LINSCOTT LAW & GREENSPAN engineers

TRANSPORTATION IMPACT ANALYSIS

ACADIA HOSPITAL

Chula Vista, California
June 16, 2020

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1.0 INTRODUCTION

The following traffic study has been prepared to determine and evaluate the traffic impacts on the local circulation system due to the construction of the proposed Acadia Hospital project ("Project") in the City of Chula Vista. This traffic study analyzes intersections and street segments in the Project vicinity to determine potential impacts related to the traffic generated by the proposed Project.

Included in this traffic study are the following:

- Project Description
- Existing Conditions Description
- Vehicle Miles Traveled (VMT) Background
- Project VMT Significance Criteria and Methodology
- Project VMT Analysis
- Local Mobility Analysis Study Area, Approach & Methodology
- Existing Conditions Assessment
- Substantial Effect Criteria
- Project Trip Generation / Distribution / Assignment
- Existing with Project Conditions Analysis
- Near-Term Assessment
- Long-Term Assessment
- Pedestrian, Bicycle, and Transit Mobility
- Parking Assessment
- Substantial Effects and Operational Improvements

2.0 PROJECT DESCRIPTION

The Acadia Hospital Project proposes the construction of a new 120-bed Hospital. The Project is located at the terminus of the Showroom Place cul-de-sac, north of Fenton Street in the City of Chula Vista.

Figure 2–1 shows the Project's Vicinity Map and ***Figure 2-2*** shows a more detailed Project Area Map. ***Figure 2–3*** shows the Project's site plan.

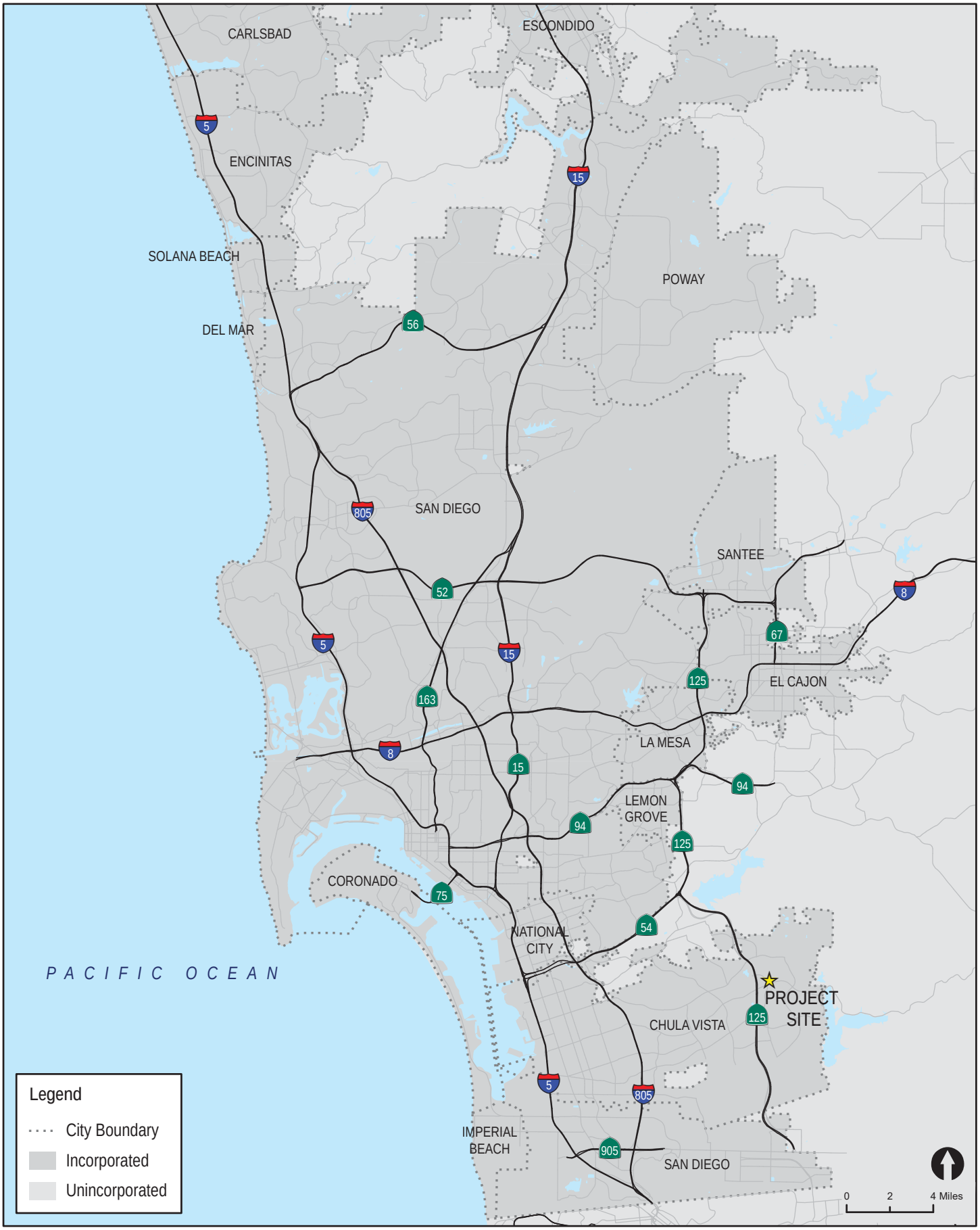

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Figure 2-1

Vicinity Map

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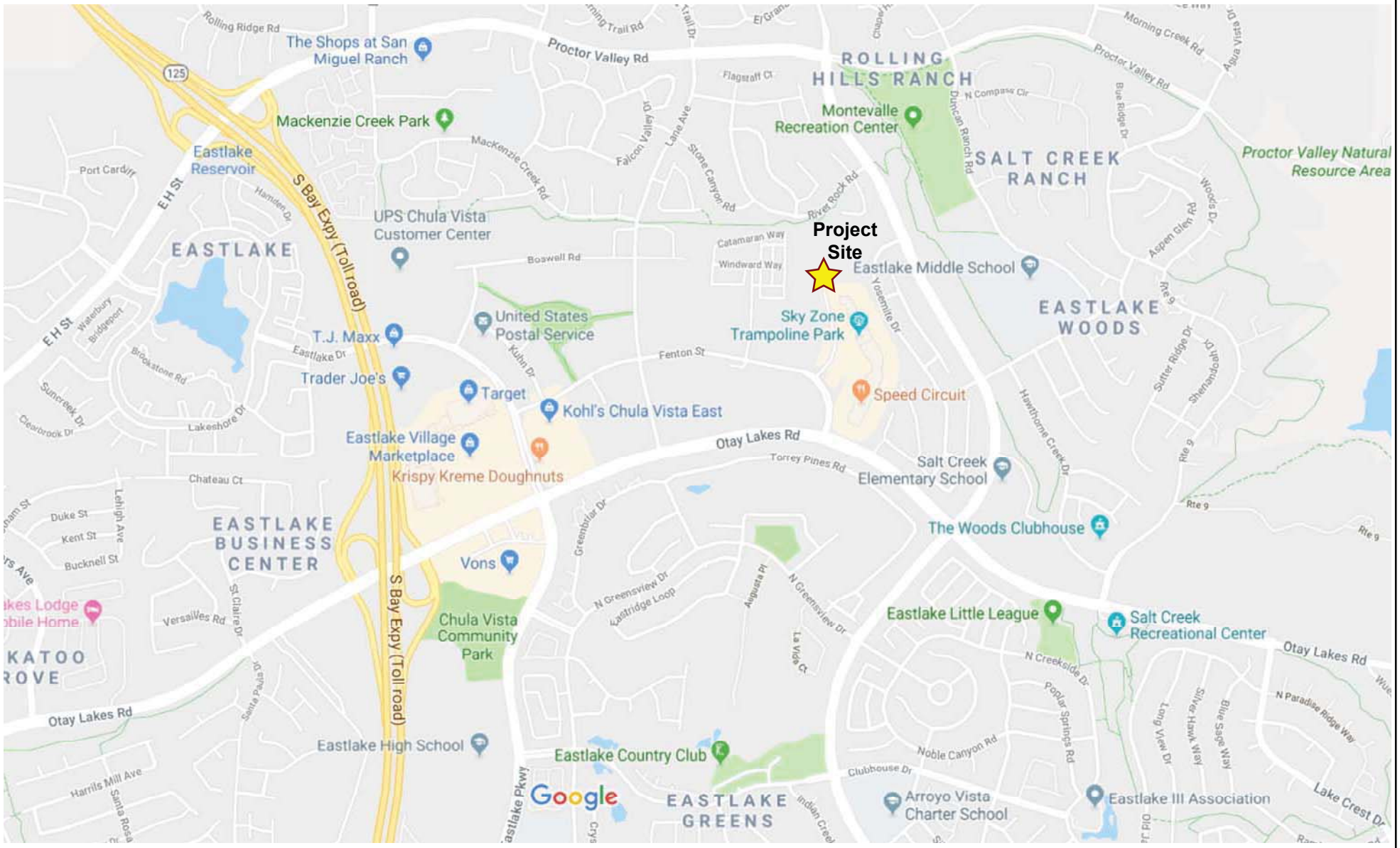

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Figure 2-2

Project Area Map

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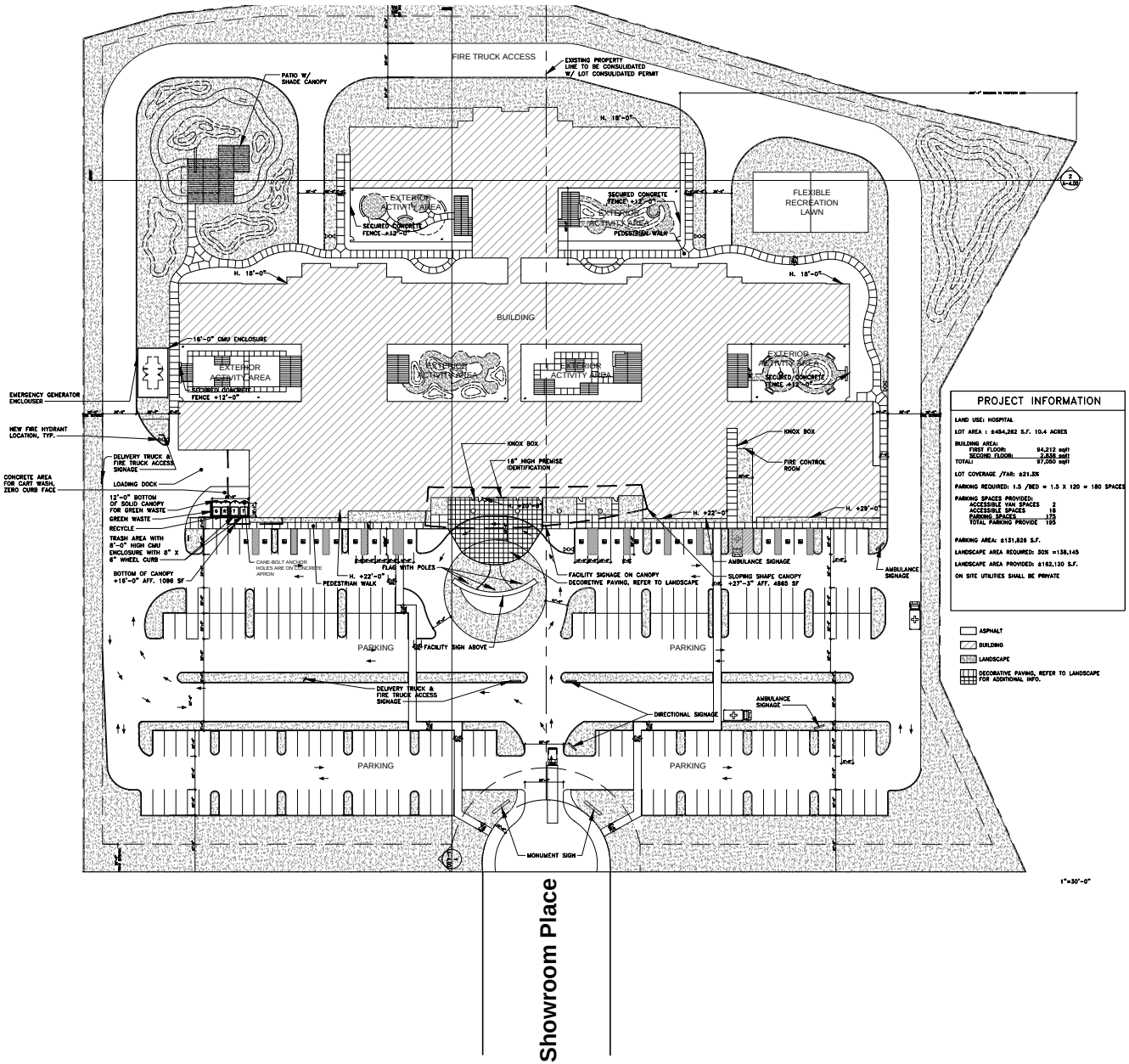

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Figure 2-3

Site Plan

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3.0 EXISTING CONDITIONS

3.1 Existing Street System

The following are brief descriptions of the existing streets in the project area. ***Figure 3-1*** depicts the existing conditions within the study area.

Otay Lakes Road is classified as a seven-lane Expressway between the SR-125 and Eastlake parkway and a six-lane prime east of Eastlake Parkway in the *City of Chula Vista General Plan*. Currently, Telegraph Canyon Road is constructed as a seven-lane divided roadway from the SR-125 Ramps to Eastlake Parkway and a six-lane divided roadway East of Eastlake parkway. Bike lanes exist on both sides of the street and curbside parking is prohibited. The posted speed limit is 50 mph.

Eastlake Parkway is classified as a four-lane Major in the *City of Chula Vista General Plan.* Currently, Eastlake Parkway is constructed as a six-lane divided roadway. Bike lanes exist on both sides of the street and curbside parking is prohibited. The posted speed limit is 40 mph.

Fenton Street is classified as a Class I Collector in the *City of Chula Vista General Plan*. Currently, Fenton Street is constructed as a four-lane undivided roadway between Eastlake Parkway and Kuhn Drive and a two-lane undivided roadway with a two-way left turn lane east of Kuhn Drive. Bike lanes are not provided on either side of the street and curbside parking is permitted east of Lane Avenue. The posted speed limit is 35 mph.

Hunte Parkway is classified as a four-lane Major in the *City of Chula Vista General Plan.* Currently, Hunte Parkway is constructed as a four-lane divided roadway. On-street parking is prohibited. The posted speed limit is 45 mph and bike lanes are provided.

Lane Avenue is classified as a Class I Collector in the *City of Chula Vista General Plan.* Currently, Lane Parkway is constructed as a four-lane undivided roadway with a two-way left-turn lane. On-street parking is prohibited. The posted speed limit is 35 mph and bike lanes are provided.

Showroom Place is an unclassified roadway in the *City of Chula Vista General Plan.* Currently, Showroom Place is constructed as a two-lane undivided roadway. On-street parking is generally allowed except between the hours of 10 PM and 6 AM. Bike lanes are not provided and a posted speed limit was not observed.

3.2 Existing Traffic Volumes

Existing weekday AM and PM peak hour (7:00-9:00 AM and 4:00-6:00 PM) turning movement counts at the study intersections and 24-hour average daily traffic (ADT) volumes along the study area street segment were conducted on Tuesday, December 18th, 2018 while area schools were in session. ***Table 3–1*** provides a summary of the counted average daily traffic volumes (ADTs).

Figure 3–2 shows the Existing Traffic Volumes. ***Appendix A*** contains the manual count sheets.

TABLE 3–1
EXISTING TRAFFIC VOLUMES

Street Segment	ADT[a]	Date
Otay Lakes Road		
SR-125 Northbound Ramps to Eastlake Parkway	43,230	Dec. 18, 2018
Eastlake Parkway to Lane Avenue	29,30	Dec. 18, 2018
Lane Avenue to Fenton Street	19,210	Dec. 18, 2018
Fenton Street to Hunte Parkway	18,750	Dec. 18, 2018
East of Hunte Parkway	10,670	Dec. 18, 2018
Eastlake Parkway		
Fenton Street to Otay Lakes Road	23,250	Dec. 18, 2018
Fenton Street		
Lane Avenue to Showroom Place	8,200	Dec. 18, 2018
Showroom Place to Otay Lakes Road	6,260	Dec. 18, 2018
Hunte Parkway		
Otay Lakes Road to Clubhouse Drive	14,910	Dec. 18, 2018

Footnotes:

a. Average Daily Traffic Volumes. Source: NDS Traffic Count Firm

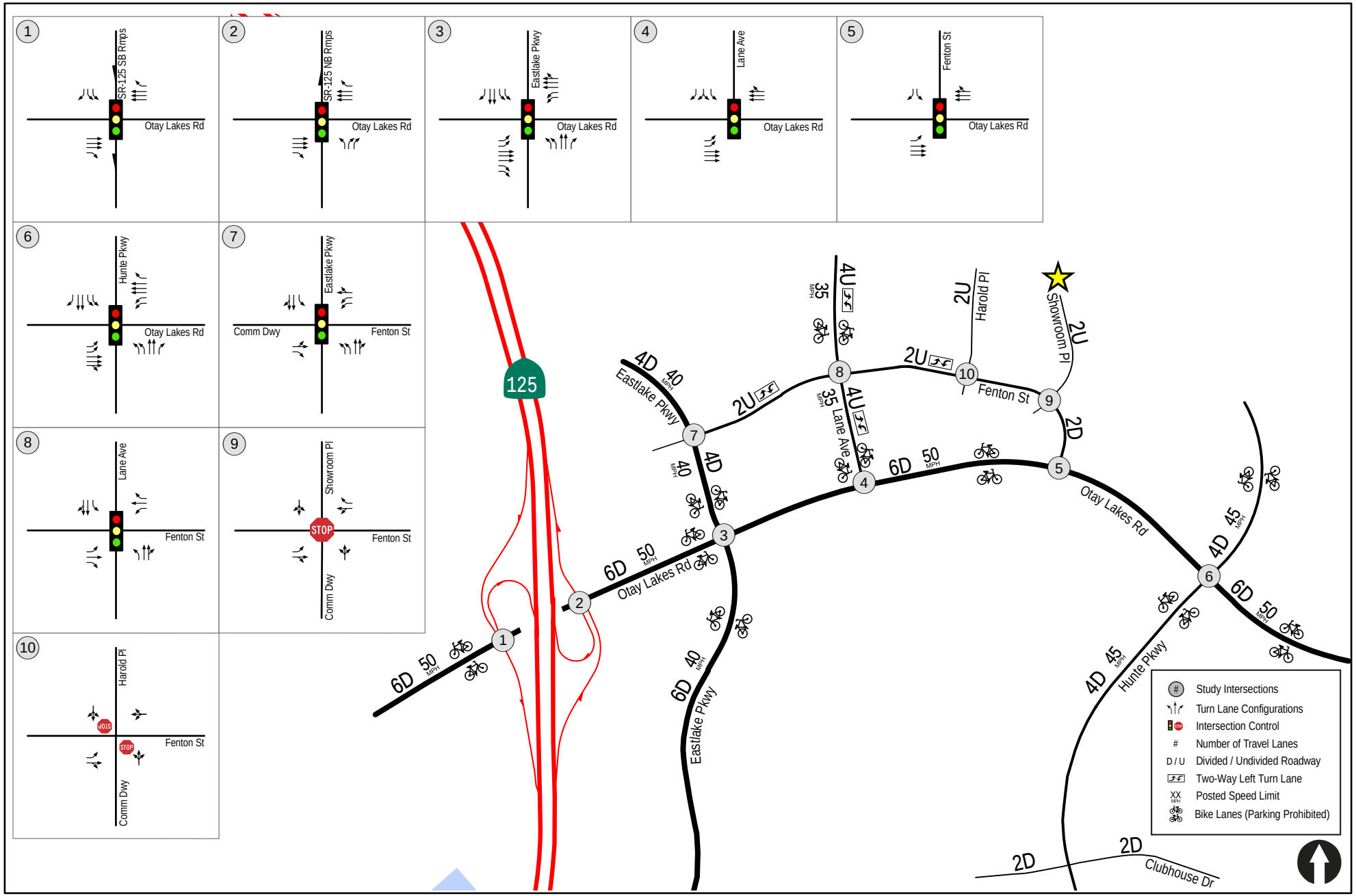

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Figure 3-1

Existing Conditions Diagram

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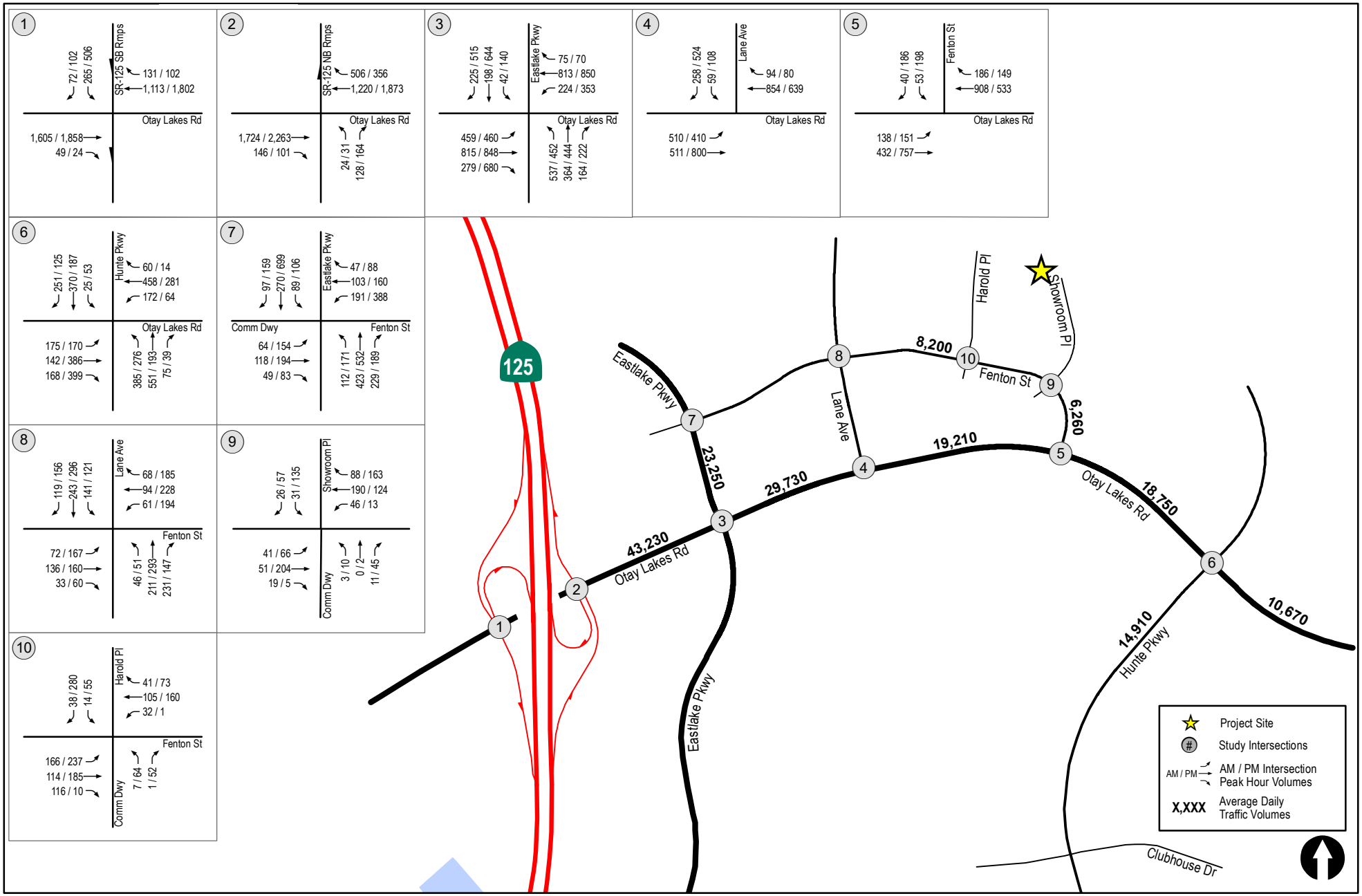

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Figure 3-2

Existing Traffic Volumes

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4.0 VEHICLES MILES TRAVELED (VMT): OVERVIEW AND BACKGROUND

This section presents an overview and background on VMT and the implementation of California State Law Senate Bill 743 (SB 743) requiring its use in the evaluation of transportation impacts for CEQA.

