10.6	3.5	3.6	7.8	3.0	3.5	6.8	0.0	5.4
Prop In Lane	1.00		0.54	1.00		0.55	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	402	558	536	303	558	535	552	905	769	571	0	874
V/C Ratio(X)	0.10	0.48	0.49	0.23	0.27	0.29	0.13	0.20	0.24	0.20	0.00	0.34
Avail Cap(c_a), veh/h	545	795	764	419	795	763	552	905	769	571	0	874
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	0.00	1.00
Uniform Delay (d), s/veh	15.2	14.2	14.2	18.5	13.1	13.2	10.2	7.3	7.4	9.1	0.0	7.9
Incr Delay (d2), s/veh	0.1	0.6	0.7	0.4	0.3	0.3	0.5	0.5	0.7	0.8	0.0	1.1
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	3.2	3.2	0.9	1.6	1.7	0.7	1.6	1.6	1.1	0.0	2.8
LnGrp Delay(d),s/veh	15.3	14.8	14.9	18.9	13.4	13.5	10.7	7.8	8.1	9.9	0.0	8.9
LnGrp LOS	B	B	B	B	B	B	B	A	A	A		A
Approach Vol, veh/h		572			376			439				409
Approach Delay, s/veh		14.9			14.5			8.4				9.2
Approach LOS		B			B			A				A
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		31.0		21.7		31.0		21.7				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		26.5		24.5		26.5		24.5				
Max Q Clear Time (g_c+I1), s		9.8		8.7		8.8		12.6				
Green Ext Time (p_c), s		4.2		5.3		4.3		4.5				
Intersection Summary												
HCM 2010 Ctrl Delay				11.9								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
3: 4th St & Foothill Blvd

Year 2021 With Detour
AM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑		↵	↑↑	↵			
Traffic Volume (veh/h)	731	85	51	625	88	25		
Future Volume (veh/h)	731	85	51	625	88	25		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1800	1800	1700	1800	1800	1800		
Adj Flow Rate, veh/h	786	91	55	672	95	27		
Adj No. of Lanes	2	0	1	2	0	0		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	0	0	0	0	0	0		
Cap, veh/h	1539	178	340	1704	419	119		
Arrive On Green	0.50	0.50	0.50	0.50	0.32	0.32		
Sat Flow, veh/h	3179	358	607	3510	1290	367		
Grp Volume(v), veh/h	435	442	55	672	123	0		
Grp Sat Flow(s),veh/h/ln	1710	1737	607	1710	1671	0		
Q Serve(g_s), s	8.7	8.7	3.4	6.2	2.7	0.0		
Cycle Q Clear(g_c), s	8.7	8.7	12.1	6.2	2.7	0.0		
Prop In Lane		0.21	1.00		0.77	0.22		
Lane Grp Cap(c), veh/h	852	865	340	1704	542	0		
V/C Ratio(X)	0.51	0.51	0.16	0.39	0.23	0.00		
Avail Cap(c_a), veh/h	1161	1179	450	2322	542	0		
HCM Platoon Ratio	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	0.00		
Uniform Delay (d), s/veh	8.6	8.6	12.7	8.0	12.5	0.0		
Incr Delay (d2), s/veh	0.5	0.5	0.2	0.1	1.0	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	4.1	4.2	0.6	2.9	1.4	0.0		
LnGrp Delay(d),s/veh	9.1	9.1	12.9	8.1	13.5	0.0		
LnGrp LOS	A	A	B	A	B			
Approach Vol, veh/h	877			727	123			
Approach Delay, s/veh	9.1			8.5	13.5			
Approach LOS	A			A	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		21.0		29.8				29.8
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		16.5		34.5				34.5
Max Q Clear Time (g_c+I1), s		4.7		10.7				14.1
Green Ext Time (p_c), s		0.2		12.2				11.2
Intersection Summary								
HCM 2010 Ctrl Delay			9.1					
HCM 2010 LOS			A					
Notes								

HCM 2010 Signalized Intersection Summary
 4: 5th Street & Medical Center Dr

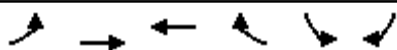
Year 2021 With Detour
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	584	8	5	438	154	2	6	8	99	10	132
Future Volume (veh/h)	118	584	8	5	438	154	2	6	8	99	10	132
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	126	621	9	5	466	164	2	6	9	105	11	140
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	257	1363	20	22	621	217	103	230	289	568	53	471
Arrive On Green	0.16	0.39	0.39	0.01	0.25	0.25	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	1619	3451	50	1619	2488	869	81	679	855	1299	157	1392
Grp Volume(v), veh/h	126	308	322	5	319	311	17	0	0	116	0	140
Grp Sat Flow(s),veh/h/ln	1619	1710	1791	1619	1710	1647	1614	0	0	1456	0	1392
Q Serve(g_s), s	3.8	7.1	7.1	0.2	9.2	9.3	0.0	0.0	0.0	2.6	0.0	3.9
Cycle Q Clear(g_c), s	3.8	7.1	7.1	0.2	9.2	9.3	0.4	0.0	0.0	3.0	0.0	3.9
Prop In Lane	1.00		0.03	1.00		0.53	0.12		0.53	0.91		1.00
Lane Grp Cap(c), veh/h	257	675	707	22	427	411	621	0	0	621	0	471
V/C Ratio(X)	0.49	0.46	0.46	0.23	0.75	0.76	0.03	0.00	0.00	0.19	0.00	0.30
Avail Cap(c_a), veh/h	319	675	707	304	578	557	621	0	0	621	0	471
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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.4	11.9	11.9	26.0	18.4	18.5	11.8	0.0	0.0	12.6	0.0	13.0
Incr Delay (d2), s/veh	1.4	0.5	0.5	5.3	3.6	4.0	0.1	0.0	0.0	0.7	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	3.4	3.6	0.1	4.7	4.7	0.2	0.0	0.0	1.3	0.0	1.7
LnGrp Delay(d),s/veh	21.9	12.4	12.3	31.3	22.0	22.5	11.9	0.0	0.0	13.3	0.0	14.6
LnGrp LOS	C	B	B	C	C	C	B			B		B
Approach Vol, veh/h		756			635			17			256	
Approach Delay, s/veh		13.9			22.3			11.9			14.0	
Approach LOS		B			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.5	5.2	25.5		22.5	12.9	17.8				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.0	10.0	18.5		18.0	10.5	18.0				
Max Q Clear Time (g_c+I1), s		2.4	2.2	9.1		5.9	5.8	11.3				
Green Ext Time (p_c), s		1.4	0.0	5.2		1.2	0.1	2.0				
Intersection Summary												
HCM 2010 Ctrl Delay				17.1								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
5: Rialto Avenue & Santa Fe Ave

Year 2021 With Detour
AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	22	540	254	39	62	33		
Future Volume (veh/h)	22	540	254	39	62	33		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1700	1800	1800	1800	1800	1800		
Adj Flow Rate, veh/h	26	628	295	45	72	38		
Adj No. of Lanes	1	2	2	1	0	0		
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86		
Percent Heavy Veh, %	0	0	0	0	0	0		
Cap, veh/h	453	1199	1199	536	475	251		
Arrive On Green	0.35	0.35	0.35	0.35	0.44	0.44		
Sat Flow, veh/h	998	3510	3510	1530	1068	564		
Grp Volume(v), veh/h	26	628	295	45	111	0		
Grp Sat Flow(s),veh/h/ln	998	1710	1710	1530	1647	0		
Q Serve(g_s), s	0.8	6.4	2.7	0.9	1.8	0.0		
Cycle Q Clear(g_c), s	3.5	6.4	2.7	0.9	1.8	0.0		
Prop In Lane	1.00			1.00	0.65	0.34		
Lane Grp Cap(c), veh/h	453	1199	1199	536	732	0		
V/C Ratio(X)	0.06	0.52	0.25	0.08	0.15	0.00		
Avail Cap(c_a), veh/h	820	2455	2455	1098	732	0		
HCM Platoon Ratio	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	0.00		
Uniform Delay (d), s/veh	11.4	11.3	10.1	9.5	7.3	0.0		
Incr Delay (d2), s/veh	0.1	0.4	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		
%ile BackOfQ(50%),veh/ln	0.2	3.0	1.3	0.4	0.9	0.0		
LnGrp Delay(d),s/veh	11.4	11.7	10.2	9.6	7.7	0.0		
LnGrp LOS	B	B	B	A	A			
Approach Vol, veh/h		654	340		111			
Approach Delay, s/veh		11.7	10.2		7.7			
Approach LOS		B	B		A			
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				19.9		24.0		19.9
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				31.5		19.5		31.5
Max Q Clear Time (g_c+l1), s				8.4		3.8		4.7
Green Ext Time (p_c), s				7.0		0.2		7.3
Intersection Summary								
HCM 2010 Ctrl Delay			10.8					
HCM 2010 LOS			B					
Notes								

HCM 2010 Signalized Intersection Summary
6: Cabrera Ave & 5th Street

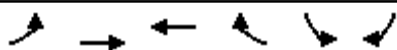
Year 2021 With Detour
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	707	16	24	562	5	11	7	24	12	4	3
Future Volume (veh/h)	7	707	16	24	562	5	11	7	24	12	4	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	8	768	17	26	611	5	12	8	26	13	4	3
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	357	1393	31	296	1416	12	214	159	370	498	149	94
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.42	0.42	0.42	0.42	0.42	0.42
Sat Flow, veh/h	774	3421	76	661	3477	28	300	381	885	915	356	224
Grp Volume(v), veh/h	8	384	401	26	300	316	46	0	0	20	0	0
Grp Sat Flow(s),veh/h/ln	774	1710	1787	661	1710	1795	1566	0	0	1496	0	0
Q Serve(g_s), s	0.4	8.8	8.8	1.6	6.5	6.5	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	6.9	8.8	8.8	10.4	6.5	6.5	0.9	0.0	0.0	0.3	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.02	0.26		0.57	0.65		0.15
Lane Grp Cap(c), veh/h	357	696	728	296	696	731	743	0	0	740	0	0
V/C Ratio(X)	0.02	0.55	0.55	0.09	0.43	0.43	0.06	0.00	0.00	0.03	0.00	0.00
Avail Cap(c_a), veh/h	486	980	1024	406	980	1029	743	0	0	740	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	13.4	11.7	11.7	15.6	11.0	11.0	9.0	0.0	0.0	8.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.7	0.1	0.4	0.4	0.2	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	4.3	4.5	0.3	3.1	3.2	0.4	0.0	0.0	0.2	0.0	0.0
LnGrp Delay(d),s/veh	13.5	12.3	12.3	15.8	11.4	11.4	9.1	0.0	0.0	8.9	0.0	0.0
LnGrp LOS	B	B	B	B	B	B	A			A		
Approach Vol, veh/h		793			642			46			20	
Approach Delay, s/veh		12.3			11.6			9.1			8.9	
Approach LOS		B			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		26.0		25.5		26.0		25.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		21.5		29.5		21.5		29.5				
Max Q Clear Time (g_c+1), s		2.9		10.8		2.3		12.4				
Green Ext Time (p_c), s		0.2		9.0		0.2		8.5				
Intersection Summary												
HCM 2010 Ctrl Delay				11.9								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
7: 5th Street & Mt. Vernon Avenue

Year 2021 With Detour
AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↖	↗	↗		↖	↖		
Traffic Volume (veh/h)	54	759	590	368	494	65		
Future Volume (veh/h)	54	759	590	368	494	65		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1700	1800	1800	1800	1700	1800		
Adj Flow Rate, veh/h	56	791	615	383	515	68		
Adj No. of Lanes	1	2	2	0	1	1		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96		
Percent Heavy Veh, %	0	0	0	0	0	0		
Cap, veh/h	75	1725	819	510	563	532		
Arrive On Green	0.05	0.50	0.40	0.40	0.35	0.35		
Sat Flow, veh/h	1619	3510	2116	1262	1619	1530		
Grp Volume(v), veh/h	56	791	519	479	515	68		
Grp Sat Flow(s),veh/h/ln	1619	1710	1710	1577	1619	1530		
Q Serve(g_s), s	2.5	11.1	19.3	19.3	22.6	2.3		
Cycle Q Clear(g_c), s	2.5	11.1	19.3	19.3	22.6	2.3		
Prop In Lane	1.00			0.80	1.00	1.00		
Lane Grp Cap(c), veh/h	75	1725	692	638	563	532		
V/C Ratio(X)	0.75	0.46	0.75	0.75	0.91	0.13		
Avail Cap(c_a), veh/h	109	1725	692	638	686	648		
HCM Platoon Ratio	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		
Uniform Delay (d), s/veh	35.0	11.9	18.9	18.9	23.2	16.6		
Incr Delay (d2), s/veh	15.2	0.9	7.3	7.9	15.0	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.5	5.4	10.5	9.8	12.4	2.3		
LnGrp Delay(d),s/veh	50.3	12.8	26.3	26.9	38.2	16.7		
LnGrp LOS	D	B	C	C	D	B		
Approach Vol, veh/h		847	998		583			
Approach Delay, s/veh		15.2	26.6		35.7			
Approach LOS		B	C		D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		43.0		31.3	7.4	35.6		
Change Period (Y+Rc), s		5.5		5.5	4.0	5.5		
Max Green Setting (Gmax), s		37.5		31.5	5.0	28.5		
Max Q Clear Time (g_c+l1), s		13.1		24.6	4.5	21.3		
Green Ext Time (p_c), s		14.2		1.2	0.0	5.6		
Intersection Summary								
HCM 2010 Ctrl Delay			24.8					
HCM 2010 LOS			C					

HCM 2010 Signalized Intersection Summary
8: Mt. Vernon Avenue & 2nd Street

Year 2021 With Detour
AM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations								
Traffic Volume (veh/h)	16	6	149	5	19	137		
Future Volume (veh/h)	16	6	149	5	19	137		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1800	1800	1700	1800	1700	1800		
Adj Flow Rate, veh/h	18	7	173	0	22	0		
Adj No. of Lanes	1	0	2	1	1	1		
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88		
Percent Heavy Veh, %	0	0	0	0	0	0		
Cap, veh/h	268	104	860	391	915	865		
Arrive On Green	0.22	0.22	0.22	0.00	0.57	0.00		
Sat Flow, veh/h	1235	480	2659	1800	1619	1530		
Grp Volume(v), veh/h	0	25	173	0	22	0		
Grp Sat Flow(s),veh/h/ln	0	1715	1330	1800	1619	1530		
Q Serve(g_s), s	0.0	0.5	2.5	0.0	0.3	0.0		
Cycle Q Clear(g_c), s	0.0	0.5	3.1	0.0	0.3	0.0		
Prop In Lane		0.28	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	0	373	860	391	915	865		
V/C Ratio(X)	0.00	0.07	0.20	0.00	0.02	0.00		
Avail Cap(c_a), veh/h	0	895	1670	939	915	865		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00		
Uniform Delay (d), s/veh	0.0	14.3	15.5	0.0	4.4	0.0		
Incr Delay (d2), s/veh	0.0	0.1	0.1	0.0	0.0	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.0	0.3	1.0	0.0	0.1	0.0		
LnGrp Delay(d),s/veh	0.0	14.4	15.6	0.0	4.5	0.0		
LnGrp LOS		B	B		A			
Approach Vol, veh/h	25			173	22			
Approach Delay, s/veh	14.4			15.6	4.5			
Approach LOS	B			B	A			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		31.0		15.0				15.0
Change Period (Y+Rc), s		5.0		5.0				5.0
Max Green Setting (Gmax), s		26.0		24.0				24.0
Max Q Clear Time (g_c+l1), s		2.3		2.5				5.1
Green Ext Time (p_c), s		0.0		0.7				0.7
Intersection Summary								
HCM 2010 Ctrl Delay			14.4					
HCM 2010 LOS			B					
Notes								