At the time this report was prepared, the City of Chula Vista was in the process of creating guidelines for VMT evaluation. LLG has coordinated with City Staff on an interim approach and methodology, and to obtain the latest draft screening map which identifies employee VMT per capita for locations Regionwide.

4.1 VMT Background

VMT is defined as a measure of miles traveled by vehicles within a specified region and for a specified time period. VMT is a measure of the use and efficiency of the transportation network. VMTs are calculated based on individual vehicle trips generated and their associated trip lengths. VMT accounts for two-way (round trip) travel and is estimated for a typical weekday for the purposes of measuring transportation impacts. For hospital projects like the Acadia project, "VMT per employee" is the efficiency metric used for evaluation. In general, the analysis presents the project VMT per employee, and compares it to a regional VMT per employee to determine if the former is higher, equal to, or lower than the latter.

4.2 Senate Bill 743

In September 2013, the Governor's Office signed SB 743 into law, starting a process that fundamentally changes the way transportation impact analysis is conducted under CEQA. Within the State's CEQA Guidelines, these changes include the elimination of auto delay, LOS, and similar measurements of vehicular roadway capacity and traffic congestion as the basis for determining significant impacts. The guidance identifies VMT as the most appropriate CEQA transportation metric, along with the elimination of auto delay / LOS for CEQA purposes statewide. The justification for this paradigm shift is that auto delay/ LOS impacts lead to improvements that increase roadway capacity and therefore induce more traffic and greenhouse gas emissions. The legislation was also intended to incentivize development in and around Transit Priority Areas (TPAs) and High-Quality Transit Corridors (HQTC's), and to encourage high density infill and mixed-use projects.

In January 2016, the Governor's Office of Planning and Research (OPR) issued Draft Guidance, which provided recommendations for updating the State's CEQA Guidelines in response to SB 743 and recommended practice for VMT analysis in an accompanying "*Technical Advisory on Evaluating Transportation Impacts in CEQA*" (Technical Advisory). OPR's most recent Technical Advisory is dated December 2018.

4.3 Proposed Technical Guidance

The following information is sourced from OPR's latest Technical Advisory (December 2018). This represents a non-regulatory advisory document on the evaluation of transportation impacts using VMT.

4.3.1 *General Recommendations Regarding Methodology*

OPR allows a screening map to be the basis of the VMT impact evaluation. As a hospital project, the VMT is evaluated in terms of "VMT per employee". The Project VMT per employee is obtained from the screening map, and then compared to VMT thresholds established by the City to determine the significance of the Project's impacts.

4.3.2 *Recommendations Regarding Significance Thresholds*

Lead agencies have the discretion to set or apply their own thresholds of significance. However, the criteria for determining the significance of transportation impacts should promote:

- Reduction of greenhouse gas emissions;
- Development of multimodal transportation networks; and
- A diversity of land uses

Given that the City of Chula Vista has not yet adopted VMT thresholds, the OPR Advisory describes the analysis for the following circumstances, which was used for the project's VMT analysis:

> A proposed project exceeding a level of fifteen percent (15%) below existing VMT per capita may indicate a significant transportation impact. Existing VMT per capita may be measured as Regional VMT per capita or as City VMT per capita.

Thus, for this analysis, the minimum threshold of significance for determination of the project's transportation impact is ***15% or less of the regional VMT per Employee***. Any reduction in comparative VMT more than 15% is considered not significant.

5.0 VMT ANALYSIS

5.1 Local Agency Transition to SB743

To-date, some local and regional agencies have begun transitioning to SB 743 VMT analyses to satisfy CEQA requirements. While the City of Chula Vista has not yet formally developed draft guidelines or adopted significance criteria and technical methodologies for VMT analysis, they are in the process of doing so and anticipate City Council adoption by June 2020.

To prepare this VMT analysis ahead of formal adoption of the City's significance criteria and methodology, LLG consulted with City of Chula Vista staff and was instructed to utilize OPR guidance from the Technical Advisory and San Diego ITE Regional Guidelines to develop significance thresholds and technical methodologies for the Project.

5.2 Significance Criteria

Guidance from OPR's Technical Advisory is used to establish a significance threshold of a minimum 15% reduction or more from the regional average VMT per employee. That means that if the Project's VMT per employee is more than 15% below the regional average, no significant transportation impact would result.

5.3 Map-Based Screening

Prior to any detailed project-specific VMT analysis, OPR allows for the use of a "map-based screening" (screening map) to identify if a project would result in a less-than-significant impact. The City of Chula Vista's screening map which has been developed for their forthcoming VMT guidelines was utilized for the Project. This map provides VMT per employee evaluation for locations throughout the City, and accounts for surrounding land uses, population density, and transportation infrastructure in accordance with OPR guidelines. These elements collectively shape mobility behavior and provide a strong indication of expected project VMT.

In general, higher density and mix of land uses with access to mobility options are expected to generate lower VMT.

5.3.1 *Screening Map Results*

The City of Chula Vista's VMT Screening Tool (screening map) is found online at:

https://cvgis.maps.arcgis.com/apps/webappviewer/index.html?id=d80a3cddc1964f8c88dafef234147e98

This screening map allows for a search by address of properties within the City of Chula Vista. The data presented in the screening map includes:

- Census Tract
- VMT per employee
- Percent of regional mean

- Employees
- Description of VMT results

Figure 5–1 shows a screen capture of the overall screening map. This figure shows the project location, the City boundaries, and the TPAs and HQTCs identified within the City.

Figure 5–2 shows a summary of the query for the Acadia project site. This figure shows that the VMT per employee at this location is 21.35 miles, which is 82.43% of the regional average (25.90 miles). The result is that the Project is more than 15% below the regional VMT per employee significance threshold.

Table 5–1 presents a tabular summary of the screening map data described above.

TABLE 5–1
PROJECT VMT FINDINGS – CITY OF CHULA VISTA SCREENING TOOL

Scenario	Regional Baseline VMT per Employee	Significance Threshold (85% of Regional Average VMT per Employee)	Project VMT per Employee	Transportation Impact? (Over Threshold?)
Employee VMT per capita	25.90	22.02	21.35	No

Source: City of Chula Vista VMT Screening Tool (May 2020).

5.4 Impacts Summary

Based on the screening map review and the Project's location in a high efficiency area and the resultant 21.35 VMT per Employee, the Project is 82.43% of the regional average VMT per Employee, which is below the 85% minimum threshold of significance.

Therefore, the Project is presumed to have less than significant transportation impacts, and no mitigation measures are required.

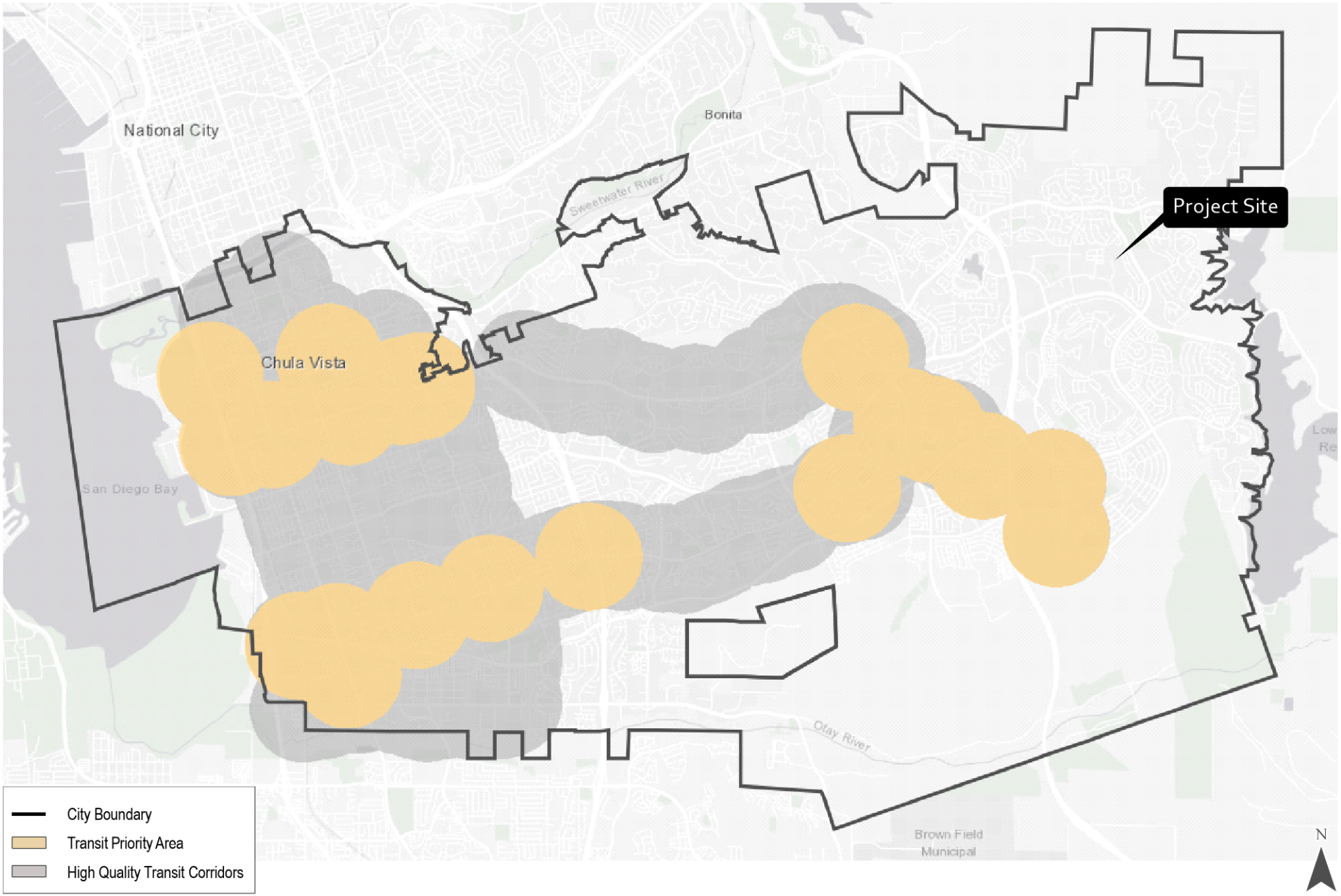

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Figure 5-1
Chula Vista Overall VMT Screening Map

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Figure 5-2
Map Query

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6.0 LOCAL MOBILITY ANALYSIS STUDY AREA, APPROACH AND METHODOLOGY

In addition to the VMT analysis presented above, a Project-Specific Local Mobility Analysis (LMA) was also prepared that focuses on automobile delay and LOS. The LOS analysis was conducted to identify Project effects on the roadway operations in the Project study area and recommend Project improvements to address noted deficiencies; however, the CEQA impact significance determination for the proposed Project is based only on VMT and not on LOS.

6.1 Study Area

The study area was determined based on the SANTEC/ITE Regional Guidelines for Traffic Impact Studies which require that a Project study area be established as follows:

- Intersections and street segments where the Project will add 50 or more peak hour trips in either direction.
- Mainline freeway locations where the Project will add 50 or more peak hour trips in either direction.
- Metered Freeway Ramps where the Project will add 20 or more peak hour trips.

In addition, the study area locations were selected based on the Project's trip distribution and are the most likely locations to be affected by the Project. The Project study area includes the following locations.

INTERSECTIONS

1. State-Route 125 SB Ramps / Otay Lakes Road
2. State-Route 125 NB Ramps / Otay Lakes Road
3. Eastlake Parkway / Otay Lakes Road
4. Lane Avenue / Otay Lakes Road
5. Fenton Street / Otay Lakes Road
6. Hunte Parkway / Otay Lakes Road
7. Eastlake Parkway / Fenton Street
8. Lane Avenue / Fenton Street
9. Showroom Place / Fenton Street
10. Harold Place / Fenton Street

STREET SEGMENTS

Otay Lakes Road

State-Route 125 NB Ramps to Eastlake Parkway

Eastlake Parkway to Lane Avenue

Lane Avenue to Fenton Street

Fenton Street to Hunte Parkway

East of Hunte Parkway

Eastlake Parkway

Fenton Street to Otay Lakes Road

Fenton Street

Lane Avenue to Showroom Place

Showroom Place to Otay Lakes Road

Hunte Parkway

Otay Lakes Road to Clubhouse Drive

It should be noted that the unsignalized intersections along Lane Avenue north of Fenton Street, specifically at Boswell Road and MacKenzie Creek Road, were considered for analysis but not included in the study area since only 6% of the Project's trips (144 ADT, 12 AM peak hour trips, and 14 PM peak hour trips) are expected to travel through these intersections.

6.2 Analysis Approach

This study analyzes the above-mentioned intersections and street segments in the Project area. The study area locations were analyzed under the following conditions to determine potential affects to the road network:

- Existing
- Existing with Project
- Near-Term without Project
- Near-Term with Project
- Long-Term without Project
- Long-Term with Project

6.3 Analysis Methodology

There are various methodologies used to analyze signalized intersections, un-signalized intersections and street segments. The measure of effectiveness for intersection and segment operations is level of service which denotes the operating conditions which occur at a given intersection or on a given roadway segment under various traffic volume loads. It is a qualitative measure used to describe a quantitative analysis taking into account factors such as roadway geometries, signal phasing, speed, travel delay, freedom to maneuver, and safety. Level of service provides an index to the operational qualities of a roadway segment or an intersection. Levels of service designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst. Level of service designation is reported differently for signalized and un-signalized intersections, as well as for roadway segments.

6.3.1 *Signalized Intersections*

In the Highway Capacity Manual (HCM), Level of Service for signalized intersections is defined in terms of delay. The level of service analysis results in seconds of delay expressed in terms of letters A through F. Delay is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. ***Table 6-1*** summarizes the signalized intersections levels of service descriptions.

Table 6-2 depicts the criteria, which are based on the overall average control delay for a signalized intersection. The level of service criteria is stated in terms of the average control delay per vehicle for a 15-minute analysis period. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

Level of service A describes operations with very low delay, (i.e. less than 10.0 seconds per vehicle). This occurs when progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.

Level of service B describes operations with delay in the range 10.1 seconds and 20.0 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of Average delay.

Level of service C describes operations with delay in the range 20.1 seconds and 35.0 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.

Level of service D describes operations with delay in the range 35.1 seconds and 55.0 seconds per vehicle. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or higher v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are more frequent.

Level of service E describes operations with delay in the range of 55.1 seconds to 80.0 seconds per vehicle. This is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.

Level of service F describes operations with delay in excess of over 80.0 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with over-saturation (i.e., when arrival flow rates exceed the capacity of the intersection). It may also occur at high v/c ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

TABLE 6–1
INTERSECTION LEVEL OF SERVICE DESCRIPTIONS

Level of Service	Description
A	Occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
B	Generally occurs with good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.
C	Generally results when there is fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
D	Generally results in noticeable congestion. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	Considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high volume-to-capacity ratios. Individual cycle failures are frequent occurrences.
F	Considered to be unacceptable to most drivers. This condition often occurs with over saturation i.e. when arrival flow rates exceed the capacity of the intersection. It may also occur at high volume-to-capacity ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels

TABLE 6–2
INTERSECTION LOS & DELAY RANGES

LOS	Delay (seconds/vehicle)	
	Signalized Intersections	**Un-signalized Intersections**
A	≤ 10.0	≤ 10.0
B	10.1 to 20.0	10.1 to 15.0
C	20.1 to 35.0	15.1 to 25.0
D	35.1 to 55.0	25.1 to 35.0
E	55.1 to 80.0	35.1 to 50.0
F	≥ 80.1	≥ 50.1

Source: 2010 Highway Capacity Manual

6.3.2 *Un-signalized Intersections*

Table 6-2 depicts the criteria, which are based on the average control delay for any particular minor movement at an un-signalized intersection. The level of service is determined by the computed or measured control delay and is defined for each minor movement. Level of service is not defined for the intersection as a whole.

Level of Service F exists when there are insufficient gaps of suitable size to allow a side street demand to safely cross through a major street traffic stream. This level of service is generally evident from extremely long control delays experienced by side-street traffic and by queuing on the minor-street approaches. The method, however, is based on a constant critical gap size; that is, the critical gap remains constant no matter how long the side-street motorist waits.

LOS F may also appear in the form of side-street vehicles selecting smaller-than-usual gaps. In such cases, safety may be a problem, and some disruption to the major traffic stream may result. It is important to note that LOS F may not always result in long queues but may result in adjustments to normal gap acceptance behavior, which are more difficult to observe in the field than queuing.

6.3.3 *Street Segments*

Street segment analysis is based upon the comparison of daily traffic volumes (ADTs) to the City of Chula Vista's *Roadway Classification, Level of Service, and ADT Table*. This table provides segment capacities for different street classifications, based on traffic volumes and roadway characteristics. The City of Chula Vista's *Roadway Classification, Level of Service and ADT* table is shown in ***Table 6–3.***

TABLE 6–3
CITY OF CHULA VISTA ROADWAY CAPACITY STANDARDS
AVERAGE DAILY VEHICLE TRIPS

Road		**Level of Service**				
Roadway Classification	**X-Section**	**A** **(V/C = 0.6)**	**B** **(V/C = 0.7)**	**C** **(V/C = 0.8)**	**D** **(V/C = 0.9)**	**E** **(V/C = 1.0)**
Expressway	104/128	52,000	61,300	70,000	78,800	87,500
Prime Arterial	104/128	37,500	43,800	50,000	56,300	62,500
Major Street (6 lanes)	104/128	30,000	35,000	40,000	45,000	50,000
Major Street (4 lanes)	80/104	22,500	26,300	30,000	33,800	37,500
Class I Collector	74/94	16,500	19,300	22,000	24,800	27,500
Class II Collector	52/72	9,000	10,500	12,000	13,500	15,000
Class III Collector	40/60	5,600	6,600	7,500	8,400	9,400

7.0 SUBSTANTIAL EFFECT CRITERIA

Traffic effects will be defined as either project specific effects or cumulative effects. Project specific effects are those effects for which the addition of project trips result in an identifiable degradation in LOS on intersections, triggering the need for specific project-related improvement strategies. Cumulative effects are those in which the project trips contribute to a poor LOS, at a level that falls below the Project-specific effect threshold.

Criteria for determining whether the project results in either project specific or cumulative effects on intersections in the City of Chula Vista are as follows:

SHORT TERM (STUDY HORIZON YEAR 0 TO 4)

INTERSECTIONS

a. Project specific effect if both the following criteria are met:
   i. Level of service is LOS E or LOS F.
   ii. Project trips comprise 5% or more of entering volume.

b. Cumulative effect if only (i) is met.

STREET LINKS/SEGMENTS

If the planning analysis using the volume to capacity ratio indicates LOS C or better, there is no effect. If the planning analysis indicates LOS D, E or F, the GMOC method should be utilized. The following criteria would then be utilized.

a. Project specific effect if all the following criteria are met:
   i. Level of service is LOS D for more than 2 hours or LOS E/F for 1 hour
   ii. Project trips comprise 5% or more of segment volume
   iii. Project adds greater than 800 ADT to the segment

b. Cumulative effect if only (i) is met.

LONG TERM (STUDY HORIZON YEAR 5 AND LATER)

INTERSECTIONS

a. Project specific effect if both the following criteria are met:
   i. Level of service is LOS E or LOS F.
   ii. Project trips comprise 5% or more of entering volume.

b. Cumulative effect if only (i) is met.

STREET LINKS/SEGMENTS

Use the planning analysis using the volume to capacity ratio methodology only. The GMOC analysis methodology is not applicable beyond a four-year horizon.

a. Project specific effect if all the following criteria are met:
   i. Level of service is LOS D for more than 2 hours or LOS E/F for 1 hour

ii. Project trips comprise 5% or more of segment volume
iii. Project adds greater than 800 ADT to the segment

b. Cumulative effect if only (i) above is met. However, if the intersections along a LOS D or LOS E segment all operate at LOS D or better, the segment effect is considered not substantial since intersection analysis is more indicative of actual roadway system operations than street segment analysis. If segment Level of Service is LOS F, effect is substantial regardless of intersection LOS.

c. Notwithstanding the foregoing, if the effect identified in paragraph a. above occurs at study horizon year 10 or later, and is offsite and not adjacent to the project, the effect is considered cumulative. Study year 10 may be that typical SANDAG model year which is between 8 and 13 years in the future. In this case of a traffic study being performed in the period of 2000 to 2002, because the typical model will only evaluate traffic at years divisible by 5 (i.e. 2005, 2010, 2015 and 2020) study horizon year 10 would correspond to the SANDAG model for year 2010 and would be 8 years in the future. If the model year is less than 7 years in the future, study horizon year 10 would be 13 years in the future.

d. In the event a direct identified project specific effect in paragraph a. above occurs at study horizon year 5 or earlier and the effect is offsite and not adjacent to his project, but the property immediately adjacent to the identified project specific effect is also proposed to be developed in approximately the same time frame , an additional analysis may be required to determine whether or not the identified project specific effect would still occur if the development of the adjacent property does not take place. If the additional analysis concludes that the identified project specific effect is no longer a direct effect, then the effect shall be considered cumulative.

8.0 ANALYSIS OF EXISTING CONDITIONS

8.1 Peak Hour Intersection Analysis

Table 8–1 summarizes the peak hour intersection operations under Existing conditions in the study area. As shown, the study area intersections are calculated to currently operate acceptably at LOS D or better during the AM and PM peak hours, with the exception of the following:

- Harold Place / Fenton Street (LOS F during the PM peak hour)

Appendix B contains the Existing intersection analysis worksheets.

8.2 Daily Street Segment Operations

Table 8–2 summarizes the Existing street segment operations along the key study area roadways. As shown, all the study area street segments are calculated to currently operate acceptably at LOS B or better.

TABLE 8–1
EXISTING INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing	
			Delay[a]	LOS[b]
1. SR-125 SB Ramps / Otay Lakes Road	Signal	AM	5.4	A
		PM	14.7	B
2. SR-125 NB Ramps / Otay Lakes Road	Signal	AM	3.1	A
		PM	1.7	A
3. Eastlake Parkway / Otay Lakes Road	Signal	AM	39.6	D
		PM	44.8	D
4. Lane Avenue / Otay Lakes Road	Signal	AM	14.0	B
		PM	15.5	B
5. Fenton Street / Otay Lakes Road	Signal	AM	8.9	A
		PM	11.8	B
6. Hunte Parkway / Otay Lakes Road	Signal	AM	25.1	C
		PM	22.7	C
7. Eastlake Parkway / Fenton Street	Signal	AM	22.7	C
		PM	40.2	D
8. Lane Avenue / Fenton Street	Signal	AM	17.0	B
		PM	21.0	C
9. Showroom Place / Fenton Street	AWSC [d]	AM	10.1	B
		PM	12.1	B
10. Harold Place / Fenton Street	TWSC[c]	AM	19.2	C
		PM	**>200**	**F**

Footnotes:

a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. TWSC – Two-Way Stop Controlled intersection. Minor street left-turn delay reported.
d. AWSC – All Way Stop Controlled intersection.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

TABLE 8–2
EXISTING STREET SEGMENT OPERATIONS

Street Segment	Functional Classification	Capacity (LOS C) [a]	Existing	
			ADT[b]	LOS[c]
Otay Lakes Road				
SR-125 NB Ramps to Eastlake Parkway	7-Lane Expressway	61,250	43,230	A
Eastlake Parkway to Lane Avenue	6-Lane Prime	50,000	29,730	A
Lane Avenue to Fenton Street	6-Lane Prime	50,000	19,210	A
Fenton Street to Hunte Parkway	6-Lane Prime	50,000	18,750	A
East of Hunte Parkway	6-Lane Prime	50,000	10,670	A
Eastlake Parkway				
Fenton Street to Otay Lakes Road	4-Lane Major Road	30,000	23,250	B
Fenton Street				
Lane Avenue to Showroom Place	Class I Collector	22,000	8,200	A
Showroom Place to Otay Lakes Road	Class I Collector	22,000	6,260	A
Hunte Parkway				
Otay Lakes Road to Clubhouse Drive	4-Lane Major Road	30,000	14,910	A

Footnotes:
a. Capacities based on City of Chula Vista Roadway Classification Table.
b. Average Daily Traffic Volumes.
c. Level of Service.

9.0 TRIP GENERATION/DISTRIBUTION/ASSIGNMENT

As described in *Section 2* of this study, the Project proposes to construct a 120-Bed Hospital. Trip generation rates for the Project were obtained from the *(Not So) Brief Guide of Traffic Generators for the San Diego Region* published by the San Diego Association of Governments (SANDAG) in April 2002.

Table 9–1 summarizes the trip generation for the Project. As shown in *Table 9–1*, the Project is calculated to generate 2,400 ADT with a total of 192 trips during the AM peak hour (134 inbound/ 58 outbound trips) and 240 trips during PM peak hour (96 inbound/ 144 outbound trips).

It should be noted that the use of the SANDAG trip rate of 20 ADT per bed may not necessarily reflect the Project's actual traffic generation. The Project is a unique land use with limited opportunities for visitors and a reduced staffing requirement as compared to a traditional hospital. Counts performed at another facility suggest a traffic generation rate of 6 ADT per bed, over three times less than the rate used in this study. However, in order to provide a conservative analysis, the SANDAG trip rate of 20 ADT per bed was used.

Additional information regarding the site-specific trip generation study is provided in ***Appendix H.***

9.1 Trip Distribution and Assignment

The Project's distribution was informed by the locations of the proposed access points, traffic patterns observed from the existing traffic counts, and the location of residential areas where employees could reside.

Figure 9–1 shows the distribution of the Project trips. ***Figure 9–2*** shows the total Project traffic volumes. ***Figure 9-3*** shows the Existing with Project traffic volumes.

TABLE 9–1
PROJECT TRIP GENERATION

Use	Quantity	Daily Trip Ends (ADTS)[a]		AM Peak Hour				PM Peak Hour			
		Rate [b]	Volume	% of ADT	In:Out Split	Volume		% of ADT	In:Out Split	Volume	
						In	Out			In	Out
Hospital	120 Beds	20 / Bed	2,400	8%	70:30	134	58	10%	40:60	96	144

Footnotes:

a. Average Daily Trips

b. Trip Generation Rate from the SANDAG's *Not So Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region,* 2002.

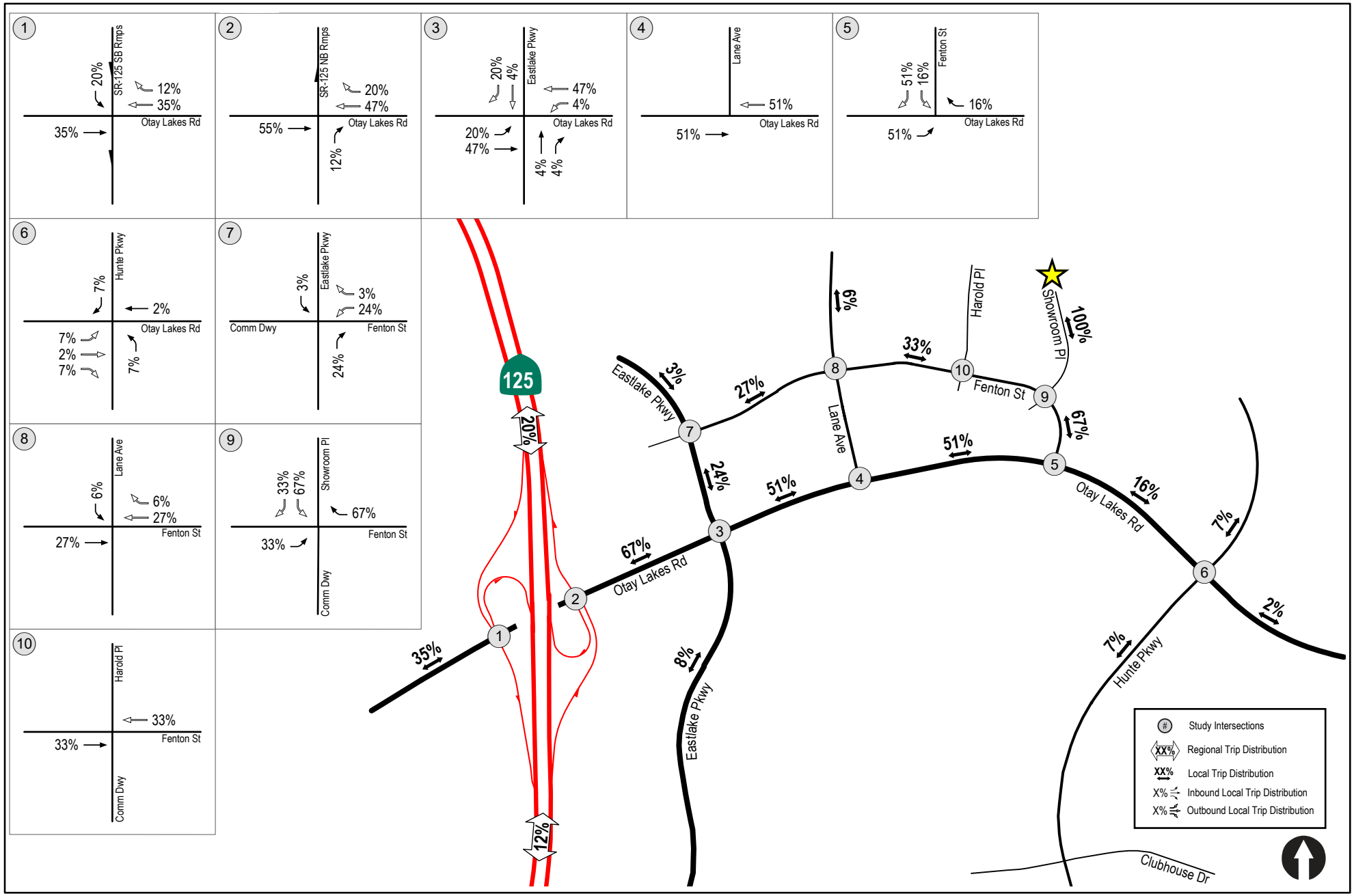

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Figure 9-1

Project Traffic Distribution

Acadia Health

Linscott Law & Greenspan engineers

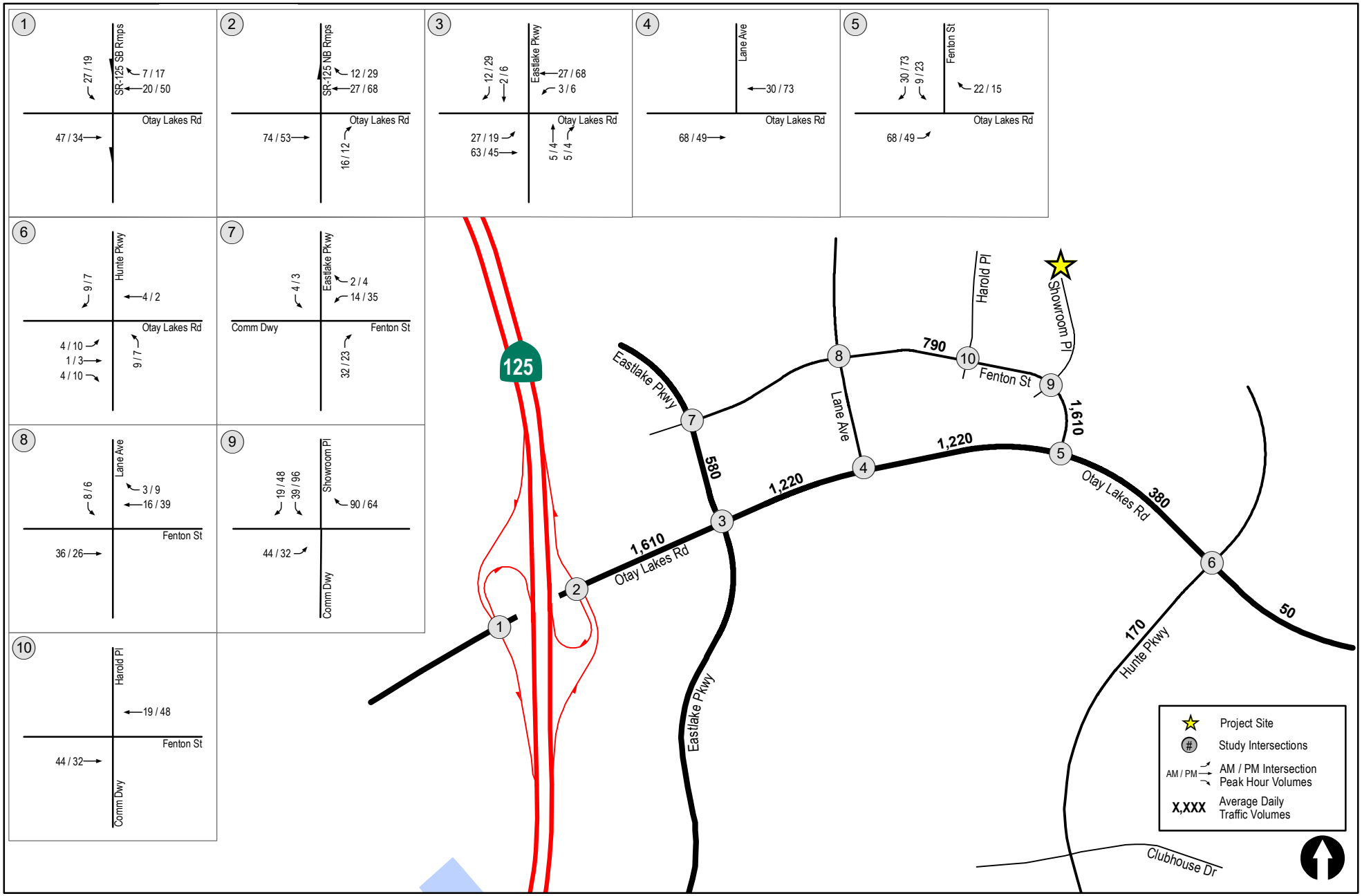

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Figure 9-2

Project Traffic Volumes

ACADIA HEALTH

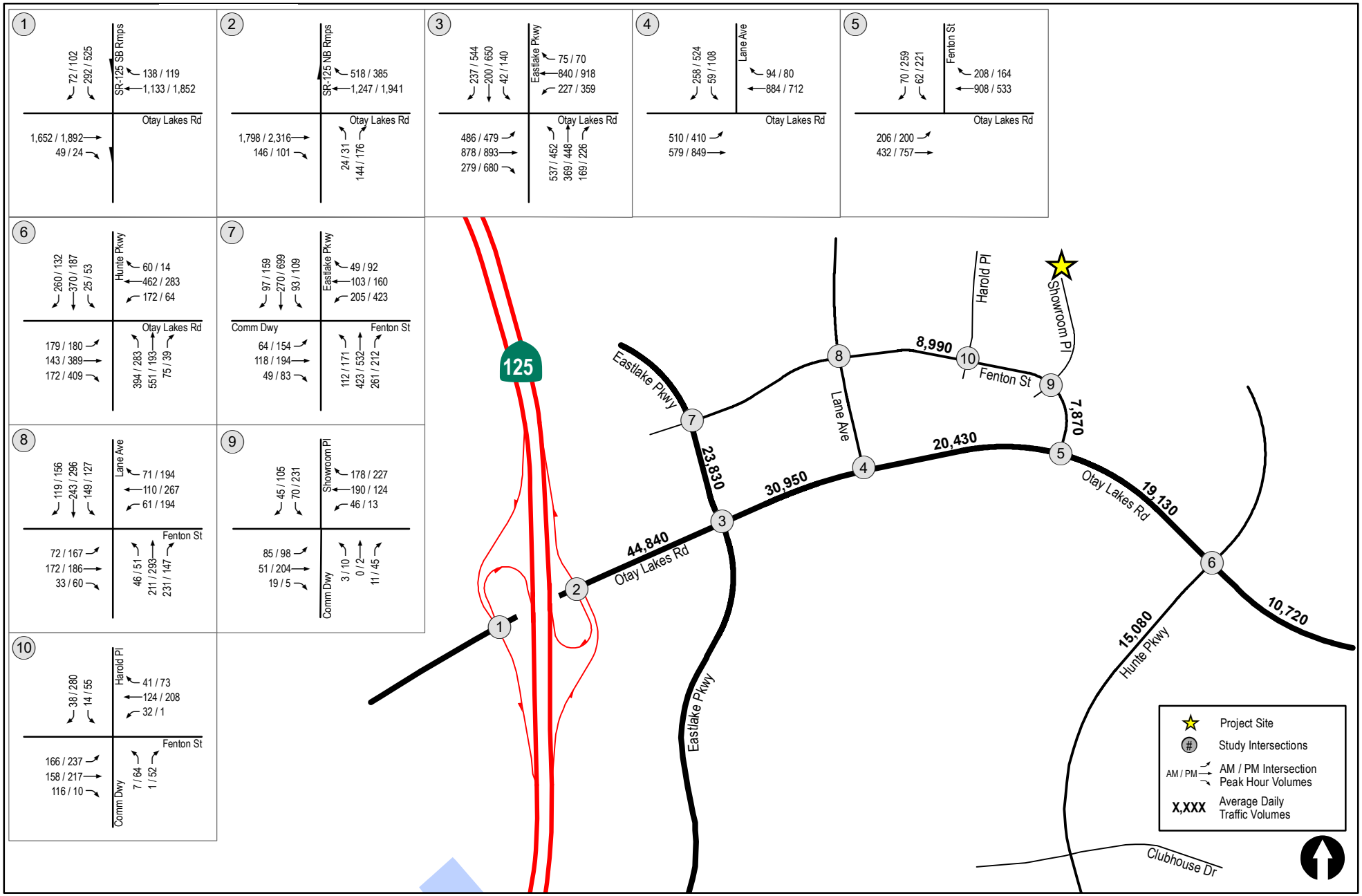

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Figure 9-3

Existing + Project Traffic Volumes

ACADIA HEALTH

10.0 ANALYSIS OF EXISTING WITH PROJECT CONDITIONS

10.1 Peak Hour Intersection Analysis

Table 10–1 summarizes the peak hour intersection operations under Existing with Project conditions in the study area. As shown, with the addition of Project traffic, the study area intersections are calculated to continue to operate acceptably at LOS D or better during the AM and PM peak hours, with the exception of the following:

- Harold Place / Fenton Street (LOS F during the PM peak hour)

Based on the City of Chula Vista's substantial effect criteria, *a substantial project specific effect* is calculated the intersection of Harold Place / Fenton Street.

Appendix C contains the Existing with Project intersection analysis worksheets.

10.2 Daily Street Segment Operations

Table 10–2 summarizes the Existing with Project street segment operations along the key study area roadways. As shown, with the addition of Project traffic, the study area street segments are calculated to continue to operate acceptably at LOS B or better.

Based on the City of Chula Vista's substantial effect criteria, no substantial segment effects are calculated.

TABLE 10–1
EXISTING WITH PROJECT INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing		Existing with Project		Project % of Entering Volume (>5%)	Effect Type
			Delay[a]	LOS[b]	Delay	LOS		
1. SR-125 SB Ramps / Otay Lakes Road	Signal	AM	5.4	A	5.7	A	3.0%	None
		PM	14.7	B	15.0	B	2.7%	
2. SR-125 NB Ramps / Otay Lakes Road	Signal	AM	3.1	A	3.4	A	3.3%	None
		PM	1.7	A	1.8	A	3.3%	
3. Eastlake Parkway / Otay Lakes Road	Signal	AM	39.6	D	41.1	D	3.3%	None
		PM	44.8	D	45.6	D	2.9%	
4. Lane Avenue / Otay Lakes Road	Signal	AM	14.0	B	14.0	B	4.1%	None
		PM	15.5	B	15.9	B	4.5%	
5. Fenton Street / Otay Lakes Road	Signal	AM	8.9	A	11.6	B	6.8%	None
		PM	11.8	B	15.4	B	7.5%	
6. Hunte Parkway / Otay Lakes Road	Signal	AM	25.1	C	25.8	C	1.1%	None
		PM	22.7	C	24.1	C	1.8%	
7. Eastlake Parkway / Fenton Street	Signal	AM	22.7	C	23.7	C	2.8%	None
		PM	40.2	D	41.4	D	2.2%	
8. Lane Avenue / Fenton Street	Signal	AM	17.0	B	18.2	B	4.2%	None
		PM	21.0	C	22.3	C	3.7%	
9. Showroom Place / Fenton Street	AWSC[d]	AM	10.1	B	11.0	B	27.5%	None
		PM	12.1	B	19.7	C	22.6%	
10. Harold Place / Fenton Street	TWSC [c]	AM	19.2	C	21.0	C	9.0%	**Project**
		PM	**>200**	**F**	**>200**	**F**	**6.7%**	

Footnotes:

a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. TWSC – Two Way Stop Controlled intersection. Minor street left-turn delay reported.
d. AWSC – All Way Stop Controlled intersection.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

TABLE 10-2
EXISTING WITH PROJECT STREET SEGMENT OPERATIONS

Street Segment	Capacity (LOS C) [a]	Existing		Existing with Project		Substantial Effect Criteria		Effect Type
		ADT[b]	LOS[c]	ADT	LOS	Project ADT > 800	Project Contribution > 5%	
Otay Lakes Road								
SR-125 NB Ramps to Eastlake Parkway	76,650	43,230	A	44,840	A	1,610	4%	None
Eastlake Parkway to Lane Avenue	62,500	29,730	A	30,950	A	1,220	4%	None
Lane Avenue to Fenton Street	62,500	19,210	A	20,430	A	1,220	6%	None
Fenton Street to Hunte Parkway	62,500	18,750	A	19,130	A	380	2%	None
East of Hunte Parkway	62,500	10,670	A	10,720	A	50	0%	None
Eastlake Parkway								
Fenton Street to Otay Lakes Road	37,500	23,250	B	23,830	B	580	2%	None
Fenton Street								
Lane Avenue to Showroom Place	27,500	8,200	A	8,990	A	790	9%	None
Showroom Place to Otay Lakes Road	27,500	6,260	A	7,870	A	1,610	20%	None
Hunte Parkway								
Otay Lakes Road to Clubhouse Drive	37,500	14,910	A	15,080	A	170	1%	None

Footnotes:
a. Capacities based on City of Chula Vista Roadway Classification Table.
b. Average Daily Traffic Volumes.
c. Level of Service.

11.0 NEAR-TERM (YEAR 2025) ANALYSIS

11.1 Near-Term Volumes

Future traffic volumes for the Near-Term (Year 2025) scenario were forecast by first calculating the average growth factor for the area. A factor of 1.5% per year was calculated based on the overall increase in daily traffic between the Existing daily traffic volumes conducted for this study in 2018 and the Year 2035 daily traffic volumes obtained from the SANDAG Series 13 traffic model, divided by the number of years between 2018 and 2035 (calculations included in ***Appendix I***). A growth factor of 10.5% (1.5% x 7 years to account for the growth between Existing 2018 traffic counts and Year 2025 conditions) was then applied to the Existing traffic volumes to determine the Near-Term (Year 2025) traffic volumes.

Figure 11–1 depicts the Near-Term without Project traffic volumes, and ***Figure 11–2*** depicts the Near-Term with Project traffic volumes.

11.2 Near-Term without Project Conditions

11.2.1 *Peak Hour Intersection Analysis*

Table 11–1 summarizes the peak hour intersection operations under Near-Term conditions in the study area. As shown, the following study area intersections are calculated to operate at LOS E or F in the Year 2025:

- Eastlake Parkway / Otay Lakes Road (LOS E during the AM and PM peak hours)
- Hunte Parkway / Otay Lakes Road (LOS E during the AM peak hour)
- Eastlake Parkway / Fenton Street (LOS E during the PM peak hour)
- Harold Place / Fenton Street (LOS F during the PM peak hour)

Appendix D contains the Near-Term intersection analysis worksheets.

11.2.2 *Daily Street Segment Operations*

Table 11–2 summarizes the Near-Term street segment operations along the key study area roadways. As shown, the study area street segments are calculated to operate acceptably at LOS B or better.

11.3 Near-Term with Project Conditions

11.3.1 *Peak Hour Intersection Analysis*

Table 11–1 summarizes the peak hour intersection operations under Near-Term with Project conditions in the study area. As shown, with the addition of Project traffic, the following study area intersections are calculated to operate at LOS E or F:

- Eastlake Parkway / Otay Lakes Road (LOS E during the AM and PM peak hours)
- Hunte Parkway / Otay Lakes Road (LOS E during the AM peak hour)
- Eastlake Parkway / Fenton Street (LOS E during the PM peak hour)
- Harold Place / Fenton Street (LOS F during the AM and PM peak hour)

Based on the City of Chula Vista's substantial effect criteria, *substantial cumulative effects* are calculated at the following intersections:

- Eastlake Parkway / Otay Lakes Road
- Hunte Parkway / Otay Lakes Road
- Eastlake Parkway / Fenton Street

A *substantial project specific effect* is calculated at the intersection of Harold Place / Fenton Street.

Appendix E contains the Near-Term with Project intersection analysis worksheets.

11.3.2 *Daily Street Segment Operations*

Table 11–2 summarizes the Near-Term with Project Street segment operations along the key study area roadways. As shown, with the addition of Project traffic, the study area street segments are calculated to continue to operate acceptably at LOS B or better.

Based on the City of Chula Vista's substantial effect criteria, no substantial segment effects are calculated.

TABLE 11–1
NEAR TERM INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Near Term without Project		Near Term with Project		Project % of Entering Volume (>5%)	Effect Type
			Delay[a]	LOS[b]	Delay	LOS		
1. SR-125 SB Ramps / Otay Lakes Road	Signal	AM	7.0	A	7.4	A	2.7%	None
		PM	11.3	B	11.6	B	2.4%	
2. SR-125 NB Ramps / Otay Lakes Road	Signal	AM	5.0	A	5.3	A	3.0%	None
		PM	6.6	A	6.8	A	3.0%	
3. Eastlake Parkway / Otay Lakes Road	Signal	AM	**58.7**	**E**	**61.4**	**E**	**3.0%**	**Cumulative**
		PM	**70.6**	**E**	**72.3**	**E**	**2.8%**	
4. Lane Avenue / Otay Lakes Road	Signal	AM	15.6	B	15.6	B	3.7%	None
		PM	15.9	B	16.2	B	4.1%	
5. Fenton Street / Otay Lakes Road	Signal	AM	9.5	A	12.7	B	6.2%	None
		PM	12.9	B	17.8	B	6.8%	
6. Hunte Parkway / Otay Lakes Road	Signal	AM	**68.4**	**E**	**72.5**	**E**	**1.0%**	**Cumulative**
		PM	36.2	D	40.6	D	1.6%	
7. Eastlake Parkway / Fenton Street	Signal	AM	26.2	C	27.8	C	2.6%	**Cumulative**
		PM	**75.2**	**E**	**78.6**	**E**	**2.0%**	
8. Lane Avenue / Fenton Street	Signal	AM	17.5	B	18.6	B	3.8%	None
		PM	24.6	C	26.2	C	3.4%	
9. Showroom Place / Fenton Street	AWSC[d]	AM	10.7	B	11.8	B	25.6%	None
		PM	13.4	B	24.3	C	20.9%	
10. Harold Place / Fenton Street	TWSC[c]	AM	21.8	C	24.0	C	8.3%	**Project**
		PM	**>200**	**F**	**>200**	**F**	6.0%	

Footnotes:

a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. TWSC – Two Way Stop Controlled intersection. Minor street left-turn delay reported.
d. AWSC – All Way Stop Controlled intersection.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

TABLE 11–2
NEAR TERM STREET SEGMENT OPERATIONS

Street Segment	Capacity (LOS C) [a]	Near Term without Project		Near Term with Project		Substantial Effect Criteria		Effect Type
		ADT[b]	LOS[c]	ADT	LOS	Project ADT > 800	Project Contribution > 5%	
Otay Lakes Road								
SR-125 NB Ramps to Eastlake Parkway	76,650	47,800	B	49,410	B	1,610	3%	None
Eastlake Parkway to Lane Avenue	62,500	32,900	A	34,120	A	1,220	4%	None
Lane Avenue to Fenton Street	62,500	21,200	A	22,420	A	1,220	5%	None
Fenton Street to Hunte Parkway	62,500	20,700	A	21,080	A	380	2%	None
East of Hunte Parkway	62,500	11,800	A	11,850	A	50	0%	None
Eastlake Parkway								
Fenton Street to Otay Lakes Road	37,500	25,700	B	26,280	B	580	2%	None
Fenton Street								
Lane Avenue to Showroom Place	27,500	9,100	A	9,890	A	790	8%	None
Showroom Place to Otay Lakes Road	27,500	6,900	A	8,510	A	1,610	19%	None
Hunte Parkway								
Otay Lakes Road to Clubhouse Drive	37,500	16,500	A	16,670	A	170	1%	None

Footnotes:
a. Capacities based on City of Chula Vista Roadway Classification Table.
b. Average Daily Traffic Volumes.
c. Level of Service.