HCM 2010 Signalized Intersection Summary
 9: Mt. Vernon Avenue & Rialto Avenue

Year 2021 With Detour
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	356	51	472	126	38	61	10	323	32	25	109
Future Volume (veh/h)	85	356	51	472	126	38	61	10	323	32	25	109
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	101	424	61	562	150	45	73	12	385	38	30	130
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	816	2003	286	614	1744	507	256	380	340	80	380	340
Arrive On Green	0.67	0.67	0.67	0.67	0.67	0.67	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1140	3005	430	874	2616	760	1176	1710	1530	947	1710	1530
Grp Volume(v), veh/h	101	240	245	562	96	99	73	12	385	38	30	130
Grp Sat Flow(s),veh/h/ln	1140	1710	1724	874	1710	1666	1176	1710	1530	947	1710	1530
Q Serve(g_s), s	3.1	4.9	5.0	55.0	1.8	1.9	5.1	0.5	20.0	0.0	1.3	6.5
Cycle Q Clear(g_c), s	5.0	4.9	5.0	60.0	1.8	1.9	11.6	0.5	20.0	20.0	1.3	6.5
Prop In Lane	1.00		0.25	1.00		0.46	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	816	1140	1149	614	1140	1111	256	380	340	80	380	340
V/C Ratio(X)	0.12	0.21	0.21	0.91	0.08	0.09	0.28	0.03	1.13	0.47	0.08	0.38
Avail Cap(c_a), veh/h	816	1140	1149	614	1140	1111	256	380	340	80	380	340
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	6.2	5.8	5.8	18.8	5.3	5.3	34.7	27.4	35.0	45.0	27.7	29.8
Incr Delay (d2), s/veh	0.1	0.1	0.1	18.4	0.0	0.0	2.8	0.2	89.6	18.9	0.4	3.2
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	2.3	2.3	17.0	0.8	0.9	1.8	0.2	16.9	1.4	0.6	3.1
LnGrp Delay(d),s/veh	6.3	5.9	5.9	37.3	5.3	5.3	37.4	27.6	124.6	63.9	28.1	33.0
LnGrp LOS	A	A	A	D	A	A	D	C	F	E	C	C
Approach Vol, veh/h		586			757			470			198	
Approach Delay, s/veh		6.0			29.1			108.6			38.2	
Approach LOS		A			C			F			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		25.0		65.0		25.0		65.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		20.0		60.0		20.0		60.0				
Max Q Clear Time (g_c+I1), s		22.0		7.0		22.0		62.0				
Green Ext Time (p_c), s		0.0		11.5		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				41.8								
HCM 2010 LOS				D								

HCM 2010 Signalized Intersection Summary
 10: L St & 5th Street

Year 2021 With Detour
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	1236	16	15	1015	37	9	2	11	68	5	20
Future Volume (veh/h)	8	1236	16	15	1015	37	9	2	11	68	5	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	9	1405	18	17	1153	42	10	2	12	77	6	23
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	242	1798	23	190	1750	64	261	74	249	440	43	105
Arrive On Green	0.52	0.52	0.52	0.52	0.52	0.52	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	449	3458	44	361	3366	123	534	225	759	1021	132	319
Grp Volume(v), veh/h	9	694	729	17	586	609	24	0	0	106	0	0
Grp Sat Flow(s),veh/h/ln	449	1710	1792	361	1710	1778	1518	0	0	1472	0	0
Q Serve(g_s), s	0.9	19.5	19.5	2.4	14.8	14.9	0.0	0.0	0.0	2.2	0.0	0.0
Cycle Q Clear(g_c), s	15.7	19.5	19.5	21.9	14.8	14.9	0.6	0.0	0.0	3.0	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.07	0.42		0.50	0.73		0.22
Lane Grp Cap(c), veh/h	242	889	932	190	889	925	584	0	0	588	0	0
V/C Ratio(X)	0.04	0.78	0.78	0.09	0.66	0.66	0.04	0.00	0.00	0.18	0.00	0.00
Avail Cap(c_a), veh/h	247	907	951	194	907	944	584	0	0	588	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.2	11.5	11.5	20.4	10.4	10.4	13.6	0.0	0.0	14.3	0.0	0.0
Incr Delay (d2), s/veh	0.1	4.4	4.2	0.2	1.7	1.7	0.1	0.0	0.0	0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	10.1	10.6	0.2	7.3	7.5	0.3	0.0	0.0	1.3	0.0	0.0
LnGrp Delay(d),s/veh	16.2	15.9	15.7	20.6	12.1	12.1	13.7	0.0	0.0	15.0	0.0	0.0
LnGrp LOS	B	B	B	C	B	B	B			B		
Approach Vol, veh/h		1432			1212			24			106	
Approach Delay, s/veh		15.8			12.2			13.7			15.0	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.0		35.4		24.0		35.4				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		19.5		31.5		19.5		31.5				
Max Q Clear Time (g_c+1), s		2.6		21.5		5.0		23.9				
Green Ext Time (p_c), s		0.6		9.0		0.5		7.0				
Intersection Summary												
HCM 2010 Ctrl Delay				14.2								
HCM 2010 LOS				B								

Intersection

Intersection Delay, s/veh 9.7

Intersection LOS A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations		↙ ↕	↕ ↗			↙ ↕	↕ ↗				↕ ↗			↙ ↕	↕ ↗	
Traffic Vol, veh/h	0	6	172	25	0	45	240	60	0	31	2	32	0	17	3	5
Future Vol, veh/h	0	6	172	25	0	45	240	60	0	31	2	32	0	17	3	5
Peak Hour Factor	0.95	0.84	0.84	0.84	0.95	0.84	0.84	0.84	0.95	0.84	0.84	0.84	0.95	0.84	0.84	0.84
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	7	205	30	0	54	286	71	0	37	2	38	0	20	4	6
Number of Lanes	0	1	2	0	0	1	2	0	0	0	1	0	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	3	3
HCM Control Delay	9.6	9.8	9.8	9.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	48%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	3%	0%	100%	70%	0%	100%	57%	0%	38%
Vol Right, %	49%	0%	0%	30%	0%	0%	43%	0%	62%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	65	6	115	82	45	160	140	17	8
LT Vol	31	6	0	0	45	0	0	17	0
Through Vol	2	0	115	57	0	160	80	0	3
RT Vol	32	0	0	25	0	0	60	0	5
Lane Flow Rate	77	7	137	98	54	190	167	20	10
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.133	0.012	0.214	0.148	0.087	0.283	0.234	0.039	0.016
Departure Headway (Hd)	6.168	6.145	5.642	5.429	5.86	5.357	5.056	6.912	5.973
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	584	577	629	654	606	665	703	521	602
Service Time	3.871	3.939	3.436	3.222	3.645	3.143	2.841	4.617	3.678
HCM Lane V/C Ratio	0.132	0.012	0.218	0.15	0.089	0.286	0.238	0.038	0.017
HCM Control Delay	9.8	9	10	9.2	9.2	10.3	9.4	9.9	8.8
HCM Lane LOS	A	A	A	A	A	B	A	A	A
HCM 95th-tile Q	0.5	0	0.8	0.5	0.3	1.2	0.9	0.1	0

HCM 2010 Signalized Intersection Summary
 12: K St & Rialto Avenue

Year 2021 With Detour
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (veh/h)	20	784	48	88	618	7	52	40	126	10	69	24
Future Volume (veh/h)	20	784	48	88	618	7	52	40	126	10	69	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	24	945	58	106	745	8	63	48	152	12	83	29
Adj No. of Lanes	0	2	0	0	2	0	0	1	0	0	1	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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	65	1546	94	144	1121	13	86	66	208	19	134	47
Arrive On Green	0.49	0.49	0.49	0.49	0.49	0.49	0.22	0.22	0.22	0.12	0.12	0.12
Sat Flow, veh/h	36	3124	189	176	2265	27	387	295	934	167	1152	402
Grp Volume(v), veh/h	536	0	491	369	0	490	263	0	0	124	0	0
Grp Sat Flow(s),veh/h/ln	745	0	1605	834	0	1633	1616	0	0	1721	0	0
Q Serve(g_s), s	0.0	0.0	18.0	17.3	0.0	17.5	12.2	0.0	0.0	5.6	0.0	0.0
Cycle Q Clear(g_c), s	17.3	0.0	18.0	35.3	0.0	17.5	12.2	0.0	0.0	5.6	0.0	0.0
Prop In Lane	0.04		0.12	0.29		0.02	0.24		0.58	0.10		0.23
Lane Grp Cap(c), veh/h	910	0	794	470	0	808	359	0	0	199	0	0
V/C Ratio(X)	0.59	0.00	0.62	0.79	0.00	0.61	0.73	0.00	0.00	0.62	0.00	0.00
Avail Cap(c_a), veh/h	919	0	803	476	0	817	359	0	0	383	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	14.7	0.0	14.9	20.5	0.0	14.7	29.2	0.0	0.0	34.1	0.0	0.0
Incr Delay (d2), s/veh	1.0	0.0	1.4	8.4	0.0	1.3	12.4	0.0	0.0	3.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.7	0.0	8.2	8.8	0.0	8.0	6.7	0.0	0.0	2.8	0.0	0.0
LnGrp Delay(d),s/veh	15.7	0.0	16.3	28.9	0.0	16.0	41.6	0.0	0.0	37.2	0.0	0.0
LnGrp LOS	B		B	C		B	D			D		
Approach Vol, veh/h		1027			859			263			124	
Approach Delay, s/veh		16.0			21.5			41.6			37.2	
Approach LOS		B			C			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		44.6		13.9		44.6				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		40.5		18.0		40.5				
Max Q Clear Time (g_c+I1), s		14.2		20.0		7.6		37.3				
Green Ext Time (p_c), s		0.5		13.5		0.4		2.8				
Intersection Summary												
HCM 2010 Ctrl Delay				22.2								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary
 13: I St & 2nd Street

Year 2021 With Detour
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	358	8	17	418	5	2	0	10	5	2	2
Future Volume (veh/h)	2	358	8	17	418	5	2	0	10	5	2	2
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	2	407	9	19	475	6	2	0	11	6	2	2
Adj No. of Lanes	1	2	0	1	2	0	0	1	1	0	1	1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	371	820	18	76	1339	17	705	0	631	568	169	631
Arrive On Green	0.24	0.24	0.24	0.05	0.39	0.39	0.41	0.00	0.41	0.41	0.41	0.41
Sat Flow, veh/h	877	3421	76	1619	3459	44	1320	0	1530	1037	411	1530
Grp Volume(v), veh/h	2	203	213	19	235	246	2	0	11	8	0	2
Grp Sat Flow(s),veh/h/ln	877	1710	1787	1619	1710	1792	1320	0	1530	1447	0	1530
Q Serve(g_s), s	0.1	4.6	4.6	0.5	4.4	4.4	0.0	0.0	0.2	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	4.6	4.6	0.5	4.4	4.4	1.5	0.0	0.2	1.5	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.02	1.00		1.00	0.75		1.00
Lane Grp Cap(c), veh/h	371	410	428	76	662	694	705	0	631	737	0	631
V/C Ratio(X)	0.01	0.50	0.50	0.25	0.35	0.36	0.00	0.00	0.02	0.01	0.00	0.00
Avail Cap(c_a), veh/h	512	686	717	361	1239	1298	705	0	631	737	0	631
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.0	14.7	14.7	20.6	9.8	9.8	8.6	0.0	7.8	7.8	0.0	7.8
Incr Delay (d2), s/veh	0.0	0.9	0.9	1.7	0.3	0.3	0.0	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.3	2.4	0.3	2.1	2.2	0.0	0.0	0.1	0.1	0.0	0.0
LnGrp Delay(d),s/veh	13.0	15.6	15.6	22.3	10.1	10.1	8.7	0.0	7.9	7.8	0.0	7.8
LnGrp LOS	B	B	B	C	B	B	A		A	A		A
Approach Vol, veh/h		418			500			13			10	
Approach Delay, s/veh		15.6			10.5			8.0			7.8	
Approach LOS		B			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		23.0	6.6	15.3		23.0		21.9				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.5	10.0	18.0		18.5		32.5				
Max Q Clear Time (g_c+1), s		3.5	2.5	6.6		3.5		6.4				
Green Ext Time (p_c), s		0.0	0.0	4.1		0.0		5.9				
Intersection Summary												
HCM 2010 Ctrl Delay				12.7								
HCM 2010 LOS				B								

Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	829	675	7	0	14
Future Vol, veh/h	0	829	675	7	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	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	987	804	8	0	17



















Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	406
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	6.9
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	3.3
Pot Cap-1 Maneuver	0	-	600
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	600
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.2
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	600
HCM Lane V/C Ratio	-	-	-	0.028
HCM Control Delay (s)	-	-	-	11.2
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.1

HCM 2010 Signalized Intersection Summary
 15: I-215 SB Ramps & 5th Street

Year 2021 With Detour
 AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1087	425	296	951	0	0	0	0	667	11	185
Future Volume (veh/h)	0	1087	425	296	951	0	0	0	0	667	11	185
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1800	1800	1600	1800	0				1700	1800	1800
Adj Flow Rate, veh/h	0	1144	447	312	1001	0				768	0	134
Adj No. of Lanes	0	4	0	2	2	0				2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1280	422	491	1768	0				1077	0	509
Arrive On Green	0.00	0.28	0.28	0.17	0.52	0.00				0.33	0.00	0.33
Sat Flow, veh/h	0	4896	1530	2956	3510	0				3238	0	1530
Grp Volume(v), veh/h	0	1144	447	312	1001	0				768	0	134
Grp Sat Flow(s),veh/h/ln	0	1548	1530	1478	1710	0				1619	0	1530
Q Serve(g_s), s	0.0	14.2	16.5	5.9	12.0	0.0				12.4	0.0	3.8
Cycle Q Clear(g_c), s	0.0	14.2	16.5	5.9	12.0	0.0				12.4	0.0	3.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1280	422	491	1768	0				1077	0	509
V/C Ratio(X)	0.00	0.89	1.06	0.64	0.57	0.00				0.71	0.00	0.26
Avail Cap(c_a), veh/h	0	1280	422	499	1777	0				1077	0	509
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(l)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	20.8	21.7	23.3	9.9	0.0				17.5	0.0	14.6
Incr Delay (d2), s/veh	0.0	8.4	60.5	2.6	0.4	0.0				4.0	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.0	13.9	2.6	5.7	0.0				6.1	0.0	1.8
LnGrp Delay(d),s/veh	0.0	29.2	82.1	25.9	10.3	0.0				21.5	0.0	15.9
LnGrp LOS		C	F	C	B					C		B
Approach Vol, veh/h		1591			1313						902	
Approach Delay, s/veh		44.1			14.0						20.7	
Approach LOS		D			B						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			14.4	21.0		24.4		35.4				
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s			10.1	16.5		19.9		31.1				
Max Q Clear Time (g_c+1), s			7.9	18.5		14.4		14.0				
Green Ext Time (p_c), s			0.3	0.0		1.9		14.6				
Intersection Summary												
HCM 2010 Ctrl Delay			28.1									
HCM 2010 LOS			C									
Notes												