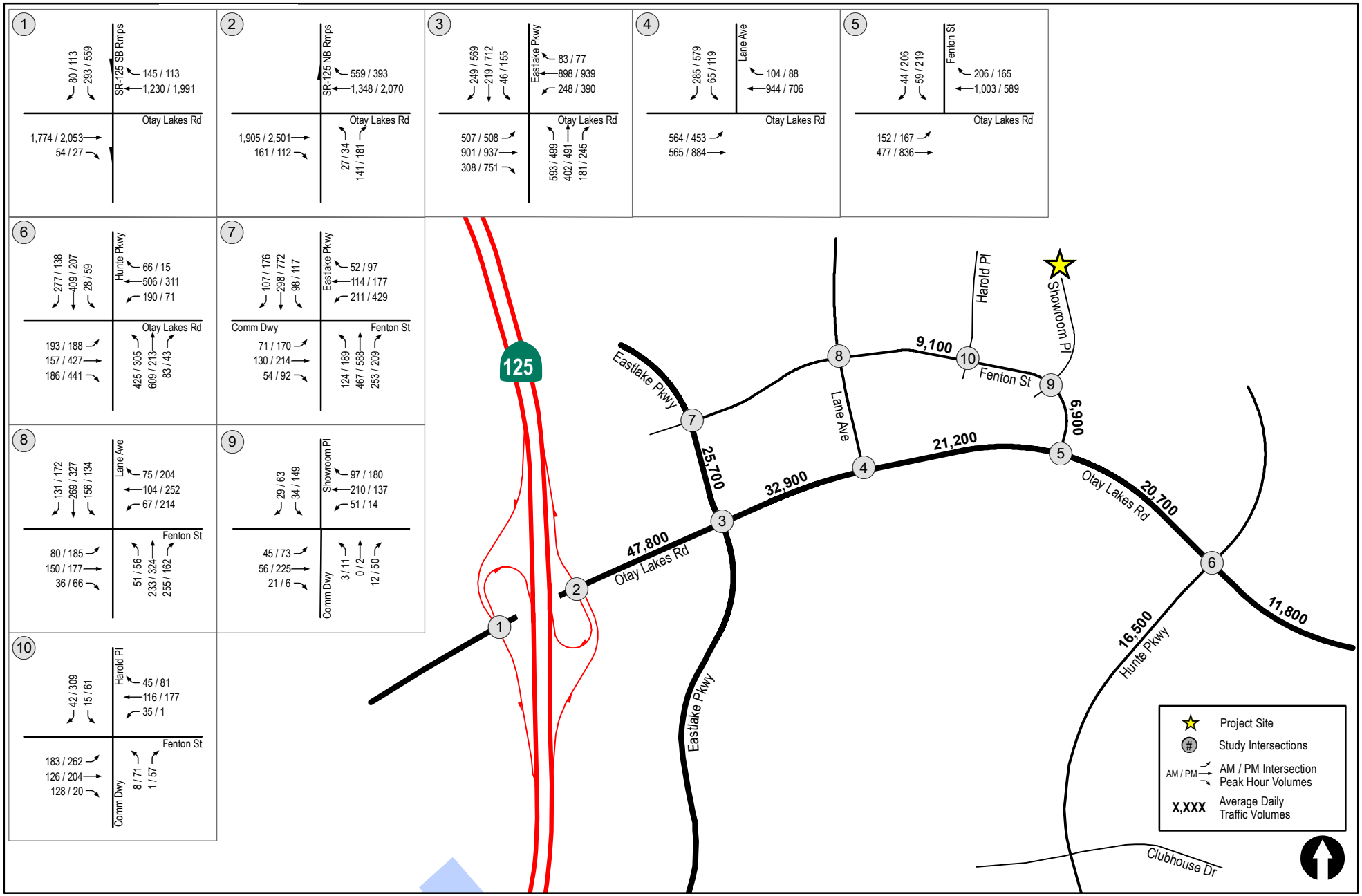

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Figure 11-1

Near-Term Without Project Traffic Volumes

ACADIA HEALTH

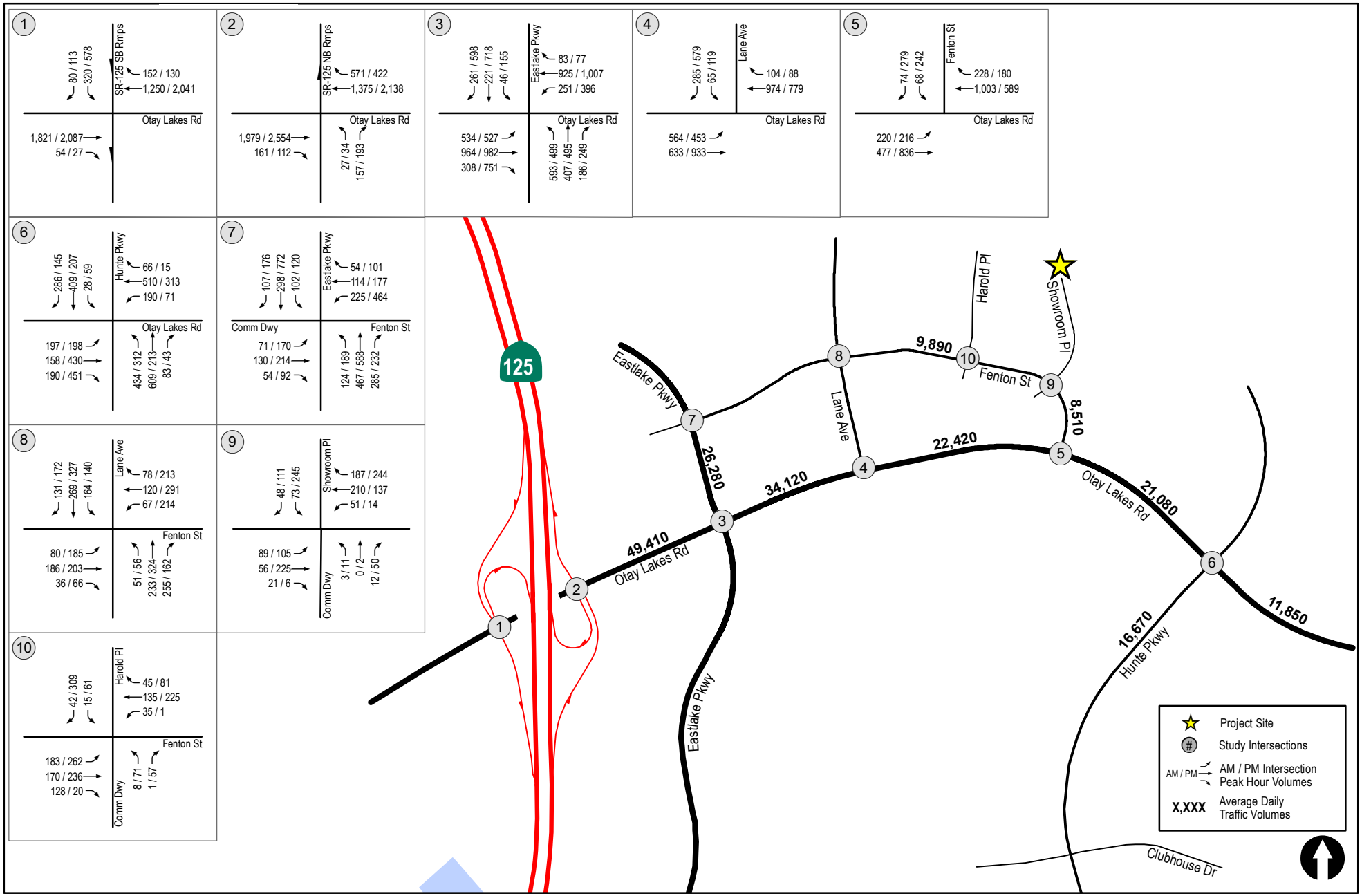

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Figure 11-2

Near-Term With Project Traffic Volumes

ACADIA HEALTH

12.0 LONG-TERM (YEAR 2035) ANALYSIS

12.1 Long-Term Volumes

In order to forecast future traffic volumes for the Long-Term (Year 2035) scenario, the SANDAG Series 13 Model was utilized. The forecasted ADT volumes were then used to calculate peak hour volumes based partially on the existing relationship between ADT and peak hour volumes.

Several other traffic engineering principles and factors such as the K-factor (the proportion of daily volume that occurs during the peak period) and D-factor (the directional split of the traffic volumes) were also considered in the forecast analysis. The forecast volumes were also checked for consistency between intersections, where no driveways or roadways exist between intersections, and were compared to existing volumes for accuracy.

Figure 12–1 depicts the Long-Term without Project traffic volumes, and ***Figure 12–2*** depicts the Long-Term with Project traffic volumes.

12.2 Long-Term without Project Conditions

12.2.1 *Peak Hour Intersection Analysis*

Table 12–1 summarizes the peak hour intersection operations under Long-Term conditions in the study area. As shown, the following study area intersections are calculated to operate at LOS E or F in the Year 2035:

- Eastlake Parkway / Otay Lakes Road (LOS E during the AM and LOS F during the PM peak hours)
- Hunte Parkway / Otay Lakes Road (LOS F during the AM peak hour)
- Eastlake Parkway / Fenton Street (LOS F during the PM peak hour)
- Harold Place / Fenton Street (LOS F during the PM peak hour)

Appendix F contains the Long-Term intersection analysis worksheets.

12.2.2 *Daily Street Segment Operations*

Table 12–2 summarizes the Long-Term street segment operations along the key study area roadways. As shown, the study area street segments are calculated to operate acceptably at LOS C or better.

12.3 Long-Term with Project Conditions

12.3.1 *Peak Hour Intersection Analysis*

Table 12–1 summarizes the peak hour intersection operations under Long-Term with Project conditions in the study area. As shown, with the addition of Project traffic, the following study area intersections are calculated to operate at LOS E or F:

- Eastlake Parkway / Otay Lakes Road (LOS E during the AM and LOS F during the PM peak hours)
- Hunte Parkway / Otay Lakes Road (LOS F during the AM peak hour)

- Eastlake Parkway / Fenton Street (LOS F during the PM peak hour)
- Harold Place / Fenton Street (LOS F during the AM and PM peak hour)

Based on the City of Chula Vista's substantial effect criteria, *substantial cumulative effects* are calculated at the following intersections:

- Eastlake Parkway / Otay Lakes Road
- Hunte Parkway / Otay Lakes Road
- Eastlake Parkway / Fenton Street

A *substantial project specific effect* is calculated at the intersection of Harold Place / Fenton Street.

Appendix G contains the Long-Term with Project intersection analysis worksheets.

12.3.2 *Daily Street Segment Operations*

Table 12–2 summarizes the Long-Term with Project Street segment operations along the key study area roadways. As shown, with the addition of Project traffic, the study area street segments are calculated to continue to operate acceptably at LOS C or better.

Based on the City of Chula Vista's substantial effect criteria, no substantial segment effects are calculated.

12.4 Queuing Assessment

A queuing assessment was conducted at the signalized study area intersections to determine the adequacy of the turn bays to accommodate 95% maximum queues. The 95th-percentile queue is defined to be the queue length that has only a 5-percent probability of being exceeded during the analysis time period. The queue assessment is provided for Long-Term (Year 2035) conditions because this is the analysis scenario with the highest traffic volumes and therefore represents worst case operations.

The results of the queue assessment are included in ***Table 12-3***, and show that the 95th percentile queues at many of the approaches may exceed the existing turn bay storage under both without and with Project conditions. In many cases, the incremental increase in queue attributable to the Project is less than one car.

It should be noted that the reported 95th percentile queue at the intersection of Eastlake Parkway and Otay Lakes Road is longer under without Project conditions as compared to with Project conditions for the southbound right-turn movement. Under the HCM signalized intersection methodology, it is possible to have a better LOS or a decrease in delay and / or queue with the addition of project trips. This can be caused by a number of factors relating to the dynamic nature of intersection operations including the allocation of green time given to each phase to balance the allocated green time for heavier movements, and the improved efficiency of right-turn overlap signal phasing with the addition of right-turning trips.

Appendices F and *G* contain the Long-Term without and with Project queue assessment worksheets, respectively.

TABLE 12–1
LONG TERM INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Long Term without Project		Long Term with Project		Project % of Entering Volume (>5%)	Effect Type
			Delay[a]	LOS[b]	Delay	LOS		
1. SR-125 SB Ramps / Otay Lakes Road	Signal	AM	7.2	A	7.6	A	2.7%	None
		PM	11.6	B	12.0	B	2.4%	
2. SR-125 NB Ramps / Otay Lakes Road	Signal	AM	5.4	A	5.7	A	2.8%	None
		PM	7.0	A	7.3	A	2.8%	
3. Eastlake Parkway / Otay Lakes Road	Signal	AM	**70.7**	**E**	**73.8**	**E**	**2.8%**	**Cumulative**
		PM	**87.1**	**F**	**89.6**	**F**	**2.6%**	
4. Lane Avenue / Otay Lakes Road	Signal	AM	17.0	B	17.0	B	3.4%	None
		PM	17.3	B	17.7	B	3.8%	
5. Fenton Street / Otay Lakes Road	Signal	AM	12.7	B	19.6	B	4.7%	None
		PM	20.6	C	35.3	D	5.9%	
6. Hunte Parkway / Otay Lakes Road	Signal	AM	**92.6**	**F**	**97.2**	**F**	**0.9%**	**Cumulative**
		PM	46.3	D	51.9	D	1.4%	
7. Eastlake Parkway / Fenton Street	Signal	AM	29.7	C	32.2	C	2.4%	**Cumulative**
		PM	**93.2**	**F**	**97.1**	**F**	**1.9%**	
8. Lane Avenue / Fenton Street	Signal	AM	27.4	C	29.8	C	2.9%	None
		PM	47.8	D	51.9	D	2.6%	
9. Showroom Place / Fenton Street	AWSC[d]	AM	16.2	B	19.1	B	20.6%	None
		PM	17.7	C	33.5	D	16.8%	
10. Harold Place / Fenton Street	TWSC [c]	AM	23.6	C	26.0	D	6.4%	**Project**
		PM	**>200**	**F**	**>200**	**F**	4.7%	

Footnotes:

a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. TWSC – Two Way Stop Controlled intersection. Minor street left-turn delay reported.
d. AWSC – All Way Stop Controlled intersection.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

TABLE 12–2
LONG TERM WITH PROJECT STREET SEGMENT OPERATIONS

Street Segment	Classification	LOS C Capacity[a]	Long-Term without Project		Long-Term with Project		Substantial Effect Criteria		Effect Type
			ADT[b]	LOS[c]	ADT[b]	LOS[c]	Project ADT > 800	Project % of Entering Volume (>5%)	
Otay Lakes Road									
SR-125 NB Ramps to Eastlake Parkway	7-Lane Expressway	61,250	51,100	B	52,710	B	1,610	3%	None
Eastlake Parkway to Lane Avenue	6-Lane Prime	50,000	33,400	A	34,620	A	1,220	4%	None
Lane Avenue to Fenton Street	6-Lane Prime	50,000	24,400	A	25,620	A	1,220	5%	None
Fenton Street to Hunte Parkway	6-Lane Prime	50,000	21,200	A	21,580	A	380	2%	None
East of Hunte Parkway	6-Lane Prime	50,000	13,600	A	13,650	A	50	0%	None
Eastlake Parkway									
Fenton Street to Otay Lakes Road	4-Lane Major Road	30,000	29,200	C	29,780	C	580	2%	None
Fenton Street									
Lane Avenue to Showroom Place	Class I Collector	22,000	13,000	A	13,790	A	790	6%	None
Showroom Place to Otay Lakes Road	Class I Collector	22,000	9,900	A	11,510	A	1,610	14%	None
Hunte Parkway									
Otay Lakes Road to Clubhouse Drive	4-Lane Major Road	30,000	18,700	A	18,870	A	170	1%	None

Footnotes:
a. Capacities based on City of Chula Vista Roadway Classification Table.
b. Average Daily Traffic Volumes.
c. Level of Service.

TABLE 12-3
YEAR 2035 SIGNALIZED INTERSECTION QUEUING ASSESSMENT

Intersection	Critical Movement	Existing Storage (ft)	Year 2035			Year 2035 + Project		
			95th Percentile Queue (ft) [a]		Queue Exceeds Storage?	95th Percentile Queue (ft)		Queue Exceeds Storage?
			AM	PM		AM	PM	
1. SR-125 SB Ramps / Otay Lakes Road	SBL	500	84	173	No	91	182	No
	SBR	500	40	60	No	41	60	No
	WBR	340	0	0	No	0	0	No
	EBR	300	9	6	No	9	6	No
2. SR-125 NB Ramps / Otay Lakes Road	WBR	320	23	19	No	24	20	No
	NBL	305	28	35	No	28	35	No
	NBR	305	42	67	No	46	74	No
	EBR	350	0	0	No	0	0	No
3. Eastlake Parkway / Otay Lakes Road	SBL	200	44	102	No	44	102	No
	SBR	350	162	628	**Yes**	172	522	**Yes**
	WBL	215	158	305	**Yes**	160	309	**Yes**
	NBL	285	476	407	**Yes**	476	407	**Yes**
	NBR	290	87	140	No	89	143	No
	EBL	260	424	414	**Yes**	450	430	**Yes**
	EBR	260	40	292	**Yes**	345	293	**Yes**
4. Lane Avenue / Otay Lakes Road	SBL	260	32	51	No	32	51	No
	SBR	260	38	53	No	38	53	No
	EBL	220	278	209	**Yes**	278	209	**Yes**
5. Fenton Street / Otay Lakes Road	SBL	930	51	170	No	55	185	No
	SBR	930	21	41	No	26	74	No
	EBL	300	259	294	No	347	359	Yes
6. Hunte Parkway / Otay Lakes Road	SBL	290	24	43	No	24	43	No
	WBL	300	189	63	No	189	63	No
	WBR	240	14	0	No	14	0	No
	NBL	300	341	227	**Yes**	347	231	**Yes**
	NBR	240	13	0	No	13	0	No
	EBL	315	169	162	No	172	171	No
7. Eastlake Parkway / Fenton Street	SBL	220	155	209	No	164	212	No
	WBL	120	86	169	**Yes**	91	181	**Yes**
	NBL	230	69	147	No	69	147	No
	EBR	180	2	28	No	2	28	No

TABLE 12-3
YEAR 2035 SIGNALIZED INTERSECTION QUEUING ASSESSMENT

Intersection	Critical Movement	Existing Storage (ft)	Year 2035			Year 2035 + Project		
			95th Percentile Queue (ft) [a]		Queue Exceeds Storage?	95th Percentile Queue (ft) [a]		Queue Exceeds Storage?
			AM	PM		AM	PM	
8. Lane Avenue / Fenton Street	SBL	100	231	245	**Yes**	242	252	**Yes**
	WBL	140	133	346	**Yes**	133	346	**Yes**
	WBR	140	22	116	No	22	121	No
	NBL	130	74	99	No	74	99	No
	EBL	200	152	300	**Yes**	152	300	**Yes**
	EBR	200	11	25	No	11	25	No

Footnotes:

a. 95th percentile queue is defined as the queue length that has only a 5% probability of being exceeded.

General Notes:

1. Calculated queue lengths in feet per lane.
2. One vehicle length = approximately 22 feet.
3. Ft = Feet

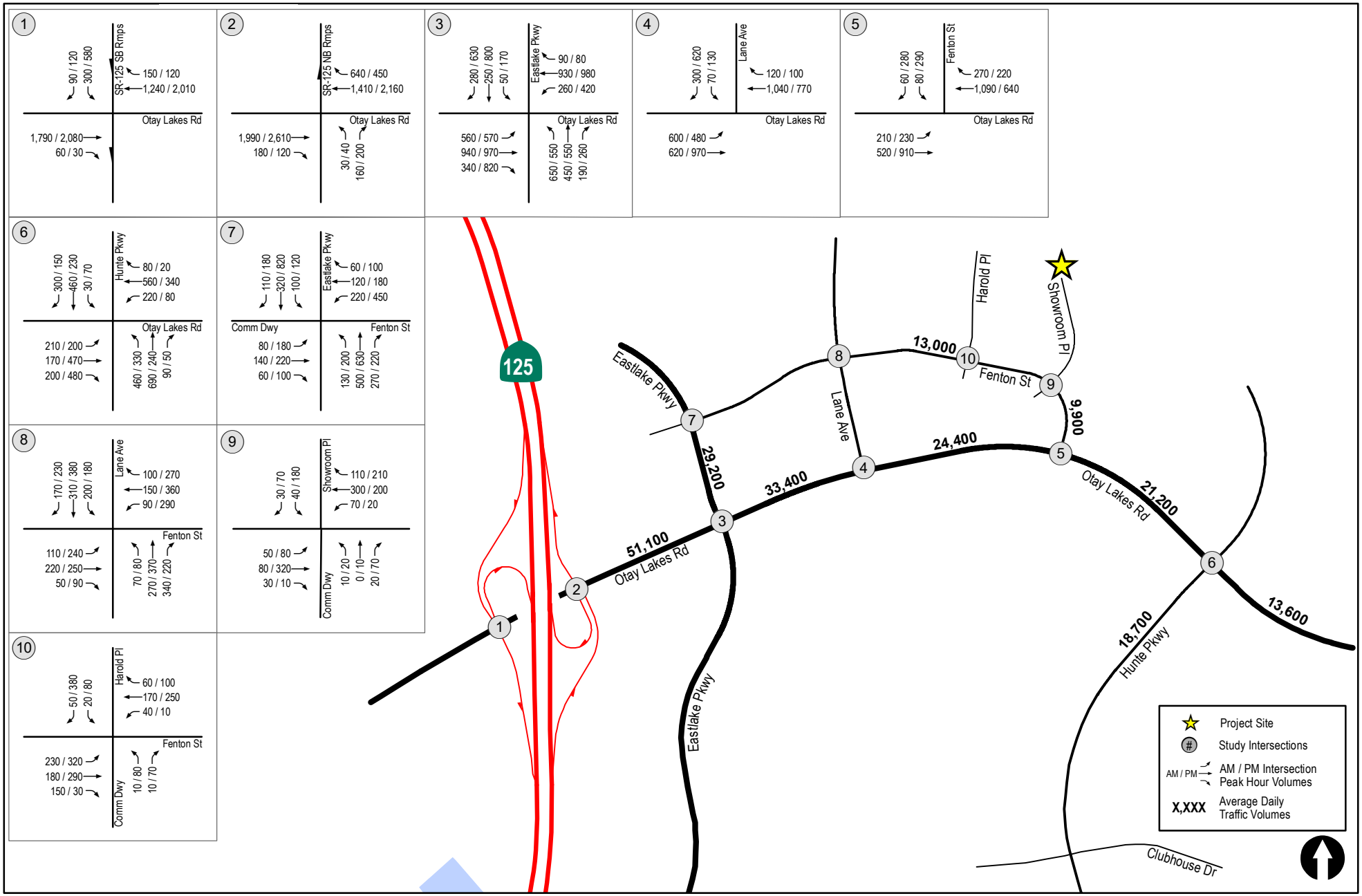

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Figure 12-1

Long-Term Without Project Traffic Volumes

ACADIA HEALTH

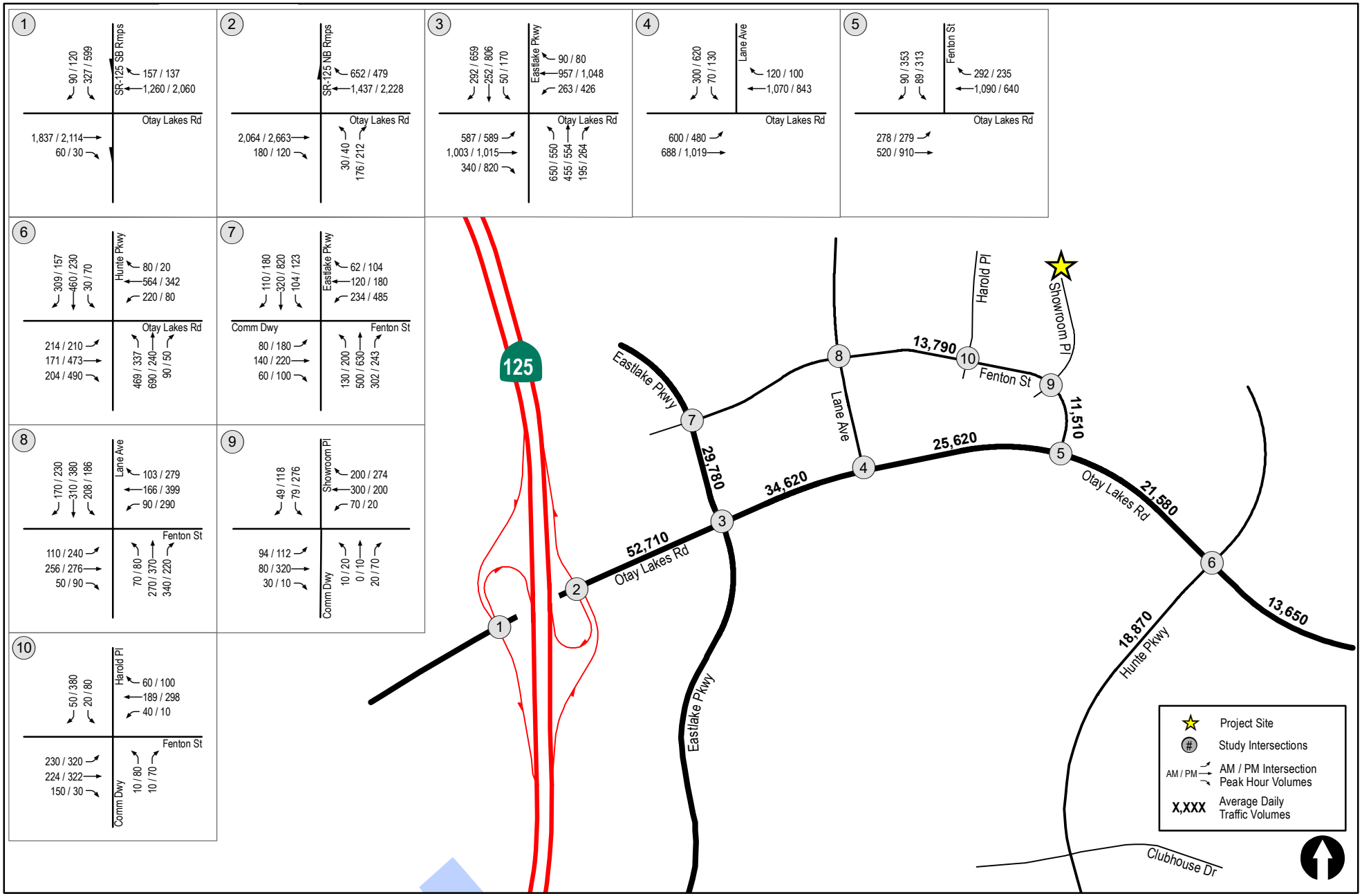

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Figure 12-2

Long-Term With Project Traffic Volumes

ACADIA HEALTH

13.0 PEDESTRIAN, BICYCLE AND TRANSIT MOBILITY

13.1 Existing Pedestrian Conditions

Continuous sidewalks are provided along the both sides of all streets in the study area.

Figure 13-1 shows the existing AM and PM peak hour (7:00-9:00 AM and 4:00-6:00 PM) pedestrian volumes crossing at the study intersections.

13.2 Existing Bicycle Network

Currently, there are Class II bike lanes located on Otay Lakes Road, Eastlake Parkway and Hunte Parkway. There are no other bicycle facilities provided along the street segments within the study area.

Figure 13-2 shows the existing AM and PM peak hour (7:00-9:00 AM and 4:00-6:00 PM) bicycle volumes traveling through the study intersections.

13.3 Existing Transit Conditions

Transit service is provided to the area via the Route 707 Bus Route. Route 707 provides bus service to the area via Lane Avenue, with stops provided on Lane Avenue and Mackenzie Road and Boswell Road and Lane Avenue. Bus service is generally provided Weekdays between 5:02 AM and 7:23 PM, with 30-minute headways.

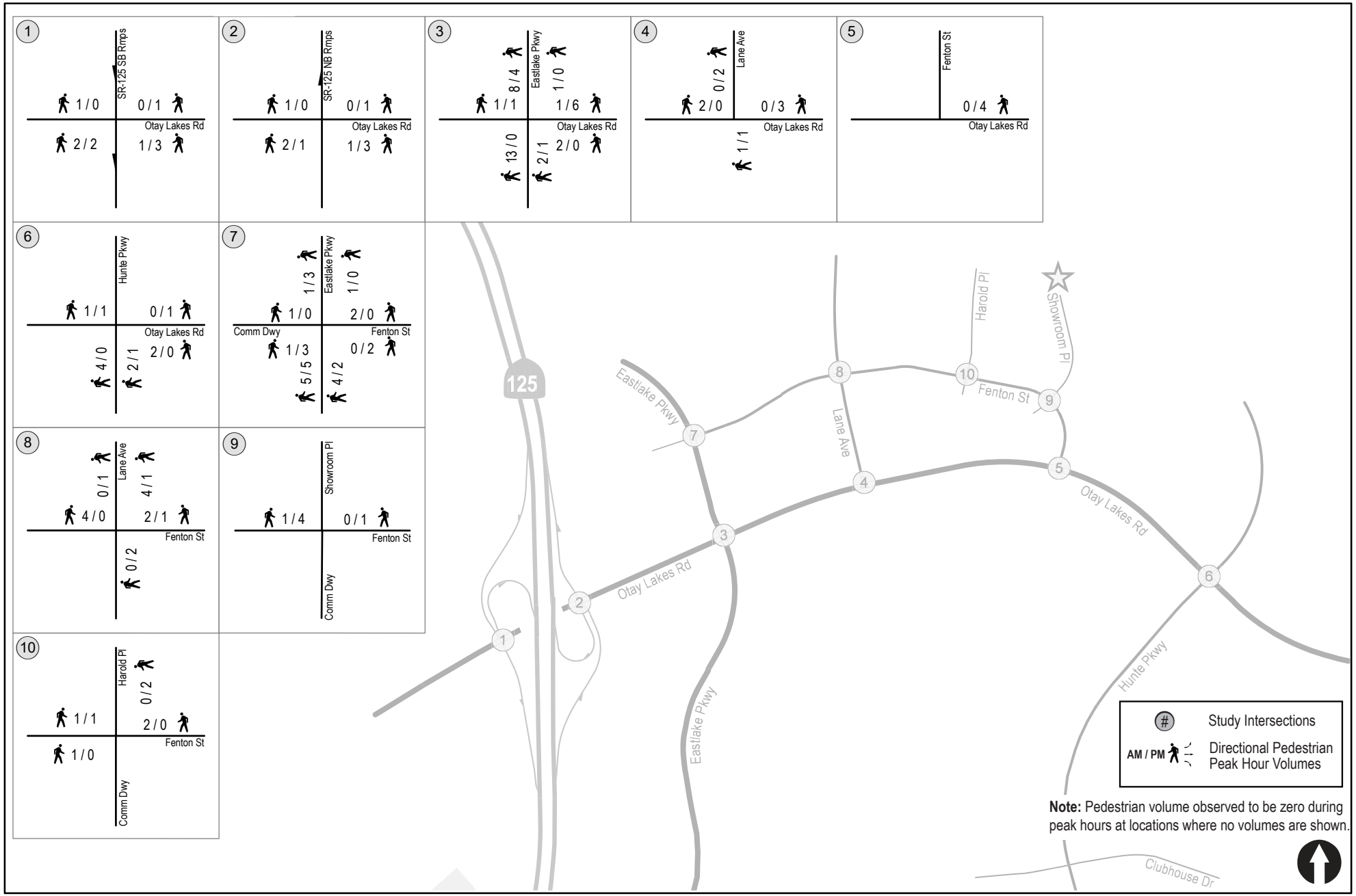

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Figure 13-1

Pedestrian Traffic Volumes

ACADIA HEALTH

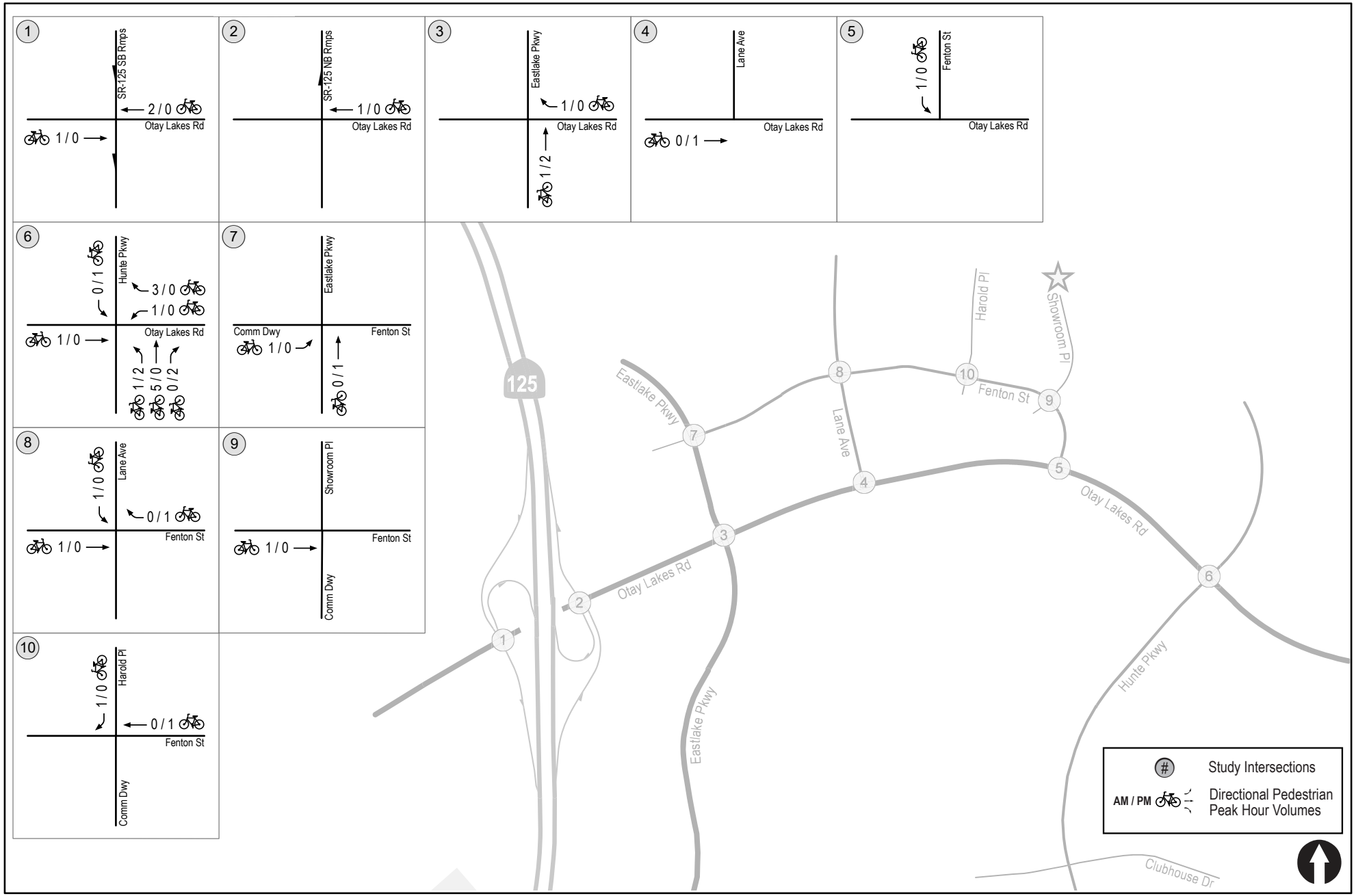

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Figure 13-2

Bicycle Traffic Volumes

ACADIA HEALTH

14.0 PARKING

The Project proposes the construction of a new 120-bed Hospital. Based on the Chula Vista Municipal Code, 1.5 parking spaces per bed are required for hospitals. Therefore, the Project would need to provide a minimum of 180 parking spaces. The Project will provide a total of 203 parking spaces including 21 accessible spaces and will therefore exceed the City's parking requirement.

15.0 SUBSTANTIAL EFFECTS AND OPERATIONAL IMPROVEMENTS

15.1 Project Specific Effects

Per the City of Chula Vista's substantial effect thresholds and the analysis methodologies presented in this report, Project-related traffic is calculated to contribute to one (1) project specific effect within the study area at the following intersection:

- Harold Place / Fenton Street.

Signalization of this intersection would improve the project specific effect as shown below in ***Table 15-1***. The Project is committed to funding the installation of this traffic signal.

Post-operational improvement analysis is provided for Long-Term (Year 2035) conditions because this is the analysis scenario with the highest traffic volumes and therefore represents worst case operations. ***Appendix J*** contains the post operational improvement intersection analysis worksheets.

TABLE 15–1
YEAR 2035 INTERSECTION OPERATIONAL IMPROVEMENT ANALYSIS FOR PROJECT SPECIFIC EFFECTS

Intersection	Control Type	Peak Hour	Year 2035		Year 2035 + Project		Year 2035 + Project + Operational Improvement	
			Delay[a]	LOS[b]	Delay	LOS	Delay	LOS
10. Harold Place / Fenton Street	TWSC / Signal[c]	PM	>200	F	>200	F	23.2	C

Footnotes:

a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. TWSC – Two Way Stop Controlled intersection. Minor street left-turn delay reported. Year 2035 + Project + Operational Improvements analysis takes into account signalization of the intersection.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

15.2 Cumulative Effects

In addition, cumulative effects are calculated at the following intersections:

- Eastlake Parkway / Otay Lakes Road
- Hunte Parkway / Otay Lakes Road
- Eastlake Parkway / Fenton Street

It is recommended that the Project provide a fairshare towards the provision of Adaptive Traffic Signal Control (ATSC) modules to all signalized intersections along Otay Lakes Road between Eastlake Parkway and Hunte Parkway and to the signalized intersection of Eastlake Parkway and Fenton Street. ATSC is an established solution for mobility along unpredictable and fluctuating traffic patterns of arterials. ATSC signals communicate with each other and dynamically adjust signal timings, memorize traffic patterns, improve traffic flow and reduce vehicle stops.

The installation of ATSC would reduce the Project's cumulative effects as shown below in ***Table 15-2*** since the post-operational improvement delays are lower than the pre-Project baseline delays. Post-operational improvement analysis is provided for Long-Term (Year 2035) conditions because this is the analysis scenario with the highest traffic volumes and therefore represents worst case operations. *Appendix J* contains the post operational improvement intersection analysis worksheets.

TABLE 15–2
YEAR 2035 INTERSECTION OPERATIONAL IMPROVEMENT ANALYSIS FOR CUMULATIVE EFFECTS

Intersection	Control Type	Peak Hour	Year 2035		Year 2035 + Project		Year 2035 + Project + Operational Improvements	
			Delay[a]	LOS[b]	Delay	LOS	Delay	LOS
3. Eastlake Parkway / Otay Lakes Road	Signal	AM	70.7	E	73.8	E	58.7	E
		PM	87.1	F	89.6	F	66.7	E
6. Hunte Parkway / Otay Lakes Road	Signal	AM	92.6	F	97.2	F	83.8	F
		PM	46.3	D	51.9	D	48.4	D
7. Eastlake Parkway / Fenton Street	Signal	AM	29.7	C	32.2	C	28.5	C
		PM	62.1	E	64.4	E	53.0	D

Footnotes:
a. Average delay expressed in seconds per vehicle.
b. Level of Service.

SIGNALIZED

DELAY/LOS THRESHOLDS

Delay	LOS
0.0 ≤ 10.0	A
10.1 to 20.0	B
20.1 to 35.0	C
35.1 to 55.0	D
55.1 to 80.0	E
≥ 80.1	F

LINSCOTT LAW & GREENSPAN
engineers

TECHNICAL APPENDICES
ACADIA HOSPITAL

Chula Vista, California
June16, 2020

LLG Ref. 3-18-3022

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APPENDIX A

EXISTING INTERSECTION AND SEGMENT MANUAL COUNT SHEETS AND TRAFFIC SIGNAL TIMING SHEETS

National Data & Surveying Services

Intersection Turning Movement Count

Location: SR-125 SB Ramps & Otay Lakes Rd
City: Chula Vista
Control: Signalized

Project ID: 18-04488-001
Date: 12/18/2018

Total

NS/EW Streets:	SR-125 SB Ramps				SR-125 SB Ramps				Otay Lakes Rd				Otay Lakes Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	2	0	1	0	0	3	1	0	0	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	42	0	10	0	0	273	15	0	0	211	24	0	575
7:15 AM	0	0	0	0	46	0	13	0	0	262	11	0	0	280	31	0	643
7:30 AM	0	0	0	0	51	0	11	0	0	365	14	0	0	254	29	0	724
7:45 AM	0	0	0	0	82	0	17	0	0	441	19	0	0	253	41	0	853
8:00 AM	0	0	0	0	70	0	25	0	0	389	15	0	0	259	25	0	783
8:15 AM	0	0	0	0	63	0	14	0	0	413	8	0	0	301	35	0	834
8:30 AM	0	0	0	0	50	0	16	0	0	362	7	0	0	300	30	0	765
8:45 AM	0	0	0	0	56	0	14	0	0	372	6	0	0	304	29	0	781
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	460	0	120	0	0	2877	95	0	0	2162	244	0	5958
APPROACH %'s :					79.31%	0.00%	20.69%	0.00%	0.00%	96.80%	3.20%	0.00%	0.00%	89.86%	10.14%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	0	0	0	0	265	0	72	0	0	1605	49	0	0	1113	131	0	3235
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.808	0.000	0.720	0.000	0.000	0.910	0.645	0.000	0.000	0.924	0.799	0.000	0.948
					0.851				0.899				0.926				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	2	0	1	0	0	3	1	0	0	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	141	0	28	0	0	402	6	0	0	412	22	0	1011
4:15 PM	0	0	0	0	106	0	32	0	0	420	3	0	0	393	19	0	973
4:30 PM	0	0	0	0	116	0	24	0	0	427	6	0	0	478	25	0	1076
4:45 PM	0	0	0	0	145	0	22	0	0	522	5	0	0	415	22	0	1131
5:00 PM	0	0	0	0	117	0	27	0	0	468	9	0	0	490	22	0	1133
5:15 PM	0	0	0	0	128	0	29	0	0	438	4	0	0	419	33	0	1051
5:30 PM	0	0	0	0	122	0	23	0	0	404	12	0	0	437	17	0	1015
5:45 PM	0	0	0	0	128	0	31	0	0	481	2	0	0	342	25	0	1009
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	1003	0	216	0	0	3562	47	0	0	3386	185	0	8399
APPROACH %'s :					82.28%	0.00%	17.72%	0.00%	0.00%	98.70%	1.30%	0.00%	0.00%	94.82%	5.18%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	0	0	0	506	0	102	0	0	1855	24	0	0	1802	102	0	4391
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.872	0.000	0.879	0.000	0.000	0.888	0.667	0.000	0.000	0.919	0.773	0.000	0.969
					0.910				0.891				0.930				

National Data & Surveying Services

Intersection Turning Movement Count

Location: SR-125 SB Ramps & Otay Lakes Rd
City: Chula Vista
Control: Signalized

Project ID: 18-04488-001
Date: 12/18/2018

Bikes

NS/EW Streets:	SR-125 SB Ramps				SR-125 SB Ramps				Otay Lakes Rd				Otay Lakes Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	2	0	1	0	0	3	1	0	0	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
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	0	0	0	0	2	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
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	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0	4
APPROACH %'s :									0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.375
										0.250				0.250			

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

National Data & Surveying Services

Intersection Turning Movement Count

Location: SR-125 SB Ramps & Otay Lakes Rd **Project ID:** 18-04488-001
City: Chula Vista **Date:** 12/18/2018

Pedestrians (Crosswalks)

NS/EW Streets:	SR-125 SB Ramps		SR-125 SB Ramps		Otay Lakes Rd		Otay Lakes Rd		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	1	0	0	0	0	0	1
8:15 AM	1	0	0	0	0	0	0	0	1
8:30 AM	0	0	1	1	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	1	0	2	1	0	0	0	0	4
APPROACH %'s :	100.00%	0.00%	66.67%	33.33%					
PEAK HR :	07:45 AM - 08:45 AM								TOTAL
PEAK HR VOL :	1	0	2	1	0	0	0	0	4
PEAK HR FACTOR :	0.250		0.500	0.250					0.500
	0.250		0.375						

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	0	0	0	1	0	0	0	0	1
4:15 PM	0	0	1	0	0	0	0	0	1
4:30 PM	0	0	2	0	0	0	0	0	2
4:45 PM	0	0	0	2	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	1	0	1	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	1	3	4	0	0	0	0	8
APPROACH %'s :	0.00%	100.00%	42.86%	57.14%					
PEAK HR :	04:30 PM - 05:30 PM								TOTAL
PEAK HR VOL :	0	1	2	3	0	0	0	0	6
PEAK HR FACTOR :		0.250	0.250	0.375					0.750
	0.250		0.625						

Prepared by National Data & Surveying Services

SR-125 SB Ramps & Otay Lakes Rd

Peak Hour Turning Movement Count

ID: 18-04488-001
City: Chula Vista

Day: Tuesday
Date: 12/18/2018

PEAK HOURS	COUNT PERIODS
AM: 07:45 AM - 08:45 AM	AM: 07:00 AM - 09:00 AM
NOON: NONE	NOON: NONE
PM: 04:30 PM - 05:30 PM	PM: 04:00 PM - 06:00 PM

SR-125 SB Ramps — SOUTHBOUND

AM	72	0	265	0	131	AM
NOON	0	0	0	0	0	NOON
PM	102	0	506	0	102	PM

Otay Lakes Rd — EASTBOUND

AM	NOON	PM	
1185	0	1904	⇦
0	0	0	0 ↶
0	0	0	0 ↱
1605	0	1855	3 →
49	0	24	1 ↳
AM	NOON	PM	

WESTBOUND — Otay Lakes Rd

PM	NOON	AM	
102	0	131	1 ↰
1802	0	1113	3 ←
0	0	0	0 ↰
0	0	0	0 ↶
2361	0	1870	⇨
PM	NOON	AM	

NORTHBOUND — SR-125 SB Ramps

PM	24	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	49	0	0	0	0	AM

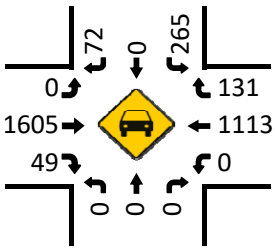
	1	0	2	0
	0	0	0	0

CONTROL

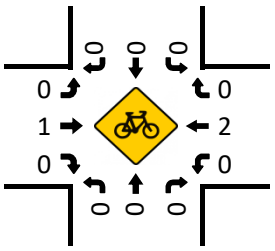
Signalized

TEV	3235 AM	0 NOON	4391 PM
PHF	0.95		0.97

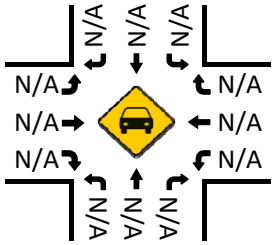
Total Vehicles (AM)