HCM 2010 Signalized Intersection Summary
 16: I-215 SB Ramps & 2nd Street

Year 2021 With Detour
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑					↑	↑↑	
Traffic Volume (veh/h)	0	309	74	254	221	0	0	0	0	500	52	229
Future Volume (veh/h)	0	309	74	254	221	0	0	0	0	500	52	229
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1800	1800	1600	1800	0				1700	1800	1800
Adj Flow Rate, veh/h	0	377	90	310	270	0				610	63	279
Adj No. of Lanes	0	3	1	2	2	0				2	1	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82				0.82	0.82	0.82
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	947	295	563	1607	0				1155	103	458
Arrive On Green	0.00	0.19	0.19	0.19	0.47	0.00				0.36	0.36	0.36
Sat Flow, veh/h	0	5076	1530	2956	3510	0				3238	290	1284
Grp Volume(v), veh/h	0	377	90	310	270	0				610	0	342
Grp Sat Flow(s),veh/h/ln	0	1638	1530	1478	1710	0				1619	0	1573
Q Serve(g_s), s	0.0	3.5	2.6	4.9	2.4	0.0				7.7	0.0	9.3
Cycle Q Clear(g_c), s	0.0	3.5	2.6	4.9	2.4	0.0				7.7	0.0	9.3
Prop In Lane	0.00		1.00	1.00		0.00				1.00		0.82
Lane Grp Cap(c), veh/h	0	947	295	563	1607	0				1155	0	561
V/C Ratio(X)	0.00	0.40	0.31	0.55	0.17	0.00				0.53	0.00	0.61
Avail Cap(c_a), veh/h	0	1705	531	570	2142	0				1155	0	561
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	18.3	18.0	19.0	7.9	0.0				13.2	0.0	13.7
Incr Delay (d2), s/veh	0.0	0.3	0.6	1.1	0.0	0.0				1.7	0.0	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.6	1.1	2.1	1.1	0.0				3.7	0.0	4.7
LnGrp Delay(d),s/veh	0.0	18.6	18.5	20.1	8.0	0.0				15.0	0.0	18.6
LnGrp LOS		B	B	C	A					B		B
Approach Vol, veh/h		467			580						952	
Approach Delay, s/veh		18.6			14.4						16.3	
Approach LOS		B			B						B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			14.4	14.5		23.0		28.9				
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s			10.0	18.0		18.5		32.5				
Max Q Clear Time (g_c+I1), s			6.9	5.5		11.3		4.4				
Green Ext Time (p_c), s			0.3	3.7		2.8		5.0				
Intersection Summary												
HCM 2010 Ctrl Delay			16.3									
HCM 2010 LOS			B									
Notes												

HCM 2010 Signalized Intersection Summary
 17: I-215 NB Ramps & 5th Street

Year 2021 With Detour
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑			↑↑↑↑	↗	↖	↕	↗			
Traffic Volume (veh/h)	173	1581	0	0	968	150	279	6	646	0	0	0
Future Volume (veh/h)	173	1581	0	0	968	150	279	6	646	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1600	1800	0	0	1800	1800	1700	1800	1800			
Adj Flow Rate, veh/h	197	1797	0	0	1100	170	214	0	849			
Adj No. of Lanes	2	2	0	0	4	1	1	0	2			
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	366	1940	0	0	2396	592	518	0	979			
Arrive On Green	0.12	0.57	0.00	0.00	0.39	0.39	0.32	0.00	0.32			
Sat Flow, veh/h	2956	3510	0	0	6444	1530	1619	0	3060			
Grp Volume(v), veh/h	197	1797	0	0	1100	170	214	0	849			
Grp Sat Flow(s),veh/h/ln	1478	1710	0	0	1548	1530	1619	0	1530			
Q Serve(g_s), s	5.0	38.2	0.0	0.0	10.6	6.1	8.3	0.0	20.8			
Cycle Q Clear(g_c), s	5.0	38.2	0.0	0.0	10.6	6.1	8.3	0.0	20.8			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	366	1940	0	0	2396	592	518	0	979			
V/C Ratio(X)	0.54	0.93	0.00	0.00	0.46	0.29	0.41	0.00	0.87			
Avail Cap(c_a), veh/h	382	1952	0	0	2396	592	518	0	979			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	32.8	15.7	0.0	0.0	18.2	16.9	21.2	0.0	25.5			
Incr Delay (d2), s/veh	1.4	8.2	0.0	0.0	0.1	0.3	2.4	0.0	10.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.1	19.9	0.0	0.0	4.5	2.6	4.0	0.0	10.1			
LnGrp Delay(d),s/veh	34.2	23.9	0.0	0.0	18.4	17.1	23.7	0.0	35.8			
LnGrp LOS	C	C			B	B	C		D			
Approach Vol, veh/h		1994			1270			1063				
Approach Delay, s/veh		24.9			18.2			33.4				
Approach LOS		C			B			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		30.0		49.7			14.4	35.4				
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5				
Max Green Setting (Gmax), s		25.5		45.5			10.3	30.7				
Max Q Clear Time (g_c+I1), s		22.8		40.2			7.0	12.6				
Green Ext Time (p_c), s		1.3		5.0			0.2	16.7				
Intersection Summary												
HCM 2010 Ctrl Delay				25.0								
HCM 2010 LOS				C								
Notes												

HCM 2010 Signalized Intersection Summary
 18: I-215 NB Ramps & 2nd Street

Year 2021 With Detour
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑			↑↑↑↑	↗	↖	↕	↗			
Traffic Volume (veh/h)	161	648	0	0	341	216	134	142	916	0	0	0
Future Volume (veh/h)	161	648	0	0	341	216	134	142	916	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1600	1800	0	0	1800	1800	1700	1800	1800			
Adj Flow Rate, veh/h	177	712	0	0	375	237	147	0	1111			
Adj No. of Lanes	2	2	0	0	4	1	1	0	2			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	592	989	0	0	1791	443	901	0	1703			
Arrive On Green	0.29	0.29	0.00	0.00	0.29	0.29	0.56	0.00	0.56			
Sat Flow, veh/h	1418	3510	0	0	6444	1530	1619	0	3060			
Grp Volume(v), veh/h	177	712	0	0	375	237	147	0	1111			
Grp Sat Flow(s),veh/h/ln	709	1710	0	0	1548	1530	1619	0	1530			
Q Serve(g_s), s	6.3	10.9	0.0	0.0	2.7	7.6	2.6	0.0	14.8			
Cycle Q Clear(g_c), s	9.0	10.9	0.0	0.0	2.7	7.6	2.6	0.0	14.8			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	592	989	0	0	1791	443	901	0	1703			
V/C Ratio(X)	0.30	0.72	0.00	0.00	0.21	0.54	0.16	0.00	0.65			
Avail Cap(c_a), veh/h	631	1084	0	0	1962	485	901	0	1703			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	19.1	18.6	0.0	0.0	15.7	17.5	6.3	0.0	9.0			
Incr Delay (d2), s/veh	0.3	2.1	0.0	0.0	0.1	1.0	0.4	0.0	2.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.3	5.4	0.0	0.0	1.2	3.3	1.2	0.0	6.6			
LnGrp Delay(d),s/veh	19.4	20.7	0.0	0.0	15.8	18.5	6.7	0.0	11.0			
LnGrp LOS	B	C			B	B	A		B			
Approach Vol, veh/h		889			612			1258				
Approach Delay, s/veh		20.5			16.8			10.5				
Approach LOS		C			B			B				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		37.0		21.4				21.4				
Change Period (Y+Rc), s		4.5		4.5				4.5				
Max Green Setting (Gmax), s		32.5		18.5				18.5				
Max Q Clear Time (g_c+l1), s		16.8		12.9				9.6				
Green Ext Time (p_c), s		5.3		4.0				5.8				
Intersection Summary												
HCM 2010 Ctrl Delay				15.1								
HCM 2010 LOS				B								
Notes												

HCM 2010 Signalized Intersection Summary
 19: H St & 5th Street

Year 2021 With Detour
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗		↖	↗		↖	↗	↘
Traffic Volume (veh/h)	159	1423	645	6	504	34	465	51	30	48	81	149
Future Volume (veh/h)	159	1423	645	6	504	34	465	51	30	48	81	149
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	183	1636	741	7	579	39	534	59	34	55	93	171
Adj No. of Lanes	1	2	1	1	2	0	1	2	0	1	2	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	210	1594	1051	28	1150	77	550	647	346	356	507	425
Arrive On Green	0.13	0.47	0.47	0.02	0.35	0.35	0.22	0.30	0.30	0.07	0.15	0.15
Sat Flow, veh/h	1619	3420	1530	1619	3253	219	1619	2156	1151	1619	3420	1530
Grp Volume(v), veh/h	183	1636	741	7	304	314	534	46	47	55	93	171
Grp Sat Flow(s),veh/h/ln	1619	1710	1530	1619	1710	1761	1619	1710	1597	1619	1710	1530
Q Serve(g_s), s	13.5	56.9	35.9	0.5	17.1	17.1	27.0	2.4	2.6	3.4	2.9	11.1
Cycle Q Clear(g_c), s	13.5	56.9	35.9	0.5	17.1	17.1	27.0	2.4	2.6	3.4	2.9	11.1
Prop In Lane	1.00		1.00	1.00		0.12	1.00		0.72	1.00		1.00
Lane Grp Cap(c), veh/h	210	1594	1051	28	605	623	550	513	479	356	507	425
V/C Ratio(X)	0.87	1.03	0.70	0.25	0.50	0.50	0.97	0.09	0.10	0.15	0.18	0.40
Avail Cap(c_a), veh/h	331	1594	1051	133	605	623	550	513	479	377	507	425
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	52.1	32.6	11.6	59.2	31.0	31.0	36.6	30.7	30.8	38.7	45.5	35.8
Incr Delay (d2), s/veh	13.9	29.6	2.2	4.6	0.7	0.7	30.9	0.3	0.4	0.2	0.8	2.8
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	10.9	33.3	15.5	0.3	8.1	8.4	10.7	1.2	1.2	1.5	1.4	5.0
LnGrp Delay(d),s/veh	66.1	62.2	13.8	63.8	31.7	31.7	67.6	31.1	31.2	38.9	46.3	38.7
LnGrp LOS	E	F	B	E	C	C	E	C	C	D	D	D
Approach Vol, veh/h	2560			625			627			319		
Approach Delay, s/veh	48.5			32.1			62.2			40.9		
Approach LOS	D			C			E			D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	3.0	41.1	6.6	61.4	31.5	22.6	20.3	47.7				
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	10.0	35.1	10.0	56.9	27.0	18.1	25.0	41.9				
Max Q Clear Time (g_c+I), s	4.5	4.6	2.5	58.9	29.0	13.1	15.5	19.1				
Green Ext Time (p_c), s	0.0	1.7	0.0	0.0	0.0	0.7	0.3	19.5				
Intersection Summary												
HCM 2010 Ctrl Delay	47.5											
HCM 2010 LOS	D											

Intersection

Int Delay, s/veh 0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↕↔		↘	↕↕
Traffic Vol, veh/h	2	9	525	2	13	714
Future Vol, veh/h	2	9	525	2	13	714
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	0	-	-	110	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	11	656	3	16	893





















Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1137	329	0	0	659	0
Stage 1	658	-	-	-	-	-
Stage 2	479	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	198	673	-	-	939	-
Stage 1	482	-	-	-	-	-
Stage 2	595	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	195	673	-	-	939	-
Mov Cap-2 Maneuver	195	-	-	-	-	-
Stage 1	482	-	-	-	-	-
Stage 2	585	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	12.8		0		0.2
HCM LOS	B				

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	195	673	939	-
HCM Lane V/C Ratio	-	-	0.013	0.017	0.017	-
HCM Control Delay (s)	-	-	23.7	10.4	8.9	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0.1	0.1	-

HCM 2010 Signalized Intersection Summary
21: H St & 3rd St

Year 2021 With Detour
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	312	194	31	26	3	50	511	32	21	661	10
Future Volume (veh/h)	15	312	194	31	26	3	50	511	32	21	661	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	18	371	231	37	31	4	60	608	38	25	787	12
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	69	476	292	123	814	103	343	1140	71	356	1040	16
Arrive On Green	0.04	0.23	0.23	0.08	0.27	0.27	0.10	0.35	0.35	0.06	0.30	0.30
Sat Flow, veh/h	1619	2039	1250	1619	3055	386	1619	3270	204	1619	3448	53
Grp Volume(v), veh/h	18	310	292	37	17	18	60	318	328	25	390	409
Grp Sat Flow(s),veh/h/ln	1619	1710	1579	1619	1710	1732	1619	1710	1764	1619	1710	1791
Q Serve(g_s), s	0.7	10.7	10.9	1.4	0.5	0.5	1.4	9.4	9.4	0.6	13.0	13.0
Cycle Q Clear(g_c), s	0.7	10.7	10.9	1.4	0.5	0.5	1.4	9.4	9.4	0.6	13.0	13.0
Prop In Lane	1.00		0.79	1.00		0.22	1.00		0.12	1.00		0.03
Lane Grp Cap(c), veh/h	69	400	369	123	456	461	343	596	615	356	516	540
V/C Ratio(X)	0.26	0.78	0.79	0.30	0.04	0.04	0.17	0.53	0.53	0.07	0.76	0.76
Avail Cap(c_a), veh/h	257	489	451	257	489	495	433	596	615	522	516	540
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	22.6	22.7	27.5	17.1	17.1	12.9	16.4	16.4	13.5	19.9	19.9
Incr Delay (d2), s/veh	1.9	6.3	7.6	1.4	0.0	0.0	0.2	3.4	3.3	0.1	9.9	9.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	5.7	5.6	0.7	0.2	0.2	0.6	5.0	5.1	0.3	7.5	7.8
LnGrp Delay(d),s/veh	31.1	28.9	30.3	28.9	17.1	17.2	13.1	19.8	19.7	13.6	29.8	29.4
LnGrp LOS	C	C	C	C	B	B	B	B	B	B	C	C
Approach Vol, veh/h		620			72			706			824	
Approach Delay, s/veh		29.6			23.2			19.2			29.1	
Approach LOS		C			C			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.0	26.5	9.3	19.2	11.0	23.5	7.2	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	10.0	19.0	10.0	18.0	10.0	19.0	10.0	18.0				
Max Q Clear Time (g_c+I1), s	2.6	11.4	3.4	12.9	3.4	15.0	2.7	2.5				
Green Ext Time (p_c), s	0.0	4.9	0.0	1.8	0.0	2.8	0.0	3.6				
Intersection Summary												
HCM 2010 Ctrl Delay			25.9									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
22: G St & 2nd Street

Year 2021 With Detour
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵ ↑↑↑			↵ ↑↑↑			↵ ↑↑		↵ ↑↑			
Traffic Volume (veh/h)	122	1143	256	52	322	41	128	442	57	198	580	86
Future Volume (veh/h)	122	1143	256	52	322	41	128	442	57	198	580	86
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	142	1329	298	60	374	48	149	514	66	230	674	100
Adj No. of Lanes	1	3	0	1	3	0	1	2	0	1	2	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	179	1353	303	142	1388	175	291	756	97	356	774	115
Arrive On Green	0.11	0.34	0.34	0.09	0.31	0.31	0.11	0.25	0.25	0.12	0.26	0.26
Sat Flow, veh/h	1619	4017	900	1619	4422	556	1619	3051	390	1619	2989	443
Grp Volume(v), veh/h	142	1084	543	60	275	147	149	287	293	230	385	389
Grp Sat Flow(s),veh/h/ln	1619	1638	1641	1619	1638	1702	1619	1710	1731	1619	1710	1722
Q Serve(g_s), s	7.5	28.7	28.8	3.1	5.5	5.7	5.7	13.3	13.4	9.1	18.9	18.9
Cycle Q Clear(g_c), s	7.5	28.7	28.8	3.1	5.5	5.7	5.7	13.3	13.4	9.1	18.9	18.9
Prop In Lane	1.00		0.55	1.00		0.33	1.00		0.23	1.00		0.26
Lane Grp Cap(c), veh/h	179	1104	553	142	1028	534	291	424	429	356	443	446
V/C Ratio(X)	0.79	0.98	0.98	0.42	0.27	0.28	0.51	0.68	0.68	0.65	0.87	0.87
Avail Cap(c_a), veh/h	298	1104	553	187	1028	534	297	424	429	356	443	446
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	38.0	28.8	28.8	37.9	22.5	22.6	22.2	29.8	29.8	21.7	31.1	31.1
Incr Delay (d2), s/veh	7.7	22.7	33.8	2.0	0.1	0.3	1.4	8.5	8.5	4.0	20.3	20.4
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	3.7	16.4	18.2	1.4	2.5	2.7	2.6	7.3	7.4	4.4	11.4	11.5
LnGrp Delay(d),s/veh	45.7	51.5	62.6	39.8	22.6	22.8	23.6	38.2	38.3	25.7	51.3	51.4
LnGrp LOS	D	D	E	D	C	C	C	D	D	C	D	D
Approach Vol, veh/h		1769			482			729			1004	
Approach Delay, s/veh		54.4			24.8			35.3			45.5	
Approach LOS		D			C			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.2	26.2	12.2	34.0	14.2	27.2	14.2	32.0				
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	10.5	21.7	10.1	29.5	10.1	22.3	16.1	23.5				
Max Q Clear Time (g_c+I1),s	11.1	15.4	5.1	30.8	7.7	20.9	9.5	7.7				
Green Ext Time (p_c), s	0.0	4.0	0.0	0.0	0.1	1.0	0.2	11.8				
Intersection Summary												
HCM 2010 Ctrl Delay				45.1								
HCM 2010 LOS				D								