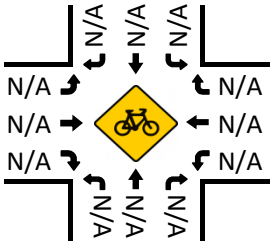
Bikes (AM)



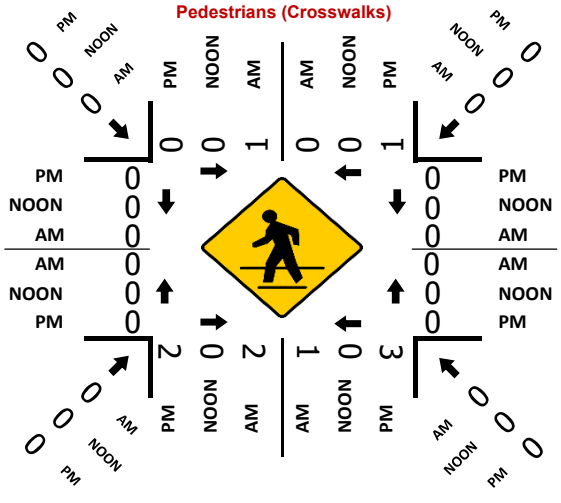
Total Vehicles (Noon)



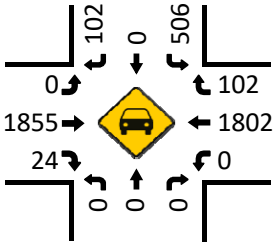
Bikes (NOON)



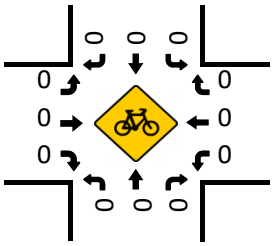
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: SR-125 NB Ramps & Otay Lakes Rd
City: Chula Vista
Control: Signalized

Project ID: 18-04488-002
Date: 12/18/2018

Total

NS/EW Streets:	SR-125 NB Ramps				SR-125 NB Ramps				Otay Lakes Rd				Otay Lakes Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0	2	0	0	0	0	0	0	3	1	0	0	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	5	0	16	0	0	0	0	0	0	252	53	0	0	246	166	0	738
7:15 AM	6	0	18	0	0	0	0	0	0	266	54	0	0	289	133	0	766
7:30 AM	7	0	31	0	0	0	0	0	0	356	55	0	0	277	109	0	835
7:45 AM	5	0	34	0	0	0	0	0	0	489	39	0	0	288	92	0	947
8:00 AM	4	0	23	0	0	0	0	0	0	418	34	0	0	285	159	0	923
8:15 AM	9	0	35	0	0	0	0	0	0	450	31	0	0	323	130	0	978
8:30 AM	6	0	36	0	0	0	0	0	0	367	29	0	0	323	125	0	886
8:45 AM	3	0	28	0	0	0	0	0	0	423	30	0	0	312	109	0	905
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	45	0	221	0	0	0	0	0	0	3021	325	0	0	2343	1023	0	6978
APPROACH %'s :	16.92%	0.00%	83.08%	0.00%					0.00%	90.29%	9.71%	0.00%	0.00%	69.61%	30.39%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	24	0	128	0	0	0	0	0	0	1724	133	0	0	1219	506	0	3734
PEAK HR FACTOR :	0.667	0.000	0.889	0.000	0.000	0.000	0.000	0.000	0.000	0.881	0.853	0.000	0.000	0.943	0.796	0.000	0.954
	0.864								0.879				0.952				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0	2	0	0	0	0	0	0	3	1	0	0	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	14	0	37	0	0	0	0	0	0	511	12	0	0	414	82	0	1070
4:15 PM	11	0	37	0	0	0	0	0	0	518	30	0	0	406	78	0	1080
4:30 PM	4	0	52	0	0	0	0	0	0	517	24	0	0	473	98	0	1168
4:45 PM	8	0	36	0	0	0	0	0	0	641	28	0	0	457	106	0	1276
5:00 PM	13	0	50	0	0	0	0	0	0	547	29	0	0	514	70	0	1223
5:15 PM	6	0	26	0	0	0	0	0	0	558	20	0	0	428	82	0	1120
5:30 PM	17	0	35	0	0	0	0	0	0	529	23	0	0	434	83	0	1121
5:45 PM	6	0	39	0	0	0	0	0	0	573	14	0	0	352	92	0	1076
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	79	0	312	0	0	0	0	0	0	4394	180	0	0	3478	691	0	9134
APPROACH %'s :	20.20%	0.00%	79.80%	0.00%					0.00%	96.06%	3.94%	0.00%	0.00%	83.43%	16.57%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	31	0	164	0	0	0	0	0	0	2263	101	0	0	1872	356	0	4787
PEAK HR FACTOR :	0.596	0.000	0.788	0.000	0.000	0.000	0.000	0.000	0.000	0.883	0.871	0.000	0.000	0.911	0.840	0.000	0.938
	0.774								0.883				0.954				

National Data & Surveying Services

Intersection Turning Movement Count

Location: SR-125 NB Ramps & Otay Lakes Rd
City: Chula Vista
Control: Signalized

Project ID: 18-04488-002
Date: 12/18/2018

Bikes

NS/EW Streets:	SR-125 NB Ramps				SR-125 NB Ramps				Otay Lakes Rd				Otay Lakes Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0	2	0	0	0	0	0	0	3	1	0	0	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
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	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0	4
APPROACH %'s :									0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250
														0.250			

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

National Data & Surveying Services

Intersection Turning Movement Count

Location: SR-125 NB Ramps & Otay Lakes Rd **Project ID:** 18-04488-002
City: Chula Vista **Date:** 12/18/2018

Pedestrians (Crosswalks)

NS/EW Streets:	SR-125 NB Ramps		SR-125 NB Ramps		Otay Lakes Rd		Otay Lakes Rd		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	1	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	1	0	0	0	0	0	1
8:15 AM	1	0	0	1	0	0	0	0	2
8:30 AM	0	0	1	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	1	0	2	2	0	0	0	0	5
APPROACH %'s :	100.00%	0.00%	50.00%	50.00%					
PEAK HR :	07:45 AM - 08:45 AM								TOTAL
PEAK HR VOL :	1	0	2	1	0	0	0	0	4
PEAK HR FACTOR :	0.250		0.500	0.250					0.500
	0.250		0.750						

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	0	0	0	1	0	0	0	0	1
4:15 PM	0	0	1	0	0	0	0	0	1
4:30 PM	0	0	1	1	0	0	0	0	2
4:45 PM	0	0	0	1	0	0	0	0	1
5:00 PM	0	0	0	1	0	0	0	0	1
5:15 PM	0	1	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	1	2	4	0	0	0	0	7
APPROACH %'s :	0.00%	100.00%	33.33%	66.67%					
PEAK HR :	04:30 PM - 05:30 PM								TOTAL
PEAK HR VOL :	0	1	1	3	0	0	0	0	5
PEAK HR FACTOR :		0.250	0.250	0.750					0.625
	0.250		0.500						

Prepared by National Data & Surveying Services

SR-125 NB Ramps & Otay Lakes Rd

Peak Hour Turning Movement Count

ID: 18-04488-002
City: Chula Vista

Day: Tuesday
Date: 12/18/2018

	PEAK HOURS	COUNT PERIODS
AM	07:45 AM - 08:45 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:30 PM - 05:30 PM	04:00 PM - 06:00 PM

SR-125 NB Ramps — SOUTHBOUND

					Departure
AM	0	0	0	0	506
NOON	0	0	0	0	0
PM	0	0	0	0	356
Lanes	0	0	0	0	

Otay Lakes Rd — EASTBOUND

Movement	AM	NOON	PM	Lanes
Departure	1243	0	1903	
U-turn	0	0	0	0
Left	0	0	0	0
Through	1724	0	2263	3
Right	133	0	101	1

Otay Lakes Rd — WESTBOUND

Movement	Lanes	PM	NOON	AM
Left	1	356	0	506
Through	3	1872	0	1219
Right	0	0	0	0
U-turn	0	0	0	0
Departure		2427	0	1852

SR-125 NB Ramps — NORTHBOUND

	Departure	U-turn	Left	Through	Right
Lanes		0	1	0	2
PM	101	0	31	0	164
NOON	0	0	0	0	0
AM	133	0	24	0	128

CONTROL: Signalized

	AM	NOON	PM
TEV	3734	0	4787
PHF	0.95		0.94

Total Vehicles (AM)

SB: 0, 0, 0 — EB: U 0, Thru 1724, Right 133 — WB: Left 506, Thru 1219, Right 0 — NB: Left 24, Thru 0, Right 128

Total Vehicles (Noon)

All movements: N/A

Total Vehicles (PM)

SB: 0, 0, 0 — EB: U 0, Thru 2263, Right 101 — WB: Left 356, Thru 1872, Right 0 — NB: Left 31, Thru 0, Right 164

Bikes (AM)

SB: 0, 0, 0 — EB: 0, 0, 0 — WB: 0, 1, 0 — NB: 0, 0, 0

Bikes (NOON)

All movements: N/A

Bikes (PM)

SB: 0, 0, 0 — EB: 0, 0, 0 — WB: 0, 0, 0 — NB: 0, 0, 0

Pedestrians (Crosswalks)

Crosswalk	AM	NOON	PM
North (westward)	1	0	0
North (eastward)	0	0	1
West (southward)	0	0	0
West (northward)	0	0	0
East (southward)	0	0	0
East (northward)	0	0	0
South (eastward)	2	0	1
South (westward)	1	0	3
Diagonals (all corners)	0	0	0

National Data & Surveying Services

Intersection Turning Movement Count

Location: Eastlake Pkwy & Otay Lakes Rd
City: Chula Vista
Control: Signalized

Project ID: 18-04488-003
Date: 12/18/2018

Total

NS/EW Streets:	Eastlake Pkwy				Eastlake Pkwy				Otay Lakes Rd				Otay Lakes Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	2	1	0	2	2	1	0	2	3	2	0	2	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	192	102	104	0	2	47	24	0	47	135	74	0	57	157	7	0	948
7:15 AM	152	51	47	1	12	30	29	0	70	118	53	0	30	181	8	0	782
7:30 AM	134	61	49	0	11	39	38	0	72	187	56	0	25	183	11	0	866
7:45 AM	117	87	39	1	4	44	49	0	112	253	92	0	61	169	16	0	1044
8:00 AM	146	90	34	0	14	42	41	0	112	197	71	0	56	229	25	0	1057
8:15 AM	140	104	32	0	11	50	62	0	122	204	65	0	54	240	16	0	1100
8:30 AM	133	83	49	0	13	62	73	0	112	161	51	1	53	175	18	0	984
8:45 AM	88	71	49	0	15	74	64	1	122	206	71	0	68	192	17	0	1038
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1102	649	403	2	82	388	380	1	769	1461	533	1	404	1526	118	0	7819
APPROACH %'s :	51.11%	30.10%	18.69%	0.09%	9.64%	45.59%	44.65%	0.12%	27.82%	52.86%	19.28%	0.04%	19.73%	74.51%	5.76%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	536	364	154	1	42	198	225	0	458	815	279	1	224	813	75	0	4185
PEAK HR FACTOR :	0.918	0.875	0.786	0.250	0.750	0.798	0.771	0.000	0.939	0.805	0.758	0.250	0.918	0.847	0.750	0.000	0.951
	0.956				0.785				0.850				0.897				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	2	1	0	2	2	1	0	2	3	2	0	2	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	112	124	44	0	25	164	125	0	112	213	166	0	75	204	14	0	1378
4:15 PM	108	129	64	0	37	152	115	4	107	204	156	0	65	137	32	0	1310
4:30 PM	116	122	54	1	35	152	114	3	106	187	162	1	69	220	16	0	1358
4:45 PM	121	132	51	0	25	150	124	2	129	265	167	0	83	189	18	1	1457
5:00 PM	104	99	55	0	29	184	148	1	109	196	164	0	106	249	14	0	1458
5:15 PM	110	91	60	0	44	158	129	1	114	200	187	1	94	192	22	0	1403
5:30 PM	115	114	57	0	17	146	104	3	104	202	153	2	98	164	18	0	1297
5:45 PM	121	123	61	0	26	139	91	2	114	244	148	0	73	135	17	0	1294
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	907	934	446	1	238	1245	950	16	895	1711	1303	4	663	1490	151	1	10955
APPROACH %'s :	39.64%	40.82%	19.49%	0.04%	9.72%	50.84%	38.79%	0.65%	22.87%	43.73%	33.30%	0.10%	28.76%	64.64%	6.55%	0.04%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	451	444	220	1	133	644	515	7	458	848	680	2	352	850	70	1	5676
PEAK HR FACTOR :	0.932	0.841	0.917	0.250	0.756	0.875	0.870	0.583	0.888	0.800	0.909	0.500	0.830	0.853	0.795	0.250	0.973
	0.918				0.897				0.886				0.862				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Eastlake Pkwy & Otay Lakes Rd
City: Chula Vista
Control: Signalized

Project ID: 18-04488-003
Date: 12/18/2018

Bikes

NS/EW Streets:	Eastlake Pkwy				Eastlake Pkwy				Otay Lakes Rd				Otay Lakes Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	2	1	0	2	2	1	0	2	3	2	0	2	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	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	1	0	0	1
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	0	0	0	0	0	0	0	0
8:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2
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	0	0	0	0
8:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0	4
APPROACH %'s :	0.00%	50.00%	50.00%	0.00%									0.00%	50.00%	50.00%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2
PEAK HR FACTOR :	0.000	0.250	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	0.250
	0.250												0.250				

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

National Data & Surveying Services

Intersection Turning Movement Count

Location: Eastlake Pkwy & Otay Lakes Rd
City: Chula Vista
Project ID: 18-04488-003
Date: 12/18/2018

Pedestrians (Crosswalks)

NS/EW Streets:	Eastlake Pkwy		Eastlake Pkwy		Otay Lakes Rd		Otay Lakes Rd		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	0	0	0	0	0	0	0	1	1
7:15 AM	0	1	0	0	0	0	0	2	3
7:30 AM	0	0	0	0	0	0	1	0	1
7:45 AM	0	1	0	0	0	0	0	6	7
8:00 AM	0	0	0	0	0	0	0	1	1
8:15 AM	1	0	0	0	1	1	0	0	3
8:30 AM	0	0	0	0	1	0	13	1	15
8:45 AM	0	0	3	3	2	1	0	4	13
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	1	2	3	3	4	2	14	15	44
APPROACH %'s :	33.33%	66.67%	50.00%	50.00%	66.67%	33.33%	48.28%	51.72%	
PEAK HR :	07:45 AM - 08:45 AM								TOTAL
PEAK HR VOL :	1	1	0	0	2	1	13	8	26
PEAK HR FACTOR :	0.250	0.250			0.500	0.250	0.250	0.333	0.433
	0.500				0.375		0.375		

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	1	1	0	0	0	0	0	2	4
4:15 PM	0	2	0	0	1	0	1	1	5
4:30 PM	1	0	0	0	0	0	0	1	2
4:45 PM	0	2	0	0	0	0	0	0	2
5:00 PM	0	2	0	1	0	0	0	3	6
5:15 PM	0	2	0	1	1	0	0	0	4
5:30 PM	0	0	0	0	1	0	0	0	1
5:45 PM	0	2	0	0	0	0	0	0	2
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	2	11	0	2	3	0	1	7	26
APPROACH %'s :	15.38%	84.62%	0.00%	100.00%	100.00%	0.00%	12.50%	87.50%	
PEAK HR :	04:30 PM - 05:30 PM								TOTAL
PEAK HR VOL :	1	6	0	2	1	0	0	4	14
PEAK HR FACTOR :	0.250	0.750		0.500	0.250			0.333	0.583
	0.875		0.500		0.250		0.333		

Prepared by National Data & Surveying Services

Eastlake Pkwy & Otay Lakes Rd

Peak Hour Turning Movement Count

ID: 18-04488-003
City: Chula Vista

Day: Tuesday
Date: 12/18/2018

PEAK HOURS		COUNT PERIODS
AM	07:45 AM - 08:45 AM	AM
NOON	NONE	NOON
PM	04:30 PM - 05:30 PM	PM

AM	07:00 AM - 09:00 AM	AM
NOON	NONE	NOON
PM	04:00 PM - 06:00 PM	PM

Eastlake Pkwy — SOUTHBOUND

AM	225	198	42	0	897	AM
NOON	0	0	0	0	0	NOON
PM	515	644	133	7	979	PM
	1	2	2	0		

Otay Lakes Rd — EASTBOUND

AM	NOON	PM		
1575	0	1818		
1	0	2	0	
458	0	458	2	
815	0	848	3	
279	0	680	2	
AM	NOON	PM		

CONTROL

Signalized

	AM	NOON	PM
TEV	4185	0	5676
PHF	0.95		0.97

Otay Lakes Rd — WESTBOUND

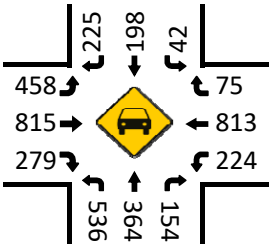
PM	NOON	AM	
70	0	75	0
850	0	813	3
352	0	224	2
1	0	0	0
1202	0	1011	
PM	NOON	AM	

Eastlake Pkwy — NORTHBOUND

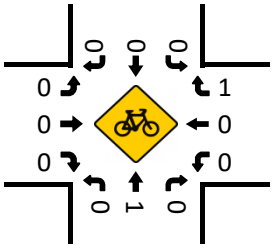
	0	2	2	1		
PM	1677	1	451	444	220	PM
NOON	0	0	0	0	0	NOON
AM	702	1	536	364	154	AM

Eastlake Pkwy

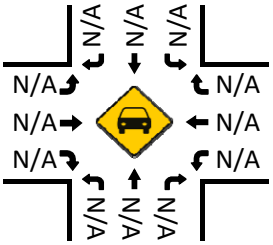
Total Vehicles (AM)



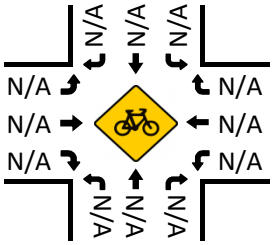
Bikes (AM)



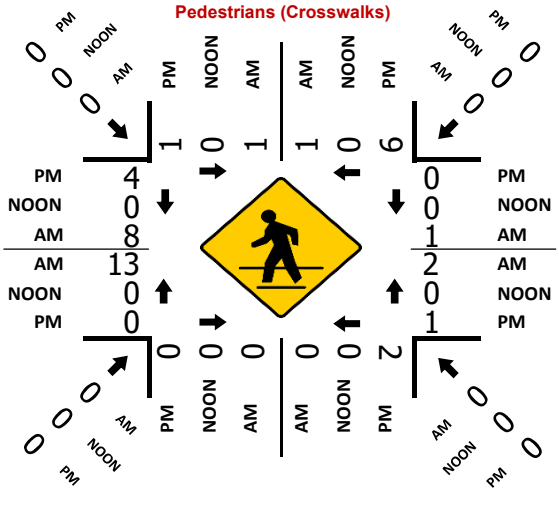
Total Vehicles (Noon)



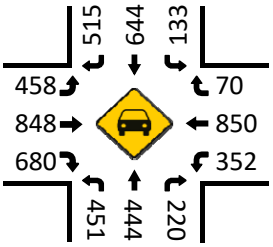
Bikes (NOON)



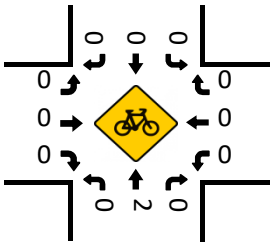
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Lane Ave & Otay Lakes Rd
City: Chula Vista
Control: Signalized

Project ID: 18-04488-004
Date: 12/18/2018

Total

NS/EW Streets:	Lane Ave				Lane Ave				Otay Lakes Rd				Otay Lakes Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1.5	0	1.5	0	2	3	0	0	0	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	4	0	60	0	136	111	0	2	0	149	13	0	475
7:15 AM	0	0	0	0	7	0	36	0	88	103	0	0	0	188	14	0	436
7:30 AM	0	0	0	0	7	0	37	0	106	118	0	0	0	175	11	0	454
7:45 AM	0	0	0	0	12	0	60	0	141	158	0	1	0	187	26	0	585
8:00 AM	0	0	0	0	9	0	67	0	130	110	0	0	0	236	20	0	572
8:15 AM	0	0	0	0	22	0	59	0	108	125	0	6	0	264	21	0	605
8:30 AM	0	0	0	0	16	0	72	0	112	118	0	12	0	166	13	0	509
8:45 AM	0	0	0	0	13	0	80	0	153	118	0	2	0	179	12	0	557
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	90	0	471	0	974	961	0	23	0	1544	130	0	4193
APPROACH %'s :					16.04%	0.00%	83.96%	0.00%	49.74%	49.08%	0.00%	1.17%	0.00%	92.23%	7.77%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	0	0	0	0	59	0	258	0	491	511	0	19	0	853	80	0	2271
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.670	0.000	0.896	0.000	0.871	0.809	0.000	0.396	0.000	0.808	0.769	0.000	0.938
					0.901				0.851				0.818				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1.5	0	1.5	0	2	3	0	0	0	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	23	0	117	0	115	170	0	6	0	142	16	0	589
4:15 PM	0	0	0	0	24	0	83	0	101	194	0	6	0	144	10	0	562
4:30 PM	0	0	0	0	28	0	145	0	79	181	0	0	0	155	17	0	605
4:45 PM	0	0	0	0	12	0	113	0	149	209	0	3	0	143	23	0	652
5:00 PM	0	0	0	0	38	0	159	0	76	217	0	3	0	178	17	0	688
5:15 PM	0	0	0	0	30	0	107	0	98	193	0	2	0	163	23	0	616
5:30 PM	0	0	0	0	22	0	114	0	100	181	0	2	0	132	5	0	556
5:45 PM	0	0	0	0	20	0	84	0	105	215	0	3	0	125	15	0	567
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	197	0	922	0	823	1560	0	25	0	1182	126	0	4835
APPROACH %'s :					17.61%	0.00%	82.39%	0.00%	34.18%	64.78%	0.00%	1.04%	0.00%	90.37%	9.63%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	0	0	0	108	0	524	0	402	800	0	8	0	639	80	0	2561
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.711	0.000	0.824	0.000	0.674	0.922	0.000	0.667	0.000	0.897	0.870	0.000	0.931
					0.802				0.838				0.922				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Lane Ave & Otay Lakes Rd
City: Chula Vista
Control: Signalized

Project ID: 18-04488-004
Date: 12/18/2018

Bikes

NS/EW Streets:	Lane Ave				Lane Ave				Otay Lakes Rd				Otay Lakes Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1.5	0	1.5	0	2	3	0	0	0	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	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	1	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	0	3
APPROACH %'s :									100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1.5	0	1.5	0	2	3	0	0	0	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	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	1	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	0	0	0	0
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	1	0	0	0	0	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	3
APPROACH %'s :					0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
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	0	0	0	1
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	0.000	0.000	0.000	0.250
									0.250								

National Data & Surveying Services

Intersection Turning Movement Count

Location: Lane Ave & Otay Lakes Rd
City: Chula Vista
Project ID: 18-04488-004
Date: 12/18/2018

Pedestrians (Crosswalks)

NS/EW Streets:	Lane Ave		Lane Ave		Otay Lakes Rd		Otay Lakes Rd		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	1	0	0	0	0	0	1	0	2
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	1	0	0	0	0	0	0	0	1
8:45 AM	1	0	0	0	0	2	0	0	3
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	3	0	0	0	0	2	1	0	6
APPROACH %'s :	100.00%	0.00%			0.00%	100.00%	100.00%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM								TOTAL
PEAK HR VOL :	2	0	0	0	0	0	1	0	3
PEAK HR FACTOR :	0.500						0.250		0.375
	0.500						0.250		

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	1	2	0	0	0	0	0	0	3
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	1	1
4:45 PM	0	0	0	0	0	0	1	1	2
5:00 PM	0	2	0	0	0	0	0	0	2
5:15 PM	0	1	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	1	5	0	0	0	0	1	2	9
APPROACH %'s :	16.67%	83.33%					33.33%	66.67%	
PEAK HR :	04:30 PM - 05:30 PM								TOTAL
PEAK HR VOL :	0	3	0	0	0	0	1	2	6
PEAK HR FACTOR :		0.375					0.250	0.500	0.750
	0.375						0.375		

Prepared by National Data & Surveying Services

Lane Ave & Otay Lakes Rd

Peak Hour Turning Movement Count

ID: 18-04488-004
City: Chula Vista
Day: Tuesday
Date: 12/18/2018

	PEAK HOURS	COUNT PERIODS
AM	07:45 AM - 08:45 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:30 PM - 05:30 PM	04:00 PM - 06:00 PM

Lane Ave — SOUTHBOUND

	Right	Thru	Left	U-Turn	⇧
AM	258	0	59	0	571
NOON	0	0	0	0	0
PM	524	0	108	0	482
Lanes	1.5	0	1.5	0	

Otay Lakes Rd — EASTBOUND

	AM	NOON	PM	Lanes
⇦	1130	0	1171	
U-Turn	19	0	8	0
Left	491	0	402	2
Thru	511	0	800	3
Right	0	0	0	0

Otay Lakes Rd — WESTBOUND

	Lanes	PM	NOON	AM
Right	0	80	0	80
Thru	3	639	0	853
Left	0	0	0	0
U-Turn	0	0	0	0
⇨		908	0	570

Lane Ave — NORTHBOUND

	⇩	U-Turn	Left	Thru	Right
Lanes		0	0	0	0
PM	0	0	0	0	0
NOON	0	0	0	0	0
AM	0	0	0	0	0

CONTROL

Signalized

	AM	NOON	PM
TEV	2271	0	2561
PHF	0.94		0.93

Total Vehicles (AM)

Approach	Left	Thru	Right
Southbound	59	0	258
Eastbound	491	511	0
Westbound	0	853	80
Northbound	0	0	0

Total Vehicles (Noon)

Approach	Left	Thru	Right
Southbound	N/A	N/A	N/A
Eastbound	N/A	N/A	N/A
Westbound	N/A	N/A	N/A
Northbound	N/A	N/A	N/A

Total Vehicles (PM)

Approach	Left	Thru	Right
Southbound	108	0	524
Eastbound	402	800	0
Westbound	0	639	80
Northbound	0	0	0

Bikes (AM)

Approach	Left	Thru	Right
Southbound	0	0	0
Eastbound	0	0	0
Westbound	0	0	0
Northbound	0	0	0

Bikes (NOON)

Approach	Left	Thru	Right
Southbound	N/A	N/A	N/A
Eastbound	N/A	N/A	N/A
Westbound	N/A	N/A	N/A
Northbound	N/A	N/A	N/A

Bikes (PM)

Approach	Left	Thru	Right
Southbound	0	0	0
Eastbound	0	1	0
Westbound	0	0	0
Northbound	0	0	0

Pedestrians (Crosswalks)

Crosswalk	Direction	AM	NOON	PM
North leg	Westbound (left half)	2	0	0
North leg	Eastbound (right half)	0	0	3
West leg	Southbound (upper half)	0	0	2
West leg	Northbound (lower half)	1	0	1
East leg	Southbound (upper half)	0	0	0
East leg	Northbound (lower half)	0	0	0
South leg	Eastbound (left half)	0	0	0
South leg	Westbound (right half)	0	0	0
NW corner (diagonal)		0	0	0
NE corner (diagonal)		0	0	0
SW corner (diagonal)		0	0	0
SE corner (diagonal)		0	0	0

National Data & Surveying Services

Intersection Turning Movement Count

Location: Fenton St & Otay Lakes Rd
City: Chula Vista
Control: Signalized

Project ID: 18-04488-005
Date: 12/18/2018

Total

NS/EW Streets:	Fenton St				Fenton St				Otay Lakes Rd				Otay Lakes Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1	0	1	0	1	3	0	0	0	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	9	0	7	1	23	95	0	0	0	159	14	0	308
7:15 AM	0	0	0	0	18	0	14	0	24	84	0	0	0	180	20	0	340
7:30 AM	0	0	0	0	10	0	10	0	17	110	0	0	0	188	22	0	357
7:45 AM	0	0	0	0	7	0	4	1	42	125	0	0	0	217	31	0	427
8:00 AM	0	0	0	0	14	0	8	0	25	97	0	1	0	248	33	0	426
8:15 AM	0	0	0	0	8	0	9	0	27	110	0	0	0	258	45	0	457
8:30 AM	0	0	0	0	22	0	8	0	30	100	0	1	0	185	48	0	394
8:45 AM	0	0	0	0	17	0	12	0	37	83	0	0	0	175	63	0	387
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	105	0	72	2	225	804	0	2	0	1610	276	0	3096
APPROACH %'s :					58.66%	0.00%	40.22%	1.12%	21.82%	77.98%	0.00%	0.19%	0.00%	85.37%	14.63%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	0	0	0	0	51	0	29	1	124	432	0	2	0	908	157	0	1704
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.580	0.000	0.806	0.250	0.738	0.864	0.000	0.500	0.000	0.880	0.818	0.000	0.932
					0.675				0.835				0.879				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1	0	1	0	1	3	0	0	0	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	46	0	32	0	31	161	0	1	0	129	34	0	434
4:15 PM	0	0	0	0	41	0	33	0	23	194	0	2	0	106	28	0	427
4:30 PM	0	0	0	0	37	0	33	0	25	179	0	1	0	145	25	0	445
4:45 PM	0	0	0	0	22	0	34	0	60	163	0	2	0	128	66	0	475
5:00 PM	0	0	0	0	80	0	76	0	38	210	0	1	0	118	33	0	556
5:15 PM	0	0	0	0	49	0	43	0	22	190	0	2	0	142	25	0	473
5:30 PM	0	0	0	0	36	0	33	0	32	177	0	2	0	105	27	0	412
5:45 PM	0	0	0	0	40	0	32	2	49	182	0	0	0	106	59	0	470
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	351	0	316	2	280	1456	0	11	0	979	297	0	3692
APPROACH %'s :					52.47%	0.00%	47.23%	0.30%	16.03%	83.34%	0.00%	0.63%	0.00%	76.72%	23.28%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	0	0	0	188	0	186	0	145	742	0	6	0	533	149	0	1949
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.588	0.000	0.612	0.000	0.604	0.883	0.000	0.750	0.000	0.919	0.564	0.000	0.876
					0.599				0.897				0.879				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Fenton St & Otay Lakes Rd
City: Chula Vista
Control: Signalized

Project ID: 18-04488-005
Date: 12/18/2018

Bikes

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

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

National Data & Surveying Services

Intersection Turning Movement Count

Location: Fenton St & Otay Lakes Rd
City: Chula Vista
Project ID: 18-04488-005
Date: 12/18/2018

Pedestrians (Crosswalks)

NS/EW Streets:	Fenton St		Fenton St		Otay Lakes Rd		Otay Lakes Rd		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0
APPROACH %'s :									
PEAK HR :	07:45 AM - 08:45 AM								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	0	1	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	1	0	0	0	0	0	0	1
4:45 PM	0	2	0	0	0	0	0	0	2
5:00 PM	0	1	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	2	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	7	0	0	0	0	0	0	7
APPROACH %'s :	0.00%	100.00%							
PEAK HR :	04:30 PM - 05:30 PM								TOTAL
PEAK HR VOL :	0	4	0	0	0	0	0	0	4
PEAK HR FACTOR :		0.500							0.500
	0.500								

Prepared by National Data & Surveying Services

Fenton St & Otay Lakes Rd

Peak Hour Turning Movement Count

ID: 18-04488-005
City: Chula Vista

Day: Tuesday
Date: 12/18/2018

PEAK HOURS	COUNT PERIODS
07:45 AM - 08:45 AM	07:00 AM - 09:00 AM
NONE	NONE
04:30 PM - 05:30 PM	04:00 PM - 06:00 PM

SOUTHBOUND — Fenton St

AM	29	0	51	1	282	AM
NOON	0	0	0	0	0	NOON
PM	186	0	188	0	294	PM

EASTBOUND — Otay Lakes Rd

AM	NOON	PM	
939	0	725	
2	0	6	0
124	0	145	1
432	0	742	3
0	0	0	0
AM	NOON	PM	

WESTBOUND — Otay Lakes Rd

PM	NOON	AM	
149	0	157	0
533	0	908	3
0	0	0	0
0	0	0	0
930	0	483	
PM	NOON	AM	

NORTHBOUND — Fenton St

PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

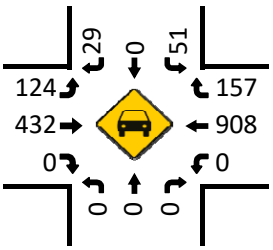
	1	0	1	0
	0	0	0	0

CONTROL

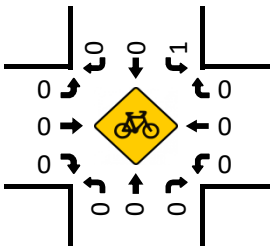
Signalized

TEV	1704 AM	0 NOON	1949 PM
PHF	0.93		0.88

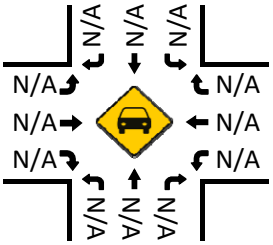
Total Vehicles (AM)



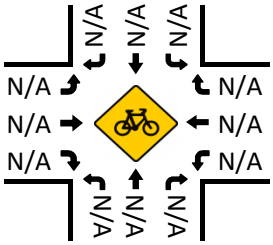
Bikes (AM)



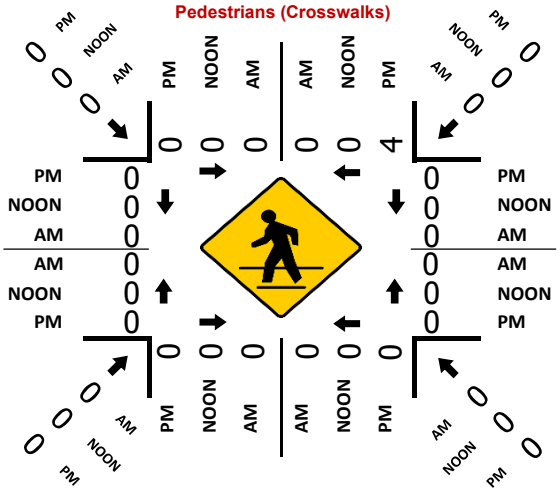
Total Vehicles (Noon)



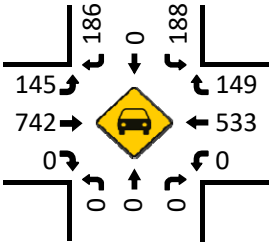
Bikes (NOON)



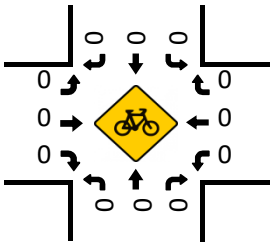
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Hunte Pkwy & Otay Lakes Rd
City: Chula Vista
Control: Signalized

Project ID: 18-04488-006
Date: 12/18/2018

Total

NS/EW Streets:	Hunte Pkwy				Hunte Pkwy				Otay Lakes Rd				Otay Lakes Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	2	1	0	2	2	1	0	2	3	0	0	2	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	87	101	14	0	5	26	27	0	36	38	22	0	8	71	4	0	439
7:15 AM	70	97	9	1	1	47	36	0	43	29	39	0	4	71	12	0	459
7:30 AM	82	160	14	0	3	80	54	0	56	32	27	0	17	87	11	0	623
7:45 AM	91	230	35	0	7	86	63	0	63	37	27	1	37	100	24	0	801
8:00 AM	88	119	11	1	10	118	79	0	38	30	46	0	93	132	17	0	782
8:15 AM	123	42	15	0	5	86	46	0	17	43	68	0	25	119	8	0	597
8:30 AM	140	52	8	0	3	35	24	0	18	57	46	1	6	63	4	0	457
8:45 AM	106	46	14	1	4	25	34	0	21	51	31	0	3	76	1	0	413
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	787	847	120	3	38	503	363	0	292	317	306	2	193	719	81	0	4571
APPROACH %'s :	44.79%	48.21%	6.83%	0.17%	4.20%	55.64%	40.15%	0.00%	31.84%	34.57%	33.37%	0.22%	19.44%	72.41%	8.16%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	384	551	75	1	25	370	242	0	174	142	168	1	172	438	60	0	2803
PEAK HR FACTOR :	0.780	0.599	0.536	0.250	0.625	0.784	0.766	0.000	0.690	0.826	0.618	0.250	0.462	0.830	0.625	0.000	0.875
	0.710				0.769				0.947				0.692				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	2	1	0	2	2	1	0	2	3	0	0	2	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	52	39	10	1	9	45	29	0	39	85	81	0	14	72	5	0	481
4:15 PM	55	36	14	0	13	55	21	0	55	90	95	0	12	74	9	0	529
4:30 PM	75	50	12	0	14	49	28	0	40	85	77	1	15	58	1	0	505
4:45 PM	90	62	14	1	17	42	33	0	36	73	87	0	17	70	6	0	548
5:00 PM	54	36	11	0	12	48	31	0	60	107	126	0	11	55	5	1	557
5:15 PM	55	45	2	1	10	48	33	0	33	105	109	0	20	67	2	0	530
5:30 PM	63	34	15	0	10	44	28	0	41	84	81	0	2	53	5	0	460
5:45 PM	73	49	9	0	7	44	39	1	39	100	92	0	12	50	6	0	521
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	517	351	87	3	92	375	242	1	343	729	748	1	103	499	39	1	4131
APPROACH %'s :	53.97%	36.64%	9.08%	0.31%	12.96%	52.82%	34.08%	0.14%	18.84%	40.03%	41.08%	0.05%	16.04%	77.73%	6.07%	0.16%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	274	193	39	2	53	187	125	0	169	370	399	1	63	250	14	1	2140
PEAK HR FACTOR :	0.761	0.778	0.696	0.500	0.779	0.954	0.947	0.000	0.704	0.864	0.792	0.250	0.788	0.893	0.583	0.250	0.961
	0.760				0.992				0.801				0.882				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Hunte Pkwy & Otay Lakes Rd
City: Chula Vista
Control: Signalized

Project ID: 18-04488-006
Date: 12/18/2018

Bikes

NS/EW Streets:	Hunte Pkwy				Hunte Pkwy				Otay Lakes Rd				Otay Lakes Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	2	1	0	2	2	1	0	2	3	0	0	2	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2
7:45 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	0	1	0	5
8:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	2	9	0	0	0	0	0	0	0	1	0	0	1	0	3	0	16
APPROACH %'s :	18.18%	81.82%	0.00%	0.00%					0.00%	100.00%	0.00%	0.00%	25.00%	0.00%	75.00%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	1	5	0	0	0	0	0	0	0	1	0	0	1	0	3	0	11
PEAK HR FACTOR :	0.250	0.313	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.750	0.000	0.550
	0.375				0.000				0.250				1.000				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	2	1	0	2	2	1	0	2	3	0	0	2	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	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	1	0	0	1
4:30 PM	2	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	5
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	2	0	2	0	1	0	0	0	0	0	0	0	1	1	0	0	7
APPROACH %'s :	50.00%	0.00%	50.00%	0.00%	100.00%	0.00%	0.00%	0.00%					50.00%	50.00%	0.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	2	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	5
PEAK HR FACTOR :	0.25	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	0.000	0.000	0.250
	0.250				0.250												

National Data & Surveying Services

Intersection Turning Movement Count

Location: Hunte Pkwy & Otay Lakes Rd
City: Chula Vista
Project ID: 18-04488-006
Date: 12/18/2018

Pedestrians (Crosswalks)

NS/EW Streets:	Hunte Pkwy		Hunte Pkwy		Otay Lakes Rd		Otay Lakes Rd		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	1	0	0	0	2	1	0	0	4
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	1	0	0	0	2	0	1	0	4
7:45 AM	0	0	0	0	0	0	2	0	2
8:00 AM	0	0	0	0	0	0	1	0	1
8:15 AM	0	0	0	2	0	0	0	0	2
8:30 AM	0	0	1	0	0	0	0	0	1
8:45 AM	0	0	0	1	0	0	0	1	2
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	2	0	1	3	4	1	4	1	16
APPROACH %'s :	100.00%	0.00%	25.00%	75.00%	80.00%	20.00%	80.00%	20.00%	
PEAK HR :	07:30 AM - 08:30 AM								TOTAL
PEAK HR VOL :	1	0	0	2	2	0	4	0	9
PEAK HR FACTOR :	0.250			0.250	0.250		0.500		0.563
	0.250		0.250		0.250		0.500		

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	1	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	1	0	0	0	1	0	0	0	2
5:00 PM	0	1	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	2	0	0	0	0	0	0	0	2
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	4	1	0	0	1	0	0	0	6
APPROACH %'s :	80.00%	20.00%			100.00%	0.00%			
PEAK HR :	04:30 PM - 05:30 PM								TOTAL
PEAK HR VOL :	1	1	0	0	1	0	0	0	3
PEAK HR FACTOR :	0.250	0.250			0.250				0.375
	0.500				0.250				

Prepared by National Data & Surveying Services

Hunte Pkwy & Otay Lakes Rd

Peak Hour Turning Movement Count

ID: 18-04488-006
City: Chula Vista

Day: Tuesday
Date: 12/18/2018

PEAK HOURS

AM: 07:30 AM - 08:30 AM
NOON: NONE
PM: 04:30 PM - 05:30 PM

COUNT PERIODS

AM: 07:00 AM - 09:00 AM
NOON: NONE
PM: 04:00 PM - 06:00 PM

SOUTHBOUND — Hunte Pkwy

AM	242	370	25	0	785	AM
NOON	0	0	0	0	0	NOON
PM	125	187	53	0	376	PM
	1	2	2	0		

EASTBOUND — Otay Lakes Rd

AM	NOON	PM	
1065	0	650	
1	0	1	0
174	0	169	2
142	0	370	3
168	0	399	0

WESTBOUND — Otay Lakes Rd

	PM	NOON	AM
1	14	0	60
3	250	0	438
2	63	0	172
0	1	0	0
	463	0	242

NORTHBOUND — Hunte Pkwy

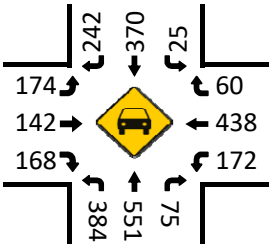
	0	2	2	1	
PM	651	2	274	193	39	PM
NOON	0	0	0	0	0	NOON
AM	711	1	384	551	75	AM

CONTROL

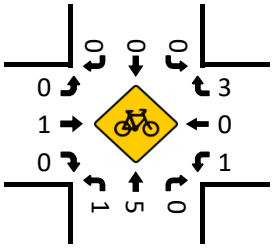
Signalized

TEV	2803	0	2140
	AM	NOON	PM
PHF	0.87		0.96

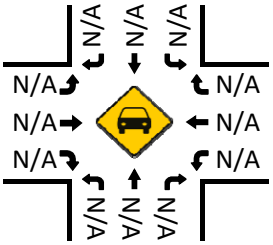
Total Vehicles (AM)



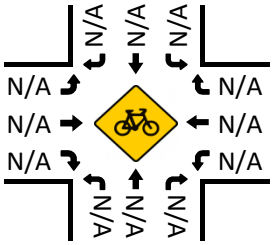
Bikes (AM)



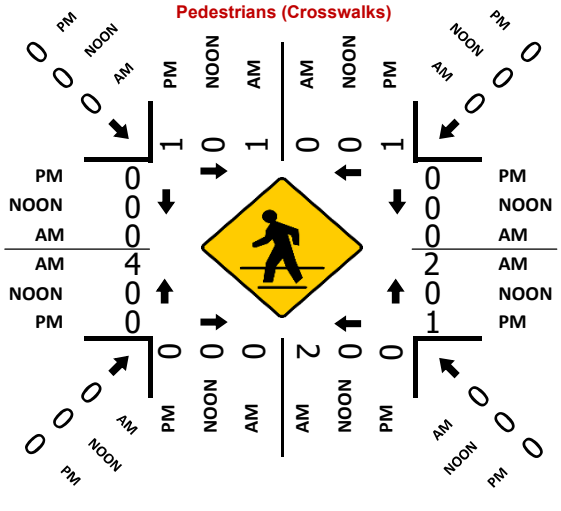
Total Vehicles (Noon)



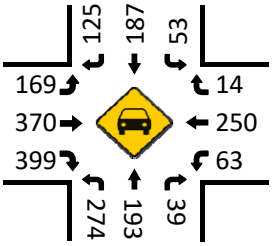
Bikes (NOON)



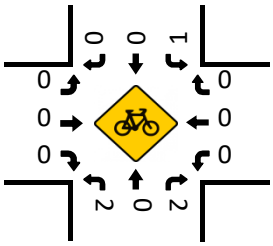
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Eastlake Pkwy & Fenton St
City: Chula Vista
Control: Signalized

Project ID: 18-04488-007
Date: 12/18/2018

Total

NS/EW Streets:	Eastlake Pkwy				Eastlake Pkwy				Fenton St				Fenton St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	2	0	0	1	2	0	0	0.5	0.5	1	0	2	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	9	72	36	2	9	47	9	0	4	9	2	0	56	9	3	0	267
7:15 AM	12	88	30	0	8	27	9	0	4	12	5	0	27	16	6	0	244
7:30 AM	18	64	39	1	10	57	8	0	10	14	3	0	29	9	7	0	269
7:45 AM	15	111	64	0	14	57	19	0	13	20	9	0	36	16	6	0	380
8:00 AM	33	104	65	0	19	55	12	0	13	17	12	0	34	22	4	0	390
8:15 AM	35	99	65	0	23	61	31	0	11	35	9	0	45	21	13	0	448
8:30 AM	27	108	49	0	16	72	30	0	20	32	9	0	58	41	17	0	479
8:45 AM	17	112	50	0	31	82	24	0	20	34	19	0	54	19	13	0	475
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	166	758	398	3	130	458	142	0	95	173	68	0	339	153	69	0	2952
APPROACH %'s :	12.53%	57.21%	30.04%	0.23%	17.81%	62.74%	19.45%	0.00%	28.27%	51.49%	20.24%	0.00%	60.43%	27.27%	12.30%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	112	423	229	0	89	270	97	0	64	118	49	0	191	103	47	0	1792
PEAK HR FACTOR :	0.800	0.944	0.881	0.000	0.718	0.823	0.782	0.000	0.800	0.843	0.645	0.000	0.823	0.628	0.691	0.000	0.935
	0.946				0.832				0.791				0.735				