HCM 2010 Signalized Intersection Summary
 23: G St & Rialto Avenue

Year 2021 With Detour
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕			↕		↔	↕	
Traffic Volume (veh/h)	396	409	15	35	242	73	2	42	21	166	116	440
Future Volume (veh/h)	396	409	15	35	242	73	2	42	21	166	116	440
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	455	470	17	40	278	84	2	48	24	191	133	506
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	1	2	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	626	1948	70	555	1506	446	58	544	256	447	485	434
Arrive On Green	0.58	0.58	0.58	0.58	0.58	0.58	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	978	3367	122	872	2603	771	0	1920	902	1274	1710	1530
Grp Volume(v), veh/h	455	238	249	40	181	181	35	0	39	191	133	506
Grp Sat Flow(s),veh/h/ln	978	1710	1779	872	1710	1664	1344	0	1479	1274	1710	1530
Q Serve(g_s), s	26.8	4.5	4.5	1.5	3.3	3.4	0.0	0.0	1.3	8.5	3.9	18.5
Cycle Q Clear(g_c), s	30.2	4.5	4.5	6.0	3.3	3.4	18.5	0.0	1.3	9.7	3.9	18.5
Prop In Lane	1.00		0.07	1.00		0.46	0.06		0.61	1.00		1.00
Lane Grp Cap(c), veh/h	626	990	1029	555	990	963	439	0	419	447	485	434
V/C Ratio(X)	0.73	0.24	0.24	0.07	0.18	0.19	0.08	0.00	0.09	0.43	0.27	1.17
Avail Cap(c_a), veh/h	697	1113	1158	618	1113	1083	439	0	419	447	485	434
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	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.6	6.7	6.7	8.2	6.5	6.5	17.3	0.0	17.2	20.8	18.2	23.4
Incr Delay (d2), s/veh	3.4	0.1	0.1	0.1	0.1	0.1	0.4	0.0	0.4	3.0	1.4	97.4
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	7.7	2.1	2.2	0.4	1.5	1.5	0.5	0.0	0.6	3.3	2.0	19.4
LnGrp Delay(d),s/veh	17.0	6.9	6.9	8.3	6.6	6.6	17.6	0.0	17.7	23.8	19.6	120.8
LnGrp LOS	B	A	A	A	A	A	B		B	C	B	F
Approach Vol, veh/h		942			402			74			830	
Approach Delay, s/veh		11.8			6.7			17.6			82.3	
Approach LOS		B			A			B			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		23.0		42.3		23.0		42.3				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.5		42.5		18.5		42.5				
Max Q Clear Time (g_c+I1), s		20.5		32.2		20.5		8.0				
Green Ext Time (p_c), s		0.0		5.6		0.0		9.9				
Intersection Summary												
HCM 2010 Ctrl Delay			37.1									
HCM 2010 LOS			D									

PM PEAK HOUR

Intersection

Int Delay, s/veh 69

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑↑	↑	↑
Traffic Vol, veh/h	757	122	280	627	138	267
Future Vol, veh/h	757	122	280	627	138	267
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	225	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	780	126	289	646	142	275

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	1744
Stage 1	-	-	843
Stage 2	-	-	901
Critical Hdwy	-	4.1	6.8
Critical Hdwy Stg 1	-	-	5.8
Critical Hdwy Stg 2	-	-	5.8
Follow-up Hdwy	-	2.2	3.5
Pot Cap-1 Maneuver	-	759	~ 79
Stage 1	-	-	388
Stage 2	-	-	362
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	759	~ 49
Mov Cap-2 Maneuver	-	-	~ 49
Stage 1	-	-	388
Stage 2	-	-	224

Approach	EB	WB	NB
HCM Control Delay, s	0	3.9	\$ 364.3
HCM LOS			F

























Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	49	559	-	-	759	-
HCM Lane V/C Ratio	2.903	0.492	-	-	0.38	-
HCM Control Delay (s)	\$ 1035.3	17.5	-	-	12.6	-
HCM Lane LOS	F	C	-	-	B	-
HCM 95th %tile Q(veh)	15.2	2.7	-	-	1.8	-

Notes

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

HCM 2010 Signalized Intersection Summary
2: Rialto Avenue & Rancho Ave

Year 2021 With Detour
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (veh/h)	55	292	124	115	424	56	155	245	118	101	225	72
Future Volume (veh/h)	55	292	124	115	424	56	155	245	118	101	225	72
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	60	321	136	126	466	62	170	269	130	111	247	79
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	320	816	339	345	1052	139	507	887	754	510	644	206
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.49	0.49	0.49	0.49	0.49	0.49
Sat Flow, veh/h	840	2358	979	896	3037	402	1011	1800	1530	946	1308	418
Grp Volume(v), veh/h	60	231	226	126	261	267	170	269	130	111	0	326
Grp Sat Flow(s),veh/h/ln	840	1710	1627	896	1710	1729	1011	1800	1530	946	0	1726
Q Serve(g_s), s	3.3	5.7	5.9	6.9	6.6	6.7	7.1	5.0	2.6	4.4	0.0	6.6
Cycle Q Clear(g_c), s	10.0	5.7	5.9	12.8	6.6	6.7	13.7	5.0	2.6	9.4	0.0	6.6
Prop In Lane	1.00		0.60	1.00		0.23	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	320	592	563	345	592	599	507	887	754	510	0	850
V/C Ratio(X)	0.19	0.39	0.40	0.37	0.44	0.45	0.33	0.30	0.17	0.22	0.00	0.38
Avail Cap(c_a), veh/h	382	720	685	412	720	728	507	887	754	510	0	850
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	0.00	1.00
Uniform Delay (d), s/veh	18.0	13.8	13.9	18.7	14.1	14.1	13.1	8.5	7.9	11.3	0.0	8.9
Incr Delay (d2), s/veh	0.3	0.4	0.5	0.6	0.5	0.5	1.8	0.9	0.5	1.0	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	2.8	2.7	1.8	3.1	3.2	2.2	2.7	1.2	1.3	0.0	3.4
LnGrp Delay(d),s/veh	18.2	14.2	14.3	19.4	14.6	14.6	14.9	9.3	8.4	12.2	0.0	10.2
LnGrp LOS	B	B	B	B	B	B	B	A	A	B		B
Approach Vol, veh/h		517			654			569				437
Approach Delay, s/veh		14.7			15.5			10.8				10.7
Approach LOS		B			B			B				B
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		32.0		23.8		32.0		23.8				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		27.5		23.5		27.5		23.5				
Max Q Clear Time (g_c+1), s		15.7		12.0		11.4		14.8				
Green Ext Time (p_c), s		4.4		5.5		5.1		4.5				
Intersection Summary												
HCM 2010 Ctrl Delay				13.1								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
3: 4th St & Foothill Blvd

Year 2021 With Detour
PM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑		↵	↑↑	↵			
Traffic Volume (veh/h)	948	76	36	825	82	32		
Future Volume (veh/h)	948	76	36	825	82	32		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1800	1800	1700	1800	1800	1800		
Adj Flow Rate, veh/h	988	79	38	859	85	33		
Adj No. of Lanes	2	0	1	2	0	0		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96		
Percent Heavy Veh, %	0	0	0	0	0	0		
Cap, veh/h	1782	142	318	1900	325	126		
Arrive On Green	0.56	0.56	0.56	0.56	0.27	0.27		
Sat Flow, veh/h	3298	256	507	3510	1185	460		
Grp Volume(v), veh/h	527	540	38	859	119	0		
Grp Sat Flow(s),veh/h/ln	1710	1755	507	1710	1660	0		
Q Serve(g_s), s	10.5	10.5	2.7	7.9	3.0	0.0		
Cycle Q Clear(g_c), s	10.5	10.5	13.2	7.9	3.0	0.0		
Prop In Lane		0.15	1.00		0.71	0.28		
Lane Grp Cap(c), veh/h	950	975	318	1900	455	0		
V/C Ratio(X)	0.55	0.55	0.12	0.45	0.26	0.00		
Avail Cap(c_a), veh/h	1181	1211	386	2361	455	0		
HCM Platoon Ratio	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	0.00		
Uniform Delay (d), s/veh	7.5	7.5	11.8	7.0	15.0	0.0		
Incr Delay (d2), s/veh	0.5	0.5	0.2	0.2	1.4	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	5.0	5.1	0.4	3.7	1.5	0.0		
LnGrp Delay(d),s/veh	8.1	8.0	12.0	7.1	16.4	0.0		
LnGrp LOS	A	A	B	A	B			
Approach Vol, veh/h	1067			897	119			
Approach Delay, s/veh	8.0			7.3	16.4			
Approach LOS	A			A	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		19.0		33.9				33.9
Change Period (Y+Rc), s		4.5		4.5				4.5
Max Green Setting (Gmax), s		14.5		36.5				36.5
Max Q Clear Time (g_c+l1), s		5.0		12.5				15.2
Green Ext Time (p_c), s		0.2		15.4				14.2
Intersection Summary								
HCM 2010 Ctrl Delay			8.2					
HCM 2010 LOS			A					
Notes								

HCM 2010 Signalized Intersection Summary
4: 5th Street & Medical Center Dr

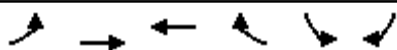
Year 2021 With Detour
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	737	4	7	621	96	3	9	7	129	14	145
Future Volume (veh/h)	126	737	4	7	621	96	3	9	7	129	14	145
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	134	784	4	7	661	102	3	10	7	137	15	154
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	254	1433	7	30	810	125	115	310	189	548	54	458
Arrive On Green	0.16	0.41	0.41	0.02	0.27	0.27	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	1619	3489	18	1619	2971	458	125	942	575	1293	163	1392
Grp Volume(v), veh/h	134	384	404	7	380	383	20	0	0	152	0	154
Grp Sat Flow(s),veh/h/ln	1619	1710	1797	1619	1710	1719	1642	0	0	1456	0	1392
Q Serve(g_s), s	4.3	9.5	9.5	0.2	11.6	11.6	0.0	0.0	0.0	3.8	0.0	4.7
Cycle Q Clear(g_c), s	4.3	9.5	9.5	0.2	11.6	11.6	0.4	0.0	0.0	4.3	0.0	4.7
Prop In Lane	1.00		0.01	1.00		0.27	0.15		0.35	0.90		1.00
Lane Grp Cap(c), veh/h	254	702	738	30	466	468	615	0	0	602	0	458
V/C Ratio(X)	0.53	0.55	0.55	0.23	0.82	0.82	0.03	0.00	0.00	0.25	0.00	0.34
Avail Cap(c_a), veh/h	293	702	738	290	551	554	615	0	0	602	0	458
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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.7	12.5	12.5	27.0	19.0	19.0	12.7	0.0	0.0	14.0	0.0	14.1
Incr Delay (d2), s/veh	1.7	0.9	0.9	4.0	8.0	8.1	0.1	0.0	0.0	1.0	0.0	2.0
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	4.7	4.9	0.1	6.5	6.6	0.2	0.0	0.0	1.9	0.0	2.0
LnGrp Delay(d),s/veh	23.4	13.4	13.4	31.0	27.0	27.1	12.8	0.0	0.0	15.0	0.0	16.1
LnGrp LOS	C	B	B	C	C	C	B			B		B
Approach Vol, veh/h		922			770			20			306	
Approach Delay, s/veh		14.8			27.1			12.8			15.5	
Approach LOS		B			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.9	5.5	27.4		22.9	13.3	19.7				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		18.4	10.0	18.1		18.4	10.1	18.0				
Max Q Clear Time (g_c+l1), s		2.4	2.2	11.5		6.7	6.3	13.6				
Green Ext Time (p_c), s		1.7	0.0	4.6		1.5	0.1	1.6				
Intersection Summary												
HCM 2010 Ctrl Delay				19.6								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
5: Rialto Avenue & Santa Fe Ave

Year 2021 With Detour
PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	35	390	500	32	133	36		
Future Volume (veh/h)	35	390	500	32	133	36		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1700	1800	1800	1800	1800	1800		
Adj Flow Rate, veh/h	37	411	526	34	140	38		
Adj No. of Lanes	1	2	2	1	0	0		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	0	0	0	0	0	0		
Cap, veh/h	310	1112	1112	498	645	175		
Arrive On Green	0.33	0.33	0.33	0.33	0.49	0.49		
Sat Flow, veh/h	815	3510	3510	1530	1308	355		
Grp Volume(v), veh/h	37	411	526	34	179	0		
Grp Sat Flow(s),veh/h/ln	815	1710	1710	1530	1672	0		
Q Serve(g_s), s	1.9	4.6	6.1	0.8	3.0	0.0		
Cycle Q Clear(g_c), s	8.0	4.6	6.1	0.8	3.0	0.0		
Prop In Lane	1.00			1.00	0.78	0.21		
Lane Grp Cap(c), veh/h	310	1112	1112	498	825	0		
V/C Ratio(X)	0.12	0.37	0.47	0.07	0.22	0.00		
Avail Cap(c_a), veh/h	480	1826	1826	817	825	0		
HCM Platoon Ratio	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	0.00		
Uniform Delay (d), s/veh	16.5	12.8	13.4	11.6	7.1	0.0		
Incr Delay (d2), s/veh	0.2	0.2	0.3	0.1	0.6	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	10.4	2.1	2.9	0.3	1.5	0.0		
LnGrp Delay(d),s/veh	16.7	13.1	13.7	11.6	7.7	0.0		
LnGrp LOS	B	B	B	B	A			
Approach Vol, veh/h		448	560		179			
Approach Delay, s/veh		13.4	13.5		7.7			
Approach LOS		B	B		A			
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				20.6		29.0		20.6
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				26.5		24.5		26.5
Max Q Clear Time (g_c+l1), s				10.0		5.0		8.1
Green Ext Time (p_c), s				6.2		0.5		6.5
Intersection Summary								
HCM 2010 Ctrl Delay			12.6					
HCM 2010 LOS			B					
Notes								

HCM 2010 Signalized Intersection Summary
6: Cabrera Ave & 5th Street

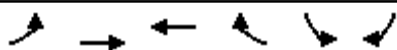
Year 2021 With Detour
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	868	7	22	726	9	9	2	25	4	3	3
Future Volume (veh/h)	10	868	7	22	726	9	9	2	25	4	3	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	10	895	7	23	748	9	9	2	26	4	3	3
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	334	1552	12	286	1544	19	185	75	417	298	219	181
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	679	3478	27	593	3461	42	263	195	1083	528	570	470
Grp Volume(v), veh/h	10	440	462	23	370	387	37	0	0	10	0	0
Grp Sat Flow(s),veh/h/ln	679	1710	1795	593	1710	1793	1541	0	0	1568	0	0
Q Serve(g_s), s	0.6	10.2	10.2	1.6	8.1	8.1	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	8.7	10.2	10.2	11.8	8.1	8.1	0.8	0.0	0.0	0.2	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.02	0.24		0.70	0.40		0.30
Lane Grp Cap(c), veh/h	334	763	801	286	763	800	677	0	0	698	0	0
V/C Ratio(X)	0.03	0.58	0.58	0.08	0.48	0.48	0.05	0.00	0.00	0.01	0.00	0.00
Avail Cap(c_a), veh/h	420	979	1028	361	979	1026	677	0	0	698	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	13.5	11.0	11.0	15.4	10.4	10.4	10.3	0.0	0.0	10.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.7	0.1	0.5	0.5	0.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	4.9	5.2	0.3	3.9	4.1	0.4	0.0	0.0	0.1	0.0	0.0
LnGrp Delay(d),s/veh	13.5	11.7	11.7	15.5	10.9	10.9	10.5	0.0	0.0	10.2	0.0	0.0
LnGrp LOS	B	B	B	B	B	B	B			B		
Approach Vol, veh/h		912			780			37			10	
Approach Delay, s/veh		11.7			11.0			10.5			10.2	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		25.0		28.3		25.0		28.3				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		20.5		30.5		20.5		30.5				
Max Q Clear Time (g_c+1), s		2.8		12.2		2.2		13.8				
Green Ext Time (p_c), s		0.1		10.6		0.2		9.9				
Intersection Summary												
HCM 2010 Ctrl Delay				11.4								
HCM 2010 LOS				B								

HCM 2010 Signalized Intersection Summary
7: 5th Street & Mt. Vernon Avenue

Year 2021 With Detour
PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	95	713	737	653	532	104		
Future Volume (veh/h)	95	713	737	653	532	104		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1700	1800	1800	1800	1700	1800		
Adj Flow Rate, veh/h	98	735	760	673	548	107		
Adj No. of Lanes	1	2	2	0	1	1		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97		
Percent Heavy Veh, %	0	0	0	0	0	0		
Cap, veh/h	108	1790	720	617	573	542		
Arrive On Green	0.07	0.52	0.41	0.41	0.35	0.35		
Sat Flow, veh/h	1619	3510	1838	1498	1619	1530		
Grp Volume(v), veh/h	98	735	743	690	548	107		
Grp Sat Flow(s),veh/h/ln	1619	1710	1710	1536	1619	1530		
Q Serve(g_s), s	5.4	11.7	37.0	37.0	29.7	4.4		
Cycle Q Clear(g_c), s	5.4	11.7	37.0	37.0	29.7	4.4		
Prop In Lane	1.00			0.98	1.00	1.00		
Lane Grp Cap(c), veh/h	108	1790	705	633	573	542		
V/C Ratio(X)	0.91	0.41	1.05	1.09	0.96	0.20		
Avail Cap(c_a), veh/h	108	1790	705	633	577	545		
HCM Platoon Ratio	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		
Uniform Delay (d), s/veh	41.6	13.0	26.4	26.4	28.3	20.1		
Incr Delay (d2), s/veh	57.7	0.7	49.1	62.8	26.8	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	4.1	5.7	26.8	26.5	17.5	4.4		
LnGrp Delay(d),s/veh	99.3	13.7	75.5	89.2	55.1	20.3		
LnGrp LOS	F	B	F	F	E	C		
Approach Vol, veh/h		833	1433		655			
Approach Delay, s/veh		23.8	82.1		49.4			
Approach LOS		C	F		D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		52.5		37.3	10.0	42.5		
Change Period (Y+Rc), s		5.5		5.5	4.0	5.5		
Max Green Setting (Gmax), s		47.0		32.0	6.0	37.0		
Max Q Clear Time (g_c+l1), s		13.7		31.7	7.4	39.0		
Green Ext Time (p_c), s		21.9		0.1	0.0	0.0		
Intersection Summary								
HCM 2010 Ctrl Delay			58.1					
HCM 2010 LOS			E					

HCM 2010 Signalized Intersection Summary
 8: Mt. Vernon Avenue & 2nd Street

Year 2021 With Detour
 PM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations								
Traffic Volume (veh/h)	19	21	196	3	31	176		
Future Volume (veh/h)	19	21	196	3	31	176		
Number	4	14	3	8	5	12		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1800	1800	1700	1800	1700	1800		
Adj Flow Rate, veh/h	20	22	208	0	33	0		
Adj No. of Lanes	1	0	2	1	1	1		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	0	0	0	0	0	0		
Cap, veh/h	171	188	829	391	915	865		
Arrive On Green	0.22	0.22	0.22	0.00	0.57	0.00		
Sat Flow, veh/h	785	863	2619	1800	1619	1530		
Grp Volume(v), veh/h	0	42	208	0	33	0		
Grp Sat Flow(s),veh/h/ln	0	1648	1309	1800	1619	1530		
Q Serve(g_s), s	0.0	0.9	3.2	0.0	0.4	0.0		
Cycle Q Clear(g_c), s	0.0	0.9	4.1	0.0	0.4	0.0		
Prop In Lane		0.52	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	0	358	829	391	915	865		
V/C Ratio(X)	0.00	0.12	0.25	0.00	0.04	0.00		
Avail Cap(c_a), veh/h	0	860	1626	939	915	865		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00		
Uniform Delay (d), s/veh	0.0	14.5	16.1	0.0	4.4	0.0		
Incr Delay (d2), s/veh	0.0	0.1	0.2	0.0	0.1	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.0	0.4	1.2	0.0	0.2	0.0		
LnGrp Delay(d),s/veh	0.0	14.6	16.3	0.0	4.5	0.0		
LnGrp LOS		B	B		A			
Approach Vol, veh/h	42			208	33			
Approach Delay, s/veh	14.6			16.3	4.5			
Approach LOS	B			B	A			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		31.0		15.0				15.0
Change Period (Y+Rc), s		5.0		5.0				5.0
Max Green Setting (Gmax), s		26.0		24.0				24.0
Max Q Clear Time (g_c+l1), s		2.4		2.9				6.1
Green Ext Time (p_c), s		0.1		1.0				0.9
Intersection Summary								
HCM 2010 Ctrl Delay			14.7					
HCM 2010 LOS			B					
Notes								

HCM 2010 Signalized Intersection Summary
 9: Mt. Vernon Avenue & Rialto Avenue

Year 2021 With Detour
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕		↔	↕		↔	↕	
Traffic Volume (veh/h)	97	278	81	529	284	84	85	38	605	36	53	129
Future Volume (veh/h)	97	278	81	529	284	84	85	38	605	36	53	129
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	101	290	84	551	296	88	89	40	630	38	55	134
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	664	1713	487	671	1701	497	266	398	356	84	398	356
Arrive On Green	0.65	0.65	0.65	0.65	0.65	0.65	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	959	2630	748	968	2613	763	1146	1710	1530	736	1710	1530
Grp Volume(v), veh/h	101	187	187	551	192	192	89	40	630	38	55	134
Grp Sat Flow(s),veh/h/ln	959	1710	1668	968	1710	1665	1146	1710	1530	736	1710	1530
Q Serve(g_s), s	4.0	3.7	3.8	44.7	3.8	3.9	6.1	1.6	20.0	0.0	2.2	6.3
Cycle Q Clear(g_c), s	7.9	3.7	3.8	48.5	3.8	3.9	12.4	1.6	20.0	20.0	2.2	6.3
Prop In Lane	1.00		0.45	1.00		0.46	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	664	1114	1086	671	1114	1085	266	398	356	84	398	356
V/C Ratio(X)	0.15	0.17	0.17	0.82	0.17	0.18	0.33	0.10	1.77	0.45	0.14	0.38
Avail Cap(c_a), veh/h	709	1193	1164	716	1193	1162	266	398	356	84	398	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	7.5	5.9	5.9	15.4	5.9	5.9	33.0	25.9	33.0	43.0	26.2	27.8
Incr Delay (d2), s/veh	0.1	0.1	0.1	7.2	0.1	0.1	3.4	0.5	358.1	16.7	0.7	3.0
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	1.1	1.7	1.7	13.1	1.8	1.8	2.2	0.8	43.8	1.3	1.1	3.0
LnGrp Delay(d),s/veh	7.6	5.9	6.0	22.6	6.0	6.0	36.4	26.4	391.1	59.7	26.9	30.8
LnGrp LOS	A	A	A	C	A	A	D	C	F	E	C	C
Approach Vol, veh/h		475			935			759			227	
Approach Delay, s/veh		6.3			15.8			330.3			34.7	
Approach LOS		A			B			F			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		25.0		61.0		25.0		61.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		20.0		60.0		20.0		60.0				
Max Q Clear Time (g_c+I1), s		22.0		9.9		22.0		50.5				
Green Ext Time (p_c), s		0.0		11.5		0.0		5.5				
Intersection Summary												
HCM 2010 Ctrl Delay				115.3								
HCM 2010 LOS				F								

HCM 2010 Signalized Intersection Summary
 10: L St & 5th Street

Year 2021 With Detour
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	1414	0	4	1537	80	14	4	23	97	0	19
Future Volume (veh/h)	12	1414	0	4	1537	80	14	4	23	97	0	19
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	12	1458	0	4	1585	82	14	4	24	100	0	20
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	153	1851	0	190	1791	92	203	81	271	471	10	74
Arrive On Green	0.54	0.54	0.00	0.54	0.54	0.54	0.31	0.31	0.31	0.31	0.00	0.31
Sat Flow, veh/h	286	3510	0	350	3309	170	397	261	878	1170	32	240
Grp Volume(v), veh/h	12	1458	0	4	816	851	42	0	0	120	0	0
Grp Sat Flow(s),veh/h/ln	286	1710	0	350	1710	1770	1537	0	0	1442	0	0
Q Serve(g_s), s	2.3	20.4	0.0	0.6	25.1	25.5	0.0	0.0	0.0	2.5	0.0	0.0
Cycle Q Clear(g_c), s	27.8	20.4	0.0	21.0	25.1	25.5	1.1	0.0	0.0	3.6	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.10	0.33		0.57	0.83		0.17
Lane Grp Cap(c), veh/h	153	1851	0	190	926	958	554	0	0	555	0	0
V/C Ratio(X)	0.08	0.79	0.00	0.02	0.88	0.89	0.08	0.00	0.00	0.22	0.00	0.00
Avail Cap(c_a), veh/h	154	1854	0	190	927	960	554	0	0	555	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.4	11.0	0.0	19.4	12.1	12.2	14.7	0.0	0.0	15.5	0.0	0.0
Incr Delay (d2), s/veh	0.2	2.3	0.0	0.0	9.9	10.3	0.3	0.0	0.0	0.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	10.1	0.0	0.1	14.1	15.0	0.5	0.0	0.0	1.6	0.0	0.0
LnGrp Delay(d),s/veh	24.7	13.3	0.0	19.4	21.9	22.4	15.0	0.0	0.0	16.4	0.0	0.0
LnGrp LOS	C	B		B	C	C	B			B		
Approach Vol, veh/h		1470			1671			42			120	
Approach Delay, s/veh		13.4			22.2			15.0			16.4	
Approach LOS		B			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		23.0		36.9		23.0		36.9				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.5		32.5		18.5		32.5				
Max Q Clear Time (g_c+1), s		3.1		29.8		5.6		27.5				
Green Ext Time (p_c), s		0.7		2.6		0.6		4.9				
Intersection Summary												
HCM 2010 Ctrl Delay				18.0								
HCM 2010 LOS				B								

Intersection

Intersection Delay, s/veh 13.8

Intersection LOS B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations		↖ ↗	↕			↖ ↗	↕				↕			↖ ↗	↕	
Traffic Vol, veh/h	0	3	362	37	0	50	300	35	0	63	7	33	0	107	7	5
Future Vol, veh/h	0	3	362	37	0	50	300	35	0	63	7	33	0	107	7	5
Peak Hour Factor	0.95	0.89	0.89	0.89	0.95	0.89	0.89	0.89	0.95	0.89	0.89	0.89	0.95	0.89	0.89	0.89
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	3	407	42	0	56	337	39	0	71	8	37	0	120	8	6
Number of Lanes	0	1	2	0	0	1	2	0	0	0	1	0	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	3	3
HCM Control Delay	14.7	13.1	13	13.4
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	61%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	7%	0%	100%	77%	0%	100%	74%	0%	58%
Vol Right, %	32%	0%	0%	23%	0%	0%	26%	0%	42%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	103	3	241	158	50	200	135	107	12
LT Vol	63	3	0	0	50	0	0	107	0
Through Vol	7	0	241	121	0	200	100	0	7
RT Vol	33	0	0	37	0	0	35	0	5
Lane Flow Rate	116	3	271	177	56	225	152	120	13
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.247	0.007	0.508	0.324	0.114	0.424	0.279	0.27	0.027
Departure Headway (Hd)	7.695	7.256	6.747	6.58	7.303	6.794	6.61	8.088	7.288
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	466	495	537	549	493	533	546	445	491
Service Time	5.439	4.973	4.464	4.297	5.021	4.512	4.327	5.832	5.033
HCM Lane V/C Ratio	0.249	0.006	0.505	0.322	0.114	0.422	0.278	0.27	0.026
HCM Control Delay	13	10	16.2	12.4	11	14.4	11.9	13.8	10.2
HCM Lane LOS	B	A	C	B	B	B	B	B	B
HCM 95th-tile Q	1	0	2.8	1.4	0.4	2.1	1.1	1.1	0.1

HCM 2010 Signalized Intersection Summary
 12: K St & Rialto Avenue

Year 2021 With Detour
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (veh/h)	21	901	39	75	867	16	55	73	116	12	51	46
Future Volume (veh/h)	21	901	39	75	867	16	55	73	116	12	51	46
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	22	959	41	80	922	17	59	78	123	13	54	49
Adj No. of Lanes	0	2	0	0	2	0	0	1	0	0	1	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	62	1572	66	112	1267	25	83	110	174	21	89	81
Arrive On Green	0.49	0.49	0.49	0.49	0.49	0.49	0.22	0.22	0.22	0.11	0.11	0.11
Sat Flow, veh/h	32	3185	135	122	2567	51	373	493	778	187	776	704
Grp Volume(v), veh/h	530	0	492	479	0	540	260	0	0	116	0	0
Grp Sat Flow(s),veh/h/ln	737	0	1614	1111	0	1629	1644	0	0	1666	0	0
Q Serve(g_s), s	0.0	0.0	17.8	15.2	0.0	20.2	11.7	0.0	0.0	5.3	0.0	0.0
Cycle Q Clear(g_c), s	17.0	0.0	17.8	33.1	0.0	20.2	11.7	0.0	0.0	5.3	0.0	0.0
Prop In Lane	0.04		0.08	0.17		0.03	0.23		0.47	0.11		0.42
Lane Grp Cap(c), veh/h	904	0	797	601	0	804	368	0	0	192	0	0
V/C Ratio(X)	0.59	0.00	0.62	0.80	0.00	0.67	0.71	0.00	0.00	0.61	0.00	0.00
Avail Cap(c_a), veh/h	920	0	812	613	0	820	368	0	0	373	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	14.6	0.0	14.8	18.5	0.0	15.4	28.8	0.0	0.0	33.9	0.0	0.0
Incr Delay (d2), s/veh	0.9	0.0	1.4	7.1	0.0	2.1	10.9	0.0	0.0	3.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.6	0.0	8.2	10.9	0.0	9.5	6.5	0.0	0.0	2.6	0.0	0.0
LnGrp Delay(d),s/veh	15.6	0.0	16.2	25.7	0.0	17.5	39.7	0.0	0.0	36.9	0.0	0.0
LnGrp LOS	B		B	C		B	D			D		
Approach Vol, veh/h		1022			1019			260			116	
Approach Delay, s/veh		15.9			21.4			39.7			36.9	
Approach LOS		B			C			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		44.2		13.8		44.2				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		40.5		18.0		40.5				
Max Q Clear Time (g_c+I1), s		13.7		19.8		7.3		35.1				
Green Ext Time (p_c), s		0.6		14.4		0.4		4.6				
Intersection Summary												
HCM 2010 Ctrl Delay				21.8								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary
 13: I St & 2nd Street

Year 2021 With Detour
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	618	5	17	466	7	5	2	50	8	0	4
Future Volume (veh/h)	0	618	5	17	466	7	5	2	50	8	0	4
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	0	687	6	19	518	8	6	2	56	9	0	4
Adj No. of Lanes	1	2	0	1	2	0	0	1	1	0	1	1
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	147	1041	9	75	1510	23	483	143	578	577	0	578
Arrive On Green	0.00	0.30	0.30	0.05	0.44	0.44	0.38	0.38	0.38	0.38	0.00	0.38
Sat Flow, veh/h	841	3474	30	1619	3447	53	937	377	1530	1137	0	1530
Grp Volume(v), veh/h	0	338	355	19	257	269	8	0	56	9	0	4
Grp Sat Flow(s),veh/h/ln	841	1710	1795	1619	1710	1791	1314	0	1530	1137	0	1530
Q Serve(g_s), s	0.0	8.4	8.4	0.6	4.9	4.9	0.0	0.0	1.2	0.2	0.0	0.1
Cycle Q Clear(g_c), s	0.0	8.4	8.4	0.6	4.9	4.9	3.2	0.0	1.2	3.3	0.0	0.1
Prop In Lane	1.00		0.02	1.00		0.03	0.75		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	147	512	538	75	749	785	625	0	578	577	0	578
V/C Ratio(X)	0.00	0.66	0.66	0.25	0.34	0.34	0.01	0.00	0.10	0.02	0.00	0.01
Avail Cap(c_a), veh/h	204	629	660	331	1135	1189	625	0	578	577	0	578
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	15.0	15.0	22.5	9.1	9.1	9.6	0.0	9.8	11.6	0.0	9.5
Incr Delay (d2), s/veh	0.0	1.9	1.8	1.7	0.3	0.3	0.0	0.0	0.3	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.2	4.4	0.3	2.3	2.4	0.1	0.0	0.5	0.1	0.0	0.0
LnGrp Delay(d),s/veh	0.0	16.8	16.7	24.2	9.4	9.4	9.6	0.0	10.2	11.6	0.0	9.5
LnGrp LOS		B	B	C	A	A	A		B	B		A
Approach Vol, veh/h		693			545			64			13	
Approach Delay, s/veh		16.8			9.9			10.1			11.0	
Approach LOS		B			A			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		23.0	6.8	19.2		23.0		25.9				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.5	10.0	18.0		18.5		32.5				
Max Q Clear Time (g_c+l1), s		5.2	2.6	10.4		5.3		6.9				
Green Ext Time (p_c), s		0.2	0.0	4.2		0.2		8.5				
Intersection Summary												
HCM 2010 Ctrl Delay				13.5								
HCM 2010 LOS				B								

Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑			↑
Traffic Vol, veh/h	0	943	961	39	0	18
Future Vol, veh/h	0	943	961	39	0	18
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	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	993	1012	41	0	19



















Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	526
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	6.9
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	3.3
Pot Cap-1 Maneuver	0	-	502
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	502
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	12.5
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	502
HCM Lane V/C Ratio	-	-	-	0.038
HCM Control Delay (s)	-	-	-	12.5
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0.1

HCM 2010 Signalized Intersection Summary
 15: I-215 SB Ramps & 5th Street

Year 2021 With Detour
 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1218	392	504	1593	0	0	0	0	220	3	181
Future Volume (veh/h)	0	1218	392	504	1593	0	0	0	0	220	3	181
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1800	1800	1600	1800	0				1700	1800	1800
Adj Flow Rate, veh/h	0	1324	426	548	1732	0				301	0	132
Adj No. of Lanes	0	4	0	2	2	0				2	0	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1599	514	651	2184	0				676	0	319
Arrive On Green	0.00	0.34	0.34	0.22	0.64	0.00				0.21	0.00	0.21
Sat Flow, veh/h	0	4928	1502	2956	3510	0				3238	0	1530
Grp Volume(v), veh/h	0	1315	435	548	1732	0				301	0	132
Grp Sat Flow(s),veh/h/ln	0	1548	1535	1478	1710	0				1619	0	1530
Q Serve(g_s), s	0.0	15.3	15.3	10.5	21.9	0.0				4.8	0.0	4.4
Cycle Q Clear(g_c), s	0.0	15.3	15.3	10.5	21.9	0.0				4.8	0.0	4.4
Prop In Lane	0.00		0.98	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1588	525	651	2184	0				676	0	319
V/C Ratio(X)	0.00	0.83	0.83	0.84	0.79	0.00				0.45	0.00	0.41
Avail Cap(c_a), veh/h	0	1588	525	733	2246	0				676	0	319
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	17.8	17.8	22.0	7.8	0.0				20.3	0.0	20.2
Incr Delay (d2), s/veh	0.0	3.8	10.7	8.0	2.0	0.0				2.1	0.0	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.0	8.0	5.0	10.7	0.0				2.3	0.0	2.2
LnGrp Delay(d),s/veh	0.0	21.6	28.5	30.0	9.8	0.0				22.5	0.0	24.1
LnGrp LOS		C	C	C	A					C		C
Approach Vol, veh/h		1750			2280						433	
Approach Delay, s/veh		23.3			14.6						23.0	
Approach LOS		C			B						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			17.5	24.7		16.8		42.1				
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s			14.6	19.6		12.3		38.7				
Max Q Clear Time (g_c+I1), s			12.5	17.3		6.8		23.9				
Green Ext Time (p_c), s			0.5	2.2		0.8		13.8				
Intersection Summary												
HCM 2010 Ctrl Delay			18.8									
HCM 2010 LOS			B									
Notes												

HCM 2010 Signalized Intersection Summary
 16: I-215 SB Ramps & 2nd Street

Year 2021 With Detour
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑					↑	↑↑	
Traffic Volume (veh/h)	0	528	161	724	307	0	0	0	0	159	191	196
Future Volume (veh/h)	0	528	161	724	307	0	0	0	0	159	191	196
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1800	1800	1600	1800	0				1700	1800	1800
Adj Flow Rate, veh/h	0	587	179	804	341	0				177	212	218
Adj No. of Lanes	0	3	1	2	2	0				1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1163	362	931	2180	0				309	344	292
Arrive On Green	0.00	0.24	0.24	0.31	0.64	0.00				0.19	0.19	0.19
Sat Flow, veh/h	0	5076	1530	2956	3510	0				1619	1800	1530
Grp Volume(v), veh/h	0	587	179	804	341	0				177	212	218
Grp Sat Flow(s),veh/h/ln	0	1638	1530	1478	1710	0				1619	1800	1530
Q Serve(g_s), s	0.0	5.4	5.3	13.4	2.1	0.0				5.2	5.7	7.0
Cycle Q Clear(g_c), s	0.0	5.4	5.3	13.4	2.1	0.0				5.2	5.7	7.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1163	362	931	2180	0				309	344	292
V/C Ratio(X)	0.00	0.50	0.49	0.86	0.16	0.00				0.57	0.62	0.75
Avail Cap(c_a), veh/h	0	1688	526	1044	2676	0				309	344	292
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	17.3	17.3	16.9	3.8	0.0				19.3	19.4	20.0
Incr Delay (d2), s/veh	0.0	0.3	1.0	7.0	0.0	0.0				7.5	8.1	15.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.5	2.3	6.4	1.0	0.0				3.0	3.5	4.3
LnGrp Delay(d),s/veh	0.0	17.7	18.3	23.9	3.9	0.0				26.8	27.5	35.9
LnGrp LOS		B	B	C	A					C	C	D
Approach Vol, veh/h		766			1145						607	
Approach Delay, s/veh		17.8			18.0						30.3	
Approach LOS		B			B						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			21.0	16.9		14.5		37.9				
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s			18.5	18.0		10.0		41.0				
Max Q Clear Time (g_c+I1), s			15.4	7.4		9.0		4.1				
Green Ext Time (p_c), s			1.1	5.0		0.3		8.4				
Intersection Summary												
HCM 2010 Ctrl Delay			20.9									
HCM 2010 LOS			C									
Notes												

HCM 2010 Signalized Intersection Summary
 17: I-215 NB Ramps & 5th Street

Year 2021 With Detour
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	218	1220	0	0	1702	659	395	4	452	0	0	0
Future Volume (veh/h)	218	1220	0	0	1702	659	395	4	452	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1600	1800	0	0	1800	1800	1700	1800	1800			
Adj Flow Rate, veh/h	240	1341	0	0	1870	724	600	0	322			
Adj No. of Lanes	2	2	0	0	4	1	2	0	1			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	485	1991	0	0	2122	524	866	0	409			
Arrive On Green	0.16	0.58	0.00	0.00	0.34	0.34	0.27	0.00	0.27			
Sat Flow, veh/h	2956	3510	0	0	6444	1530	3238	0	1530			
Grp Volume(v), veh/h	240	1341	0	0	1870	724	600	0	322			
Grp Sat Flow(s),veh/h/ln	1478	1710	0	0	1548	1530	1619	0	1530			
Q Serve(g_s), s	4.4	16.1	0.0	0.0	17.0	20.5	10.0	0.0	11.7			
Cycle Q Clear(g_c), s	4.4	16.1	0.0	0.0	17.0	20.5	10.0	0.0	11.7			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	485	1991	0	0	2122	524	866	0	409			
V/C Ratio(X)	0.49	0.67	0.00	0.00	0.88	1.38	0.69	0.00	0.79			
Avail Cap(c_a), veh/h	494	2001	0	0	2122	524	866	0	409			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	22.7	8.6	0.0	0.0	18.5	19.7	19.7	0.0	20.3			
Incr Delay (d2), s/veh	0.8	0.9	0.0	0.0	4.7	183.0	4.5	0.0	14.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.9	7.7	0.0	0.0	8.0	35.1	5.0	0.0	6.5			
LnGrp Delay(d),s/veh	23.5	9.5	0.0	0.0	23.2	202.6	24.2	0.0	34.5			
LnGrp LOS	C	A			C	F	C		C			
Approach Vol, veh/h		1581			2594			922				
Approach Delay, s/veh		11.6			73.3			27.8				
Approach LOS		B			E			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		20.5		39.3			14.3	25.0				
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5				
Max Green Setting (Gmax), s		16.0		35.0			10.0	20.5				
Max Q Clear Time (g_c+l1), s		13.7		18.1			6.4	22.5				
Green Ext Time (p_c), s		0.9		16.3			0.3	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				45.9								
HCM 2010 LOS				D								
Notes												

HCM 2010 Signalized Intersection Summary
 18: I-215 NB Ramps & 2nd Street

Year 2021 With Detour
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	175	512	0	0	901	529	130	39	403	0	0	0
Future Volume (veh/h)	175	512	0	0	901	529	130	39	403	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1600	1800	0	0	1800	1800	1700	1800	1800			
Adj Flow Rate, veh/h	184	539	0	0	948	557	105	0	486			
Adj No. of Lanes	2	2	0	0	4	1	1	0	2			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	517	1805	0	0	3268	808	514	0	972			
Arrive On Green	0.53	0.53	0.00	0.00	0.53	0.53	0.32	0.00	0.32			
Sat Flow, veh/h	610	3510	0	0	6444	1530	1619	0	3060			
Grp Volume(v), veh/h	184	539	0	0	948	557	105	0	486			
Grp Sat Flow(s),veh/h/ln	305	1710	0	0	1548	1530	1619	0	1530			
Q Serve(g_s), s	14.0	5.1	0.0	0.0	5.0	15.7	2.8	0.0	7.5			
Cycle Q Clear(g_c), s	19.0	5.1	0.0	0.0	5.0	15.7	2.8	0.0	7.5			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	517	1805	0	0	3268	808	514	0	972			
V/C Ratio(X)	0.36	0.30	0.00	0.00	0.29	0.69	0.20	0.00	0.50			
Avail Cap(c_a), veh/h	536	1908	0	0	3455	854	514	0	972			
HCM Platoon Ratio	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	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	13.0	7.7	0.0	0.0	7.7	10.2	14.5	0.0	16.1			
Incr Delay (d2), s/veh	0.4	0.1	0.0	0.0	0.0	2.2	0.9	0.0	1.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.2	2.4	0.0	0.0	2.1	7.0	1.4	0.0	3.4			
LnGrp Delay(d),s/veh	13.4	7.8	0.0	0.0	7.7	12.4	15.4	0.0	18.0			
LnGrp LOS	B	A			A	B	B		B			
Approach Vol, veh/h		723			1505			591				
Approach Delay, s/veh		9.2			9.5			17.5				
Approach LOS		A			A			B				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		23.0		35.2				35.2				
Change Period (Y+Rc), s		4.5		4.5				4.5				
Max Green Setting (Gmax), s		18.5		32.5				32.5				
Max Q Clear Time (g_c+I1), s		9.5		21.0				17.7				
Green Ext Time (p_c), s		1.7		9.7				12.1				
Intersection Summary												
HCM 2010 Ctrl Delay				11.1								
HCM 2010 LOS				B								
Notes												

HCM 2010 Signalized Intersection Summary
 19: H St & 5th Street

Year 2021 With Detour
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	208	782	682	6	1075	18	980	141	25	22	73	306
Future Volume (veh/h)	208	782	682	6	1075	18	980	141	25	22	73	306
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	226	850	741	7	1168	20	1065	153	27	24	79	333
Adj No. of Lanes	1	2	1	1	2	0	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	181	1204	1051	28	887	15	726	1306	226	310	539	412
Arrive On Green	0.11	0.35	0.35	0.02	0.26	0.26	0.33	0.45	0.45	0.04	0.16	0.16
Sat Flow, veh/h	1619	3420	1530	1619	3441	59	1619	2916	505	1619	3420	1530
Grp Volume(v), veh/h	226	850	741	7	580	608	1065	88	92	24	79	333
Grp Sat Flow(s),veh/h/ln	1619	1710	1530	1619	1710	1790	1619	1710	1711	1619	1710	1530
Q Serve(g_s), s	14.5	27.9	38.3	0.6	33.5	33.5	43.5	3.9	4.1	1.6	2.6	20.5
Cycle Q Clear(g_c), s	14.5	27.9	38.3	0.6	33.5	33.5	43.5	3.9	4.1	1.6	2.6	20.5
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	181	1204	1051	28	441	461	726	766	766	310	539	412
V/C Ratio(X)	1.25	0.71	0.71	0.25	1.32	1.32	1.47	0.12	0.12	0.08	0.15	0.81
Avail Cap(c_a), veh/h	181	1204	1051	125	441	461	726	766	766	362	539	412
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	57.7	36.3	12.4	63.1	48.2	48.3	30.4	20.9	20.9	42.0	47.2	44.4
Incr Delay (d2), s/veh	150.5	1.9	2.2	4.6	158.0	157.6	217.8	0.3	0.3	0.1	0.6	15.6
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	14.0	13.4	16.6	0.3	35.1	36.7	50.5	1.9	2.0	0.7	1.3	13.0
LnGrp Delay(d),s/veh	208.2	38.2	14.5	67.7	206.3	205.8	248.1	21.2	21.3	42.1	47.8	60.0
LnGrp LOS	F	D	B	E	F	F	F	C	C	D	D	E
Approach Vol, veh/h		1817			1195			1245			436	
Approach Delay, s/veh		49.7			205.2			215.3			56.8	
Approach LOS		D			F			F			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.3	62.7	6.7	50.3	48.0	25.0	19.0	38.0				
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	10.0	54.0	10.0	38.0	43.5	20.5	14.5	33.5				
Max Q Clear Time (g_c+I), s	10.0	6.1	2.6	40.3	45.5	22.5	16.5	35.5				
Green Ext Time (p_c), s	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			133.9									
HCM 2010 LOS			F									

Intersection

Int Delay, s/veh 0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↕↔		↘	↕↕
Traffic Vol, veh/h	2	68	1038	5	10	728
Future Vol, veh/h	2	68	1038	5	10	728
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	0	-	-	110	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	84	1281	6	12	899





















Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1759	644	0	0	1288	0
Stage 1	1285	-	-	-	-	-
Stage 2	474	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	77	420	-	-	545	-
Stage 1	227	-	-	-	-	-
Stage 2	598	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	75	420	-	-	545	-
Mov Cap-2 Maneuver	75	-	-	-	-	-
Stage 1	227	-	-	-	-	-
Stage 2	585	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	16.8		0		0.2
HCM LOS	C				

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	75	420	545	-
HCM Lane V/C Ratio	-	-	0.033	0.2	0.023	-
HCM Control Delay (s)	-	-	54.6	15.7	11.8	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	0.1	0.7	0.1	-

HCM 2010 Signalized Intersection Summary
21: H St & 3rd St

Year 2021 With Detour
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	84	48	58	349	5	121	978	61	6	695	33
Future Volume (veh/h)	16	84	48	58	349	5	121	978	61	6	695	33
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	17	89	51	62	371	5	129	1040	65	6	739	35
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	65	317	170	164	720	10	435	1538	96	241	1170	55
Arrive On Green	0.04	0.15	0.15	0.10	0.21	0.21	0.13	0.47	0.47	0.02	0.35	0.35
Sat Flow, veh/h	1619	2154	1153	1619	3455	47	1619	3270	204	1619	3325	157
Grp Volume(v), veh/h	17	69	71	62	183	193	129	544	561	6	380	394
Grp Sat Flow(s),veh/h/ln	1619	1710	1597	1619	1710	1792	1619	1710	1764	1619	1710	1772
Q Serve(g_s), s	0.7	2.4	2.7	2.4	6.5	6.5	2.8	16.8	16.8	0.2	12.6	12.6
Cycle Q Clear(g_c), s	0.7	2.4	2.7	2.4	6.5	6.5	2.8	16.8	16.8	0.2	12.6	12.6
Prop In Lane	1.00		0.72	1.00		0.03	1.00		0.12	1.00		0.09
Lane Grp Cap(c), veh/h	65	252	235	164	356	373	435	804	830	241	602	624
V/C Ratio(X)	0.26	0.28	0.30	0.38	0.51	0.52	0.30	0.68	0.68	0.02	0.63	0.63
Avail Cap(c_a), veh/h	238	453	423	238	453	475	458	804	830	454	602	624
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	25.7	25.8	28.5	23.8	23.8	10.6	14.0	14.0	14.2	18.3	18.3
Incr Delay (d2), s/veh	2.1	0.6	0.7	1.4	1.2	1.1	0.4	4.5	4.4	0.0	5.0	4.8
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	0.3	1.2	1.2	1.2	3.2	3.3	1.3	8.9	9.1	0.1	6.7	7.0
LnGrp Delay(d),s/veh	33.7	26.3	26.5	29.9	25.0	24.9	11.0	18.5	18.4	14.2	23.3	23.2
LnGrp LOS	C	C	C	C	C	C	B	B	B	B	C	C
Approach Vol, veh/h		157			438			1234			780	
Approach Delay, s/veh		27.2			25.7			17.6			23.2	
Approach LOS		C			C			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.6	36.5	11.4	14.5	13.6	28.4	7.2	18.7				
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	10.0	24.0	10.0	18.0	10.1	23.9	10.0	18.0				
Max Q Clear Time (g_c+1), s	2.2	18.8	4.4	4.7	4.8	14.6	2.7	8.5				
Green Ext Time (p_c), s	0.0	4.2	0.0	2.5	0.1	7.0	0.0	2.1				
Intersection Summary												
HCM 2010 Ctrl Delay			21.2									
HCM 2010 LOS			C									

HCM 2010 Signalized Intersection Summary
 22: G St & 2nd Street

Year 2021 With Detour
 PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵ ↑↑↑			↵ ↑↑↑			↵ ↑↑		↵ ↑↑			
Traffic Volume (veh/h)	291	479	71	73	1031	86	196	793	68	94	598	142
Future Volume (veh/h)	291	479	71	73	1031	86	196	793	68	94	598	142
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	310	510	76	78	1097	91	209	844	72	100	636	151
Adj No. of Lanes	1	3	0	1	3	0	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	316	1504	220	143	1115	92	283	926	79	244	763	181
Arrive On Green	0.19	0.35	0.35	0.09	0.24	0.24	0.11	0.29	0.29	0.09	0.28	0.28
Sat Flow, veh/h	1619	4330	634	1619	4625	383	1619	3190	272	1619	2745	651
Grp Volume(v), veh/h	310	384	202	78	777	411	209	452	464	100	396	391
Grp Sat Flow(s),veh/h/ln	1619	1638	1688	1619	1638	1732	1619	1710	1752	1619	1710	1685
Q Serve(g_s), s	19.1	8.7	8.9	4.6	23.6	23.6	9.1	25.5	25.5	4.1	21.8	21.8
Cycle Q Clear(g_c), s	19.1	8.7	8.9	4.6	23.6	23.6	9.1	25.5	25.5	4.1	21.8	21.8
Prop In Lane	1.00		0.38	1.00		0.22	1.00		0.16	1.00		0.39
Lane Grp Cap(c), veh/h	316	1138	587	143	790	417	283	496	508	244	475	468
V/C Ratio(X)	0.98	0.34	0.34	0.54	0.98	0.99	0.74	0.91	0.91	0.41	0.83	0.83
Avail Cap(c_a), veh/h	316	1138	587	175	790	417	283	496	508	254	475	468
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	40.1	24.1	24.2	43.6	37.8	37.8	25.1	34.3	34.3	24.5	33.9	33.9
Incr Delay (d2), s/veh	45.6	0.2	0.3	3.2	27.9	40.0	9.8	23.5	23.1	1.1	15.6	16.0
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	12.5	3.9	4.2	2.2	13.7	15.9	4.8	15.3	15.6	1.9	12.3	12.2
LnGrp Delay(d),s/veh	85.6	24.3	24.5	46.8	65.7	77.7	34.8	57.8	57.4	25.6	49.5	49.9
LnGrp LOS	F	C	C	D	E	E	C	E	E	C	D	D
Approach Vol, veh/h		896			1266			1125			887	
Approach Delay, s/veh		45.6			68.4			53.3			47.0	
Approach LOS		D			E			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.9	33.5	13.4	39.2	15.1	32.3	24.0	28.6				
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	10.0	28.4	10.8	32.8	10.6	27.8	19.5	24.1				
Max Q Clear Time (g_c+I), s	11.0	27.5	6.6	10.9	11.1	23.8	21.1	25.6				
Green Ext Time (p_c), s	0.1	0.7	0.0	12.8	0.0	3.1	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				54.9								
HCM 2010 LOS				D								

HCM 2010 Signalized Intersection Summary
 23: G St & Rialto Avenue

Year 2021 With Detour
 PM Peak Hour



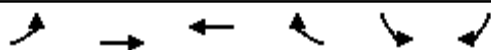
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔			↔		↔	↔	
Traffic Volume (veh/h)	598	307	21	40	444	161	20	158	35	68	93	506
Future Volume (veh/h)	598	307	21	40	444	161	20	158	35	68	93	506
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	636	327	22	43	472	171	21	168	37	72	99	538
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	612	2565	172	812	1944	700	34	246	61	125	243	218
Arrive On Green	0.79	0.79	0.79	0.79	0.79	0.79	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	755	3254	218	990	2466	887	0	1727	430	1129	1710	1530
Grp Volume(v), veh/h	636	171	178	43	326	317	92	0	134	72	99	538
Grp Sat Flow(s),veh/h/ln	755	1710	1762	990	1710	1643	595	0	1562	1129	1710	1530
Q Serve(g_s), s	95.9	3.1	3.1	1.4	6.5	6.6	0.0	0.0	10.5	8.0	6.9	18.5
Cycle Q Clear(g_c), s	102.5	3.1	3.1	4.5	6.5	6.6	18.5	0.0	10.5	18.5	6.9	18.5
Prop In Lane	1.00		0.12	1.00		0.54	0.23		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	612	1348	1389	812	1348	1296	119	0	222	125	243	218
V/C Ratio(X)	1.04	0.13	0.13	0.05	0.24	0.24	0.77	0.00	0.60	0.58	0.41	2.47
Avail Cap(c_a), veh/h	612	1348	1389	812	1348	1296	119	0	222	125	243	218
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	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.4	3.2	3.2	3.8	3.6	3.6	51.0	0.0	52.3	61.1	50.8	55.8
Incr Delay (d2), s/veh	46.7	0.0	0.0	0.0	0.1	0.1	37.5	0.0	11.6	18.0	5.0	675.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh	29.9	1.4	1.5	0.4	3.0	2.9	4.2	0.0	5.2	3.2	3.6	48.7
LnGrp Delay(d),s/veh	68.1	3.3	3.3	3.8	3.7	3.7	88.4	0.0	64.0	79.1	55.7	731.3
LnGrp LOS	F	A	A	A	A	A	F		E	E	E	F
Approach Vol, veh/h		985			686			226			709	
Approach Delay, s/veh		45.1			3.7			73.9			570.7	
Approach LOS		D			A			E			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		23.0		107.0		23.0		107.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.5		102.5		18.5		102.5				
Max Q Clear Time (g_c+l1), s		20.5		104.5		20.5		8.6				
Green Ext Time (p_c), s		0.0		0.0		0.0		21.1				
Intersection Summary												
HCM 2010 Ctrl Delay				179.7								
HCM 2010 LOS				F								

Year 2021
With Detour Conditions
(Mitigated)

AM PEAK HOUR

HCM 2010 Signalized Intersection Summary
7: 5th Street & Mt. Vernon Avenue

Year 2021 With Detour-Mitigated
AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	54	759	590	368	494	65		
Future Volume (veh/h)	54	759	590	368	494	65		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1700	1800	1800	1800	1700	1800		
Adj Flow Rate, veh/h	56	791	615	383	515	68		
Adj No. of Lanes	1	2	1	1	1	1		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96		
Percent Heavy Veh, %	0	0	0	0	0	0		
Cap, veh/h	69	1812	793	674	554	523		
Arrive On Green	0.04	0.53	0.44	0.44	0.34	0.34		
Sat Flow, veh/h	1619	3510	1800	1530	1619	1530		
Grp Volume(v), veh/h	56	791	615	383	515	68		
Grp Sat Flow(s),veh/h/ln	1619	1710	1800	1530	1619	1530		
Q Serve(g_s), s	2.9	12.1	24.9	16.0	26.4	2.6		
Cycle Q Clear(g_c), s	2.9	12.1	24.9	16.0	26.4	2.6		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	69	1812	793	674	554	523		
V/C Ratio(X)	0.81	0.44	0.78	0.57	0.93	0.13		
Avail Cap(c_a), veh/h	94	1812	793	674	632	597		
HCM Platoon Ratio	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		
Uniform Delay (d), s/veh	40.7	12.3	20.4	17.9	27.3	19.5		
Incr Delay (d2), s/veh	29.3	0.8	7.3	3.5	19.1	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	1.9	5.9	13.9	7.3	14.7	2.7		
LnGrp Delay(d),s/veh	70.0	13.1	27.8	21.4	46.4	19.6		
LnGrp LOS	E	B	C	C	D	B		
Approach Vol, veh/h		847	998		583			
Approach Delay, s/veh		16.9	25.3		43.2			
Approach LOS		B	C		D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		51.0		34.9	7.7	43.3		
Change Period (Y+Rc), s		5.5		5.5	4.0	5.5		
Max Green Setting (Gmax), s		45.5		33.5	5.0	36.5		
Max Q Clear Time (g_c+I1), s		14.1		28.4	4.9	26.9		
Green Ext Time (p_c), s		14.6		1.0	0.0	6.8		
Intersection Summary								
HCM 2010 Ctrl Delay			26.7					
HCM 2010 LOS			C					

HCM 2010 Signalized Intersection Summary
 9: Mt. Vernon Avenue & Rialto Avenue

Year 2021 With Detour-Mitigated
 AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	356	51	472	126	38	61	10	323	32	25	109
Future Volume (veh/h)	85	356	51	472	126	38	61	10	323	32	25	109
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	101	424	61	562	150	45	73	12	385	38	30	130
Adj No. of Lanes	1	2	0	1	2	0	0	1	2	1	2	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	816	2003	286	614	1744	507	242	34	598	171	380	340
Arrive On Green	0.67	0.67	0.67	0.67	0.67	0.67	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1140	3005	430	874	2616	760	755	154	2693	947	1710	1530
Grp Volume(v), veh/h	101	240	245	562	96	99	85	0	385	38	30	130
Grp Sat Flow(s),veh/h/ln	1140	1710	1724	874	1710	1666	909	0	1346	947	1710	1530
Q Serve(g_s), s	3.1	4.9	5.0	55.0	1.8	1.9	4.9	0.0	11.7	3.4	1.3	6.5
Cycle Q Clear(g_c), s	5.0	4.9	5.0	60.0	1.8	1.9	11.4	0.0	11.7	14.8	1.3	6.5
Prop In Lane	1.00		0.25	1.00		0.46	0.86		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	816	1140	1149	614	1140	1111	276	0	598	171	380	340
V/C Ratio(X)	0.12	0.21	0.21	0.91	0.08	0.09	0.31	0.00	0.64	0.22	0.08	0.38
Avail Cap(c_a), veh/h	816	1140	1149	614	1140	1111	276	0	598	171	380	340
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	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.2	5.8	5.8	18.8	5.3	5.3	33.9	0.0	31.8	38.3	27.7	29.8
Incr Delay (d2), s/veh	0.1	0.1	0.1	18.4	0.0	0.0	2.9	0.0	5.3	3.0	0.4	3.2
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	2.3	2.3	17.0	0.8	0.9	2.1	0.0	4.8	1.0	0.6	3.1
LnGrp Delay(d),s/veh	6.3	5.9	5.9	37.3	5.3	5.3	36.8	0.0	37.0	41.3	28.1	33.0
LnGrp LOS	A	A	A	D	A	A	D		D	D	C	C
Approach Vol, veh/h		586			757			470			198	
Approach Delay, s/veh		6.0			29.1			37.0			33.8	
Approach LOS		A			C			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		25.0		65.0		25.0		65.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		20.0		60.0		20.0		60.0				
Max Q Clear Time (g_c+I1), s		13.7		7.0		16.8		62.0				
Green Ext Time (p_c), s		1.8		11.5		1.1		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				24.7								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary
19: H St & 5th Street

Year 2021 With Detour-Mitigated
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	1423	645	6	504	34	465	51	30	48	81	149
Future Volume (veh/h)	159	1423	645	6	504	34	465	51	30	48	81	149
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	183	1636	741	7	579	39	534	59	34	55	93	171
Adj No. of Lanes	1	2	1	1	2	0	2	1	0	1	2	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	217	1586	877	29	1130	76	896	257	148	456	728	531
Arrive On Green	0.13	0.46	0.46	0.02	0.35	0.35	0.11	0.24	0.24	0.08	0.21	0.21
Sat Flow, veh/h	1619	3420	1530	1619	3253	219	3141	1073	618	1619	3420	1530
Grp Volume(v), veh/h	183	1636	741	7	304	314	534	0	93	55	93	171
Grp Sat Flow(s),veh/h/ln	1619	1710	1530	1619	1710	1761	1570	0	1691	1619	1710	1530
Q Serve(g_s), s	10.1	42.5	36.8	0.4	12.9	13.0	10.0	0.0	4.1	2.3	2.0	7.5
Cycle Q Clear(g_c), s	10.1	42.5	36.8	0.4	12.9	13.0	10.0	0.0	4.1	2.3	2.0	7.5
Prop In Lane	1.00		1.00	1.00		0.12	1.00		0.37	1.00		1.00
Lane Grp Cap(c), veh/h	217	1586	877	29	594	612	896	0	405	456	728	531
V/C Ratio(X)	0.84	1.03	0.85	0.24	0.51	0.51	0.60	0.00	0.23	0.12	0.13	0.32
Avail Cap(c_a), veh/h	357	1586	877	177	603	621	896	0	405	500	728	531
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	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.7	24.6	16.2	44.4	23.7	23.7	25.9	0.0	28.0	23.6	29.2	22.0
Incr Delay (d2), s/veh	9.3	31.1	7.7	4.3	0.7	0.7	1.1	0.0	1.3	0.1	0.4	1.6
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	15.1	26.7	17.1	0.2	6.2	6.4	1.6	0.0	2.0	1.0	1.0	3.4
LnGrp Delay(d),s/veh	48.0	55.6	23.9	48.7	24.4	24.4	27.0	0.0	29.3	23.7	29.5	23.6
LnGrp LOS	D	F	C	D	C	C	C		C	C	C	C
Approach Vol, veh/h		2560			625			627			319	
Approach Delay, s/veh		45.9			24.7			27.4			25.4	
Approach LOS		D			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	26.5	6.1	47.0	14.5	24.0	16.8	36.3				
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	10.0	19.5	10.0	42.5	10.0	19.5	20.2	32.3				
Max Q Clear Time (g_c+1), s	11.0	6.1	2.4	44.5	12.0	9.5	12.1	15.0				
Green Ext Time (p_c), s	0.0	1.4	0.0	0.0	0.0	1.2	0.3	15.3				
Intersection Summary												
HCM 2010 Ctrl Delay				38.3								
HCM 2010 LOS				D								

HCM 2010 Signalized Intersection Summary
23: G St & Rialto Avenue

Year 2021 With Detour-Mitigated
AM Peak Hour

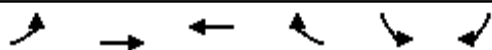


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↗		↖	↕			↕		↖	↗	
Traffic Volume (veh/h)	396	409	15	35	242	73	2	42	21	166	116	440
Future Volume (veh/h)	396	409	15	35	242	73	2	42	21	166	116	440
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	455	470	17	40	278	84	2	48	24	191	133	506
Adj No. of Lanes	2	1	0	1	2	0	0	2	0	1	2	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	971	534	19	265	427	126	63	586	275	483	522	467
Arrive On Green	0.31	0.31	0.31	0.16	0.16	0.16	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	3141	1727	62	1619	2603	771	0	1919	902	1274	1710	1530
Grp Volume(v), veh/h	455	0	487	40	181	181	35	0	39	191	133	506
Grp Sat Flow(s),veh/h/ln	1570	0	1789	1619	1710	1664	1342	0	1479	1274	1710	1530
Q Serve(g_s), s	7.1	0.0	15.7	1.3	6.0	6.2	0.0	0.0	1.2	7.7	3.6	18.6
Cycle Q Clear(g_c), s	7.1	0.0	15.7	1.3	6.0	6.2	18.6	0.0	1.2	8.8	3.6	18.6
Prop In Lane	1.00		0.03	1.00		0.46	0.06		0.61	1.00		1.00
Lane Grp Cap(c), veh/h	971	0	553	265	280	273	472	0	452	483	522	467
V/C Ratio(X)	0.47	0.00	0.88	0.15	0.64	0.66	0.07	0.00	0.09	0.40	0.25	1.08
Avail Cap(c_a), veh/h	1026	0	584	478	505	492	472	0	452	483	522	467
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	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.0	0.0	20.0	21.8	23.8	23.9	15.2	0.0	15.1	18.2	15.9	21.2
Incr Delay (d2), s/veh	0.4	0.0	14.1	0.3	2.5	2.8	0.3	0.0	0.4	2.4	1.2	65.9
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	3.1	0.0	9.9	0.6	3.0	3.1	0.5	0.0	0.5	3.0	1.8	16.3
LnGrp Delay(d),s/veh	17.4	0.0	34.0	22.1	26.3	26.7	15.5	0.0	15.5	20.7	17.1	87.1
LnGrp LOS	B		C	C	C	C	B		B	C	B	F
Approach Vol, veh/h		942			402			74			830	
Approach Delay, s/veh		26.0			26.0			15.5			60.6	
Approach LOS		C			C			B			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		23.1		23.3		23.1		14.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.6		19.9		18.6		18.0				
Max Q Clear Time (g_c+I1), s		20.6		17.7		20.6		8.2				
Green Ext Time (p_c), s		0.0		1.1		0.0		1.6				
Intersection Summary												
HCM 2010 Ctrl Delay				38.4								
HCM 2010 LOS				D								

PM PEAK HOUR

HCM 2010 Signalized Intersection Summary
7: 5th Street & Mt. Vernon Avenue





















Year 2021 With Detour-Mitigated
PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	95	713	737	653	532	104		
Future Volume (veh/h)	95	713	737	653	532	104		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1700	1800	1800	1800	1700	1800		
Adj Flow Rate, veh/h	98	735	760	673	548	107		
Adj No. of Lanes	1	2	1	1	1	1		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97		
Percent Heavy Veh, %	0	0	0	0	0	0		
Cap, veh/h	108	1843	770	654	549	518		
Arrive On Green	0.07	0.54	0.43	0.43	0.34	0.34		
Sat Flow, veh/h	1619	3510	1800	1530	1619	1530		
Grp Volume(v), veh/h	98	735	760	673	548	107		
Grp Sat Flow(s),veh/h/ln	1619	1710	1800	1530	1619	1530		
Q Serve(g_s), s	5.4	11.4	37.6	38.5	30.4	4.5		
Cycle Q Clear(g_c), s	5.4	11.4	37.6	38.5	30.4	4.5		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	108	1843	770	654	549	518		
V/C Ratio(X)	0.91	0.40	0.99	1.03	1.00	0.21		
Avail Cap(c_a), veh/h	108	1843	770	654	549	518		
HCM Platoon Ratio	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		
Uniform Delay (d), s/veh	41.7	12.2	25.5	25.8	29.7	21.1		
Incr Delay (d2), s/veh	58.4	0.6	29.4	42.6	38.1	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	4.2	5.5	24.9	23.9	19.4	4.4		
LnGrp Delay(d),s/veh	100.1	12.8	54.9	68.3	67.8	21.3		
LnGrp LOS	F	B	D	F	E	C		
Approach Vol, veh/h		833	1433		655			
Approach Delay, s/veh		23.1	61.2		60.2			
Approach LOS		C	E		E			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		54.0		36.0	10.0	44.0		
Change Period (Y+Rc), s		5.5		5.5	4.0	5.5		
Max Green Setting (Gmax), s		48.5		30.5	6.0	38.5		
Max Q Clear Time (g_c+I1), s		13.4		32.4	7.4	40.5		
Green Ext Time (p_c), s		19.3		0.0	0.0	0.0		
Intersection Summary								
HCM 2010 Ctrl Delay			50.1					
HCM 2010 LOS			D					























HCM 2010 Signalized Intersection Summary
 9: Mt. Vernon Avenue & Rialto Avenue

Year 2021 With Detour-Mitigated
 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	278	81	529	284	84	85	38	605	36	53	129
Future Volume (veh/h)	97	278	81	529	284	84	85	38	605	36	53	129
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	101	290	84	551	296	88	89	40	630	38	55	134
Adj No. of Lanes	1	2	0	1	2	0	0	1	2	1	2	0
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	664	1713	487	671	1701	497	219	85	626	147	398	356
Arrive On Green	0.65	0.65	0.65	0.65	0.65	0.65	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	959	2630	748	968	2613	763	636	367	2693	736	1710	1530
Grp Volume(v), veh/h	101	187	187	551	192	192	129	0	630	38	55	134
Grp Sat Flow(s),veh/h/ln	959	1710	1668	968	1710	1665	1003	0	1346	736	1710	1530
Q Serve(g_s), s	4.0	3.7	3.8	44.7	3.8	3.9	6.3	0.0	20.0	4.3	2.2	6.3
Cycle Q Clear(g_c), s	7.9	3.7	3.8	48.5	3.8	3.9	12.7	0.0	20.0	16.9	2.2	6.3
Prop In Lane	1.00		0.45	1.00		0.46	0.69		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	664	1114	1086	671	1114	1085	304	0	626	147	398	356
V/C Ratio(X)	0.15	0.17	0.17	0.82	0.17	0.18	0.42	0.00	1.01	0.26	0.14	0.38
Avail Cap(c_a), veh/h	709	1193	1164	716	1193	1162	304	0	626	147	398	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	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.5	5.9	5.9	15.4	5.9	5.9	31.8	0.0	33.0	37.9	26.2	27.8
Incr Delay (d2), s/veh	0.1	0.1	0.1	7.2	0.1	0.1	4.3	0.0	37.5	4.2	0.7	3.0
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	1.1	1.7	1.7	13.1	1.8	1.8	3.2	0.0	10.7	1.0	1.1	3.0
LnGrp Delay(d),s/veh	7.6	5.9	6.0	22.6	6.0	6.0	36.1	0.0	70.5	42.2	26.9	30.8
LnGrp LOS	A	A	A	C	A	A	D		F	D	C	C
Approach Vol, veh/h		475			935			759			227	
Approach Delay, s/veh		6.3			15.8			64.7			31.8	
Approach LOS		A			B			E			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		25.0		61.0		25.0		61.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		20.0		60.0		20.0		60.0				
Max Q Clear Time (g_c+I1), s		22.0		9.9		18.9		50.5				
Green Ext Time (p_c), s		0.0		11.5		0.6		5.5				
Intersection Summary												
HCM 2010 Ctrl Delay				30.9								
HCM 2010 LOS				C								




















HCM 2010 Signalized Intersection Summary
19: H St & 5th Street

Year 2021 With Detour-Mitigated
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	208	782	682	6	1075	18	980	141	25	22	73	306
Future Volume (veh/h)	208	782	682	6	1075	18	980	141	25	22	73	306
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	226	850	741	7	1168	20	1065	153	27	24	79	333
Adj No. of Lanes	1	2	1	1	2	0	2	1	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	233	1562	1069	28	1135	19	1099	511	90	296	497	443
Arrive On Green	0.14	0.46	0.46	0.02	0.33	0.33	0.24	0.34	0.34	0.04	0.15	0.15
Sat Flow, veh/h	1619	3420	1530	1619	3441	59	3141	1491	263	1619	3420	1530
Grp Volume(v), veh/h	226	850	741	7	580	608	1065	0	180	24	79	333
Grp Sat Flow(s),veh/h/ln	1619	1710	1530	1619	1710	1790	1570	0	1754	1619	1710	1530
Q Serve(g_s), s	18.1	23.4	36.8	0.6	42.9	42.9	31.5	0.0	9.8	1.6	2.6	18.9
Cycle Q Clear(g_c), s	18.1	23.4	36.8	0.6	42.9	42.9	31.5	0.0	9.8	1.6	2.6	18.9
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	233	1562	1069	28	564	591	1099	0	602	296	497	443
V/C Ratio(X)	0.97	0.54	0.69	0.25	1.03	1.03	0.97	0.00	0.30	0.08	0.16	0.75
Avail Cap(c_a), veh/h	233	1562	1069	125	564	591	1099	0	602	348	497	443
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	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.4	25.5	11.4	63.1	43.5	43.6	37.1	0.0	31.3	43.3	48.6	42.0
Incr Delay (d2), s/veh	50.5	0.4	1.9	4.6	45.4	44.6	20.1	0.0	1.3	0.1	0.7	11.2
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	11.4	11.1	15.8	0.3	27.3	28.5	8.6	0.0	5.0	0.7	1.3	12.2
LnGrp Delay(d),s/veh	105.8	25.9	13.4	67.7	88.9	88.2	57.1	0.0	32.5	43.4	49.3	53.2
LnGrp LOS	F	C	B	E	F	F	E		C	D	D	D
Approach Vol, veh/h		1817			1195			1245			436	
Approach Delay, s/veh		30.7			88.4			53.6			52.0	
Approach LOS		C			F			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.3	49.1	6.7	63.9	36.0	23.4	23.2	47.4				
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	10.0	40.4	10.0	51.6	31.5	18.9	18.7	42.9				
Max Q Clear Time (g_c+1), s	3.6	11.8	2.6	38.8	33.5	20.9	20.1	44.9				
Green Ext Time (p_c), s	0.0	2.9	0.0	11.1	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			53.5									
HCM 2010 LOS			D									

HCM 2010 Signalized Intersection Summary
23: G St & Rialto Avenue

Year 2021 With Detour-Mitigated
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	598	307	21	40	444	161	20	158	35	68	93	506
Future Volume (veh/h)	598	307	21	40	444	161	20	158	35	68	93	506
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	636	327	22	43	472	171	21	168	37	72	99	538
Adj No. of Lanes	2	1	0	1	2	0	0	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	803	426	29	386	588	212	69	507	127	371	506	453
Arrive On Green	0.26	0.26	0.26	0.24	0.24	0.24	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	3141	1668	112	1619	2466	887	0	1713	428	1129	1710	1530
Grp Volume(v), veh/h	636	0	349	43	326	317	91	0	135	72	99	538
Grp Sat Flow(s),veh/h/ln	1570	0	1780	1619	1710	1643	579	0	1562	1129	1710	1530
Q Serve(g_s), s	12.1	0.0	11.7	1.3	11.5	11.7	0.0	0.0	4.3	3.4	2.8	19.0
Cycle Q Clear(g_c), s	12.1	0.0	11.7	1.3	11.5	11.7	19.0	0.0	4.3	7.7	2.8	19.0
Prop In Lane	1.00		0.06	1.00		0.54	0.23		0.27	1.00		1.00
Lane Grp Cap(c), veh/h	803	0	455	386	408	392	240	0	462	371	506	453
V/C Ratio(X)	0.79	0.00	0.77	0.11	0.80	0.81	0.38	0.00	0.29	0.19	0.20	1.19
Avail Cap(c_a), veh/h	954	0	540	454	479	461	240	0	462	371	506	453
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	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.3	0.0	22.1	19.1	23.0	23.1	18.1	0.0	17.4	20.4	16.9	22.6
Incr Delay (d2), s/veh	3.9	0.0	5.5	0.1	8.1	8.9	4.5	0.0	1.6	1.2	0.9	105.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	0.0	6.4	0.6	6.4	6.3	1.5	0.0	2.0	1.2	1.4	21.1
LnGrp Delay(d),s/veh	26.3	0.0	27.7	19.3	31.1	32.0	22.6	0.0	19.0	21.5	17.8	127.8
LnGrp LOS	C		C	B	C	C	C		B	C	B	F
Approach Vol, veh/h		985			686			226			709	
Approach Delay, s/veh		26.7			30.8			20.5			101.6	
Approach LOS		C			C			C			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		23.5		20.9		23.5		19.8				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		19.0		19.5		19.0		18.0				
Max Q Clear Time (g_c+I1), s		21.0		14.1		21.0		13.7				
Green Ext Time (p_c), s		0.0		2.3		0.0		1.6				
Intersection Summary												
HCM 2010 Ctrl Delay				47.6								
HCM 2010 LOS				D								