NS/EW Streets:	Eastlake Pkwy				Eastlake Pkwy				Fenton St				Fenton St				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	2	0	0	1	2	0	0	0.5	0.5	1	0	2	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	47	145	58	1	31	166	28	0	36	38	19	0	94	46	13	0	722
4:15 PM	46	132	53	2	27	178	38	1	27	32	12	0	70	35	24	0	677
4:30 PM	43	134	42	1	28	151	39	0	45	46	16	0	91	33	29	0	698
4:45 PM	46	142	70	1	29	185	37	1	40	50	17	0	94	32	18	0	762
5:00 PM	39	126	49	5	21	190	36	0	41	46	18	0	115	63	23	0	772
5:15 PM	35	130	28	1	26	173	47	1	28	52	32	0	88	32	18	0	691
5:30 PM	46	110	32	0	18	142	39	1	43	38	19	0	65	33	10	0	596
5:45 PM	30	161	41	0	28	164	46	0	37	53	12	0	56	34	11	0	673
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	332	1080	373	11	208	1349	310	4	297	355	145	0	673	308	146	0	5591
APPROACH %'s :	18.49%	60.13%	20.77%	0.61%	11.12%	72.10%	16.57%	0.21%	37.26%	44.54%	18.19%	0.00%	59.72%	27.33%	12.95%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	163	532	189	8	104	699	159	2	154	194	83	0	388	160	88	0	2923
PEAK HR FACTOR :	0.886	0.937	0.675	0.400	0.897	0.920	0.846	0.500	0.856	0.933	0.648	0.000	0.843	0.635	0.759	0.000	0.947
	0.861				0.956				0.962				0.791				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Eastlake Pkwy & Fenton St
City: Chula Vista
Control: Signalized

Project ID: 18-04488-007
Date: 12/18/2018

Bikes

NS/EW Streets:	Eastlake Pkwy				Eastlake Pkwy				Fenton St				Fenton St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	2	0	0	1	2	0	0	0.5	0.5	1	0	2	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	1	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	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	0	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	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	2
APPROACH %'s :					0.00%	100.00%	0.00%	0.00%					100.00%	0.00%	0.00%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	2	0	0	1	2	0	0	0.5	0.5	1	0	2	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
4:15 PM	0	0	0	0	1	0	0	0	0	0	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	1	0	0	0	0	0	0	0	1
5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
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	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1	0	0	1	0	0	0	1	0	0	0	1	0	0	0	4
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2
PEAK HR FACTOR :	0.00	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500
	0.250								0.250								

National Data & Surveying Services

Intersection Turning Movement Count

Location: Eastlake Pkwy & Fenton St
City: Chula Vista
Project ID: 18-04488-007
Date: 12/18/2018

Pedestrians (Crosswalks)

NS/EW Streets:	Eastlake Pkwy		Eastlake Pkwy		Fenton St		Fenton St		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	0	0	0	0	0	1	2	0	3
7:15 AM	0	0	0	1	0	1	0	0	2
7:30 AM	0	0	0	2	0	0	0	0	2
7:45 AM	0	1	0	1	0	0	0	2	4
8:00 AM	0	0	1	0	0	0	1	0	2
8:15 AM	0	1	0	0	2	0	0	0	3
8:30 AM	0	1	0	0	1	0	3	0	5
8:45 AM	1	0	0	0	1	1	1	1	5
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	1	3	1	4	4	3	7	3	26
APPROACH %'s :	25.00%	75.00%	20.00%	80.00%	57.14%	42.86%	70.00%	30.00%	
PEAK HR :	08:00 AM - 09:00 AM								TOTAL
PEAK HR VOL :	1	2	1	0	4	1	5	1	15
PEAK HR FACTOR :	0.250	0.500	0.250		0.500	0.250	0.417	0.250	0.750
	0.750		0.250		0.625		0.500		

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	2	0	1	0	0	3	3	0	9
4:15 PM	4	1	1	0	0	0	0	0	6
4:30 PM	0	0	2	0	2	0	1	2	7
4:45 PM	0	0	1	1	0	0	3	1	6
5:00 PM	0	0	0	1	0	0	1	0	2
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	2	0	0	1	0	0	0	3
5:45 PM	1	1	0	0	0	0	0	1	3
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	7	4	5	2	3	3	8	4	36
APPROACH %'s :	63.64%	36.36%	71.43%	28.57%	50.00%	50.00%	66.67%	33.33%	
PEAK HR :	04:30 PM - 05:30 PM								TOTAL
PEAK HR VOL :	0	0	3	2	2	0	5	3	15
PEAK HR FACTOR :			0.375	0.500	0.250		0.417	0.375	0.536
			0.625		0.250		0.500		

Prepared by National Data & Surveying Services

Eastlake Pkwy & Fenton St

Peak Hour Turning Movement Count

ID: 18-04488-007
City: Chula Vista

Day: Tuesday
Date: 12/18/2018

PEAK HOURS

AM: 08:00 AM - 09:00 AM
NOON: NONE
PM: 04:30 PM - 05:30 PM

COUNT PERIODS

AM: 07:00 AM - 09:00 AM
NOON: NONE
PM: 04:00 PM - 06:00 PM

SOUTHBOUND — Eastlake Pkwy

AM	97	270	89	0	534	AM
NOON	0	0	0	0	0	NOON
PM	159	699	104	2	776	PM

EASTBOUND — Fenton St

AM	NOON	PM		
312	0	482	⇦	
0	0	0	↶	0
64	0	154	↱	0.5
118	0	194	→	0.5
49	0	83	↴	1
AM	NOON	PM		

WESTBOUND — Fenton St

PM	NOON	AM		
88	0	47	↰	0
160	0	103	←	1
388	0	191	↰	2
0	0	0	↰	0
487	0	436	⇨	
PM	NOON	AM		

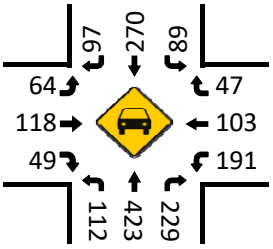
NORTHBOUND — Eastlake Pkwy

PM	1178	8	163	532	189	PM
NOON	0	0	0	0	0	NOON
AM	510	0	112	423	229	AM

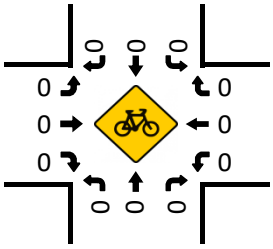
	0	2	2	0
	↰	↰	↑	↱

CONTROL			
Signalized			
TEV	1792 AM	0 NOON	2923 PM
PHF	0.94		0.95

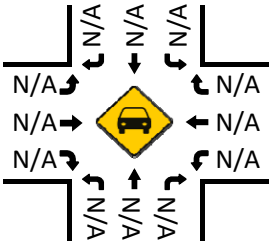
Total Vehicles (AM)



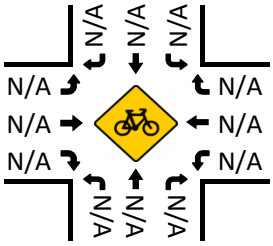
Bikes (AM)



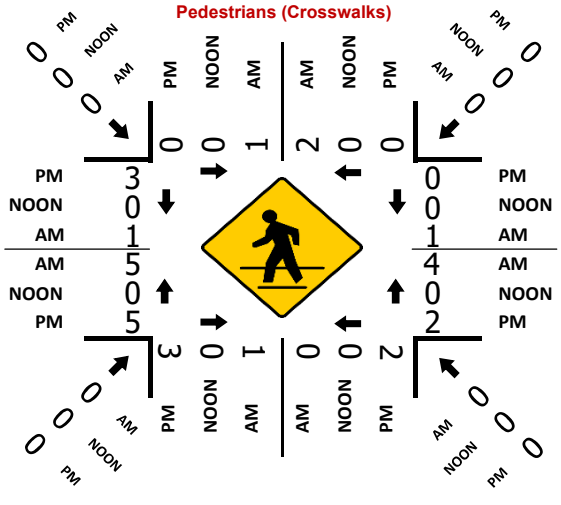
Total Vehicles (Noon)



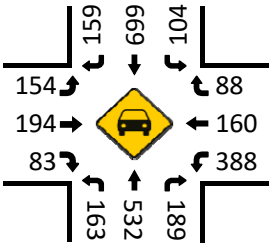
Bikes (NOON)



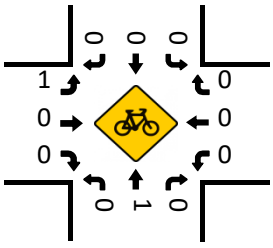
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Lane Ave & Fenton St
City: Chula Vista
Control: Signalized

Project ID: 18-04488-008
Date: 12/18/2018

Total

NS/EW Streets:	Lane Ave				Lane Ave				Fenton St				Fenton St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	1	1	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	3	114	17	0	11	60	30	0	19	14	2	0	1	6	5	0	282
7:15 AM	8	64	17	0	27	45	21	0	18	13	3	0	2	8	11	0	237
7:30 AM	6	53	37	0	19	38	18	0	14	12	5	0	3	10	7	0	222
7:45 AM	6	59	73	0	39	59	27	0	14	24	2	0	13	16	15	0	347
8:00 AM	7	29	74	0	35	68	19	0	8	35	4	0	14	23	12	0	328
8:15 AM	15	55	53	0	36	52	39	0	19	34	8	0	6	22	15	0	354
8:30 AM	11	60	40	0	26	61	30	0	26	34	11	0	16	26	13	0	354
8:45 AM	13	67	64	0	44	62	31	0	19	33	10	0	25	23	28	0	419
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	69	501	375	0	237	445	215	0	137	199	45	0	80	134	106	0	2543
APPROACH %'s :	7.30%	53.02%	39.68%	0.00%	26.42%	49.61%	23.97%	0.00%	35.96%	52.23%	11.81%	0.00%	25.00%	41.88%	33.13%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	46	211	231	0	141	243	119	0	72	136	33	0	61	94	68	0	1455
PEAK HR FACTOR :	0.767	0.787	0.780	0.000	0.801	0.893	0.763	0.000	0.692	0.971	0.750	0.000	0.610	0.904	0.607	0.000	0.868
		0.847				0.918				0.849				0.734			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	1	1	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	18	69	34	0	31	78	44	0	41	42	11	0	28	46	31	0	473
4:15 PM	9	75	27	0	31	54	38	0	34	42	17	0	32	43	33	0	435
4:30 PM	4	71	18	0	21	82	34	0	37	32	10	0	47	54	38	0	448
4:45 PM	21	93	63	0	56	55	35	0	36	44	14	0	39	59	53	0	568
5:00 PM	14	51	32	0	25	85	38	0	42	48	21	0	82	79	66	0	583
5:15 PM	12	78	34	0	19	74	49	0	52	36	15	0	26	36	28	0	459
5:30 PM	6	67	28	0	18	76	34	0	40	32	9	0	45	27	24	0	406
5:45 PM	10	75	33	0	41	62	58	0	54	38	16	0	31	36	32	0	486
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	94	579	269	0	242	566	330	0	336	314	113	0	330	380	305	0	3858
APPROACH %'s :	9.98%	61.46%	28.56%	0.00%	21.27%	49.74%	29.00%	0.00%	44.04%	41.15%	14.81%	0.00%	32.51%	37.44%	30.05%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	51	293	147	0	121	296	156	0	167	160	60	0	194	228	185	0	2058
PEAK HR FACTOR :	0.607	0.788	0.583	0.000	0.540	0.871	0.796	0.000	0.803	0.833	0.714	0.000	0.591	0.722	0.701	0.000	0.883
		0.694				0.968				0.872				0.669			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Lane Ave & Fenton St
City: Chula Vista
Control: Signalized

Project ID: 18-04488-008
Date: 12/18/2018

Bikes

NS/EW Streets:	Lane Ave				Lane Ave				Fenton St				Fenton St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	1	1	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	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	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	0	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	1	0	0	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	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	2
APPROACH %'s :					100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%					
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	2
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	0.500
					0.250				0.250								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	0	0	1	1	1	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	2
4:15 PM	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2
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	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	7	0	0	1	1	0	0	0	0	0	0	0	0	0	0	9
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	9	0	0	2	1	0	0	1	0	0	0	0	1	1	0	15
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	66.67%	33.33%	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																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250
															0.250		

National Data & Surveying Services

Intersection Turning Movement Count

Location: Lane Ave & Fenton St
City: Chula Vista
Project ID: 18-04488-008
Date: 12/18/2018

Pedestrians (Crosswalks)

NS/EW Streets:	Lane Ave		Lane Ave		Fenton St		Fenton St		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	1	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	1	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	3	1	0	0	0	0	0	0	4
8:30 AM	0	1	0	0	0	3	0	0	4
8:45 AM	1	0	0	0	0	1	0	0	2
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	5	2	0	0	1	4	0	0	12
APPROACH %'s :	71.43%	28.57%			20.00%	80.00%			
PEAK HR :	**08:00 AM - 09:00 AM**								TOTAL
PEAK HR VOL :	4	2	0	0	0	4	0	0	10
PEAK HR FACTOR :	0.333	0.500				0.333			0.625
	0.375				0.333				

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	0	0	0	0	0	2	1	0	3
4:15 PM	2	0	0	0	0	0	1	0	3
4:30 PM	0	0	0	0	0	0	0	1	1
4:45 PM	0	0	0	0	1	0	0	0	1
5:00 PM	0	1	0	0	1	1	0	0	3
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	3	1	0	3	0	0	0	7
5:45 PM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	2	4	1	0	5	3	2	1	18
APPROACH %'s :	33.33%	66.67%	100.00%	0.00%	62.50%	37.50%	66.67%	33.33%	
PEAK HR :	**04:30 PM - 05:30 PM**								TOTAL
PEAK HR VOL :	0	1	0	0	2	1	0	1	5
PEAK HR FACTOR :		0.250			0.500	0.250		0.250	0.417
	0.250				0.375		0.250		

Prepared by National Data & Surveying Services

Lane Ave & Fenton St

Peak Hour Turning Movement Count

ID: 18-04488-008
City: Chula Vista

Day: Tuesday
Date: 12/18/2018

PEAK HOURS	COUNT PERIODS
08:00 AM - 09:00 AM	07:00 AM - 09:00 AM
NONE	NONE
04:30 PM - 05:30 PM	04:00 PM - 06:00 PM

Lane Ave — SOUTHBOUND

AM	119	243	141	0	351	AM
NOON	0	0	0	0	0	NOON
PM	156	296	121	0	645	PM

EASTBOUND — Fenton St

AM	NOON	PM		
259	0	435	⇦	
0	0	0	↶	0
72	0	167	↱	1
136	0	160	→	1
33	0	60	↳	1
AM	NOON	PM		

WESTBOUND — Fenton St

PM	NOON	AM		
185	0	68	↰	1
228	0	94	←	1
194	0	61	↲	1
0	0	0	↷	0
428	0	508	⇨	
PM	NOON	AM		

0	2	1	0	⇧
0	1	2	0	⇩

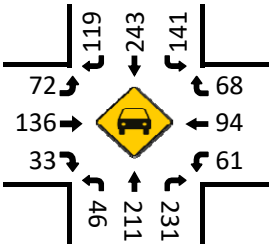
CONTROL: Signalized

TEV	1455 AM	0 NOON	2058 PM
PHF	0.87		0.88

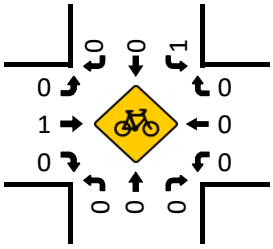
Lane Ave — NORTHBOUND

PM	550	0	51	293	147	PM
NOON	0	0	0	0	0	NOON
AM	337	0	46	211	231	AM

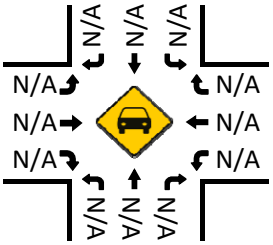
Total Vehicles (AM)



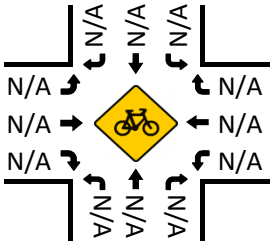
Bikes (AM)



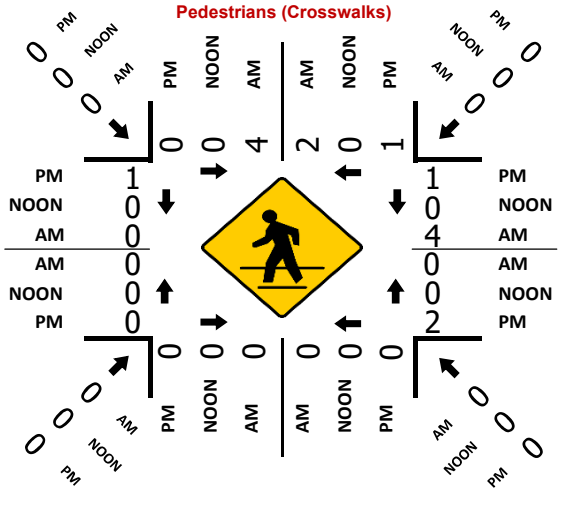
Total Vehicles (Noon)



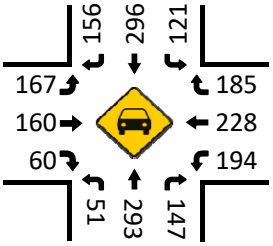
Bikes (NOON)



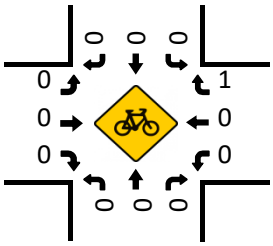
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Showroom Pl & Fenton St
City: Chula Vista
Control: 4-Way Stop

Project ID: 18-04488-009
Date: 12/18/2018

Total

NS/EW Streets:	Showroom Pl				Showroom Pl				Fenton St				Fenton St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	1	0	0	0	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	7	1	4	0	7	8	1	0	5	18	14	0	65
7:15 AM	0	0	0	0	31	0	16	0	16	3	0	0	6	7	31	0	110
7:30 AM	0	0	0	0	11	0	6	0	5	6	4	0	11	19	12	0	74
7:45 AM	0	0	1	0	7	1	1	0	7	7	4	0	15	37	19	1	100
8:00 AM	0	0	2	0	6	0	6	0	4	8	1	0	11	32	15	0	85
8:15 AM	0	0	3	0	6	0	5	0	12	9	5	0	13	50	15	0	118
8:30 AM	2	0	2	0	8	0	6	0	9	16	5	0	4	42	26	0	120
8:45 AM	1	0	4	0	11	0	9	0	16	18	8	0	17	57	32	1	174
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	3	0	12	0	87	2	53	0	76	75	28	0	82	262	164	2	846
APPROACH %'s :	20.00%	0.00%	80.00%	0.00%	61.27%	1.41%	37.32%	0.00%	42.46%	41.90%	15.64%	0.00%	16.08%	51.37%	32.16%	0.39%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	3	0	11	0	31	0	26	0	41	51	19	0	45	181	88	1	497
PEAK HR FACTOR :	0.375	0.000	0.688	0.000	0.705	0.000	0.722	0.000	0.641	0.708	0.594	0.000	0.662	0.794	0.688	0.250	0.714
	0.700				0.713				0.661				0.736				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	1	0	0	0	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	4	1	8	0	33	0	16	0	17	34	5	0	9	32	25	0	184
4:15 PM	5	1	8	0	26	0	13	0	12	41	3	0	4	24	22	0	159
4:30 PM	13	0	11	0	11	1	13	0	8	34	1	0	5	31	23	0	151
4:45 PM	4	0	8	0	27	1	13	0	27	37	4	0	6	60	52	0	239
5:00 PM	3	1	20	0	53	0	17	0	15	92	0	0	4	31	29	0	265
5:15 PM	2	0	12	0	18	0	9	0	8	47	3	0	5	20	28	0	152
5:30 PM	3	1	7	0	26	0	8	0	22	27	0	0	1	24	39	0	158
5:45 PM	2	0	6	0	38	0	23	0	21	38	2	0	3	40	67	0	240
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	36	4	80	0	232	2	112	0	130	350	18	0	37	262	285	0	1548
APPROACH %'s :	30.00%	3.33%	66.67%	0.00%	67.05%	0.58%	32.37%	0.00%	26.10%	70.28%	3.61%	0.00%	6.34%	44.86%	48.80%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	10	2	45	0	135	0	57	0	66	204	5	0	13	115	163	0	815
PEAK HR FACTOR :	0.833	0.500	0.563	0.000	0.637	0.000	0.620	0.000	0.750	0.554	0.417	0.000	0.650	0.719	0.608	0.000	0.769
	0.594				0.686				0.643				0.661				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Showroom Pl & Fenton St
City: Chula Vista
Control: 4-Way Stop

Project ID: 18-04488-009
Date: 12/18/2018

Bikes

NS/EW Streets:	Showroom Pl				Showroom Pl				Fenton St				Fenton St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	1	0	0	0	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	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	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	0	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	1	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	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	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
APPROACH %'s :									0.00%	100.00%	0.00%	0.00%					
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
PEAK HR FACTOR :	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	0.000	0.250
										0.250							

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	1	0	0	0	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0	0	1	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	0	0	0	0
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
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
APPROACH %'s :													0.00%	100.00%	0.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

National Data & Surveying Services

Intersection Turning Movement Count

Location: Showroom Pl & Fenton St
City: Chula Vista
Project ID: 18-04488-009
Date: 12/18/2018

Pedestrians (Crosswalks)

NS/EW Streets:	Showroom Pl		Showroom Pl		Fenton St		Fenton St		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	1	1	0	0	0	0	2
7:30 AM	0	0	0	1	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	1	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	1	0	1	2	0	0	0	0	4
APPROACH %'s :	100.00%	0.00%	33.33%	66.67%					
PEAK HR :	08:00 AM - 09:00 AM								TOTAL
PEAK HR VOL :	1	0	0	0	0	0	0	0	1
PEAK HR FACTOR :	0.250								0.250
	0.250								

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	1	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	2	0	0	0	0	0	0	0	2
5:45 PM	1	1	0	0	0	0	0	0	2
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	4	1	0	0	0	0	0	0	5
APPROACH %'s :	80.00%	20.00%							
PEAK HR :	05:00 PM - 06:00 PM								TOTAL
PEAK HR VOL :	4	1	0	0	0	0	0	0	5
PEAK HR FACTOR :	0.500	0.250							0.625
	0.625								

Prepared by National Data & Surveying Services

Showroom Pl & Fenton St

Peak Hour Turning Movement Count

ID: 18-04488-009
City: Chula Vista

Day: Tuesday
Date: 12/18/2018

PEAK HOURS

AM: 08:00 AM - 09:00 AM
NOON: NONE
PM: 05:00 PM - 06:00 PM

COUNT PERIODS

AM: 07:00 AM - 09:00 AM
NOON: NONE
PM: 04:00 PM - 06:00 PM

SOUTHBOUND — Showroom Pl

AM	26	0	31	0	129	AM
NOON	0	0	0	0	0	NOON
PM	57	0	135	0	231	PM

EASTBOUND — Fenton St

AM	NOON	PM	
210	0	182	⇦
0	0	0	0 ↶
41	0	66	1 ↱
51	0	204	1 →
19	0	5	0 ↴
AM	NOON	PM	

WESTBOUND — Fenton St

PM	NOON	AM	
163	0	88	1 ↰
115	0	181	1 ←
13	0	45	0 ↰
0	0	1	0 ↶
384	0	94	⇨
PM	NOON	AM	

NORTHBOUND — Showroom Pl

PM	18	0	10	2	45	PM
NOON	0	0	0	0	0	NOON
AM	64	0	3	0	11	AM

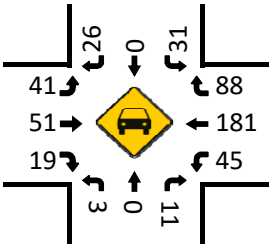
0 ↶ 0 ↰ 1 ↑ 0 ↱

CONTROL

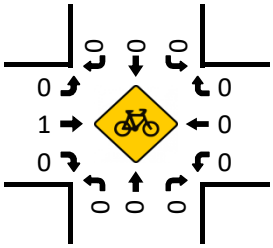
4-Way Stop

TEV	497 AM	0 NOON	815 PM
PHF	0.71		0.77

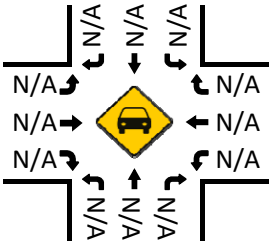
Total Vehicles (AM)



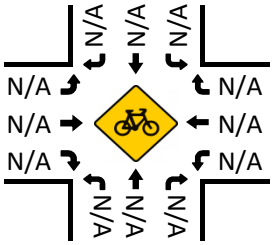
Bikes (AM)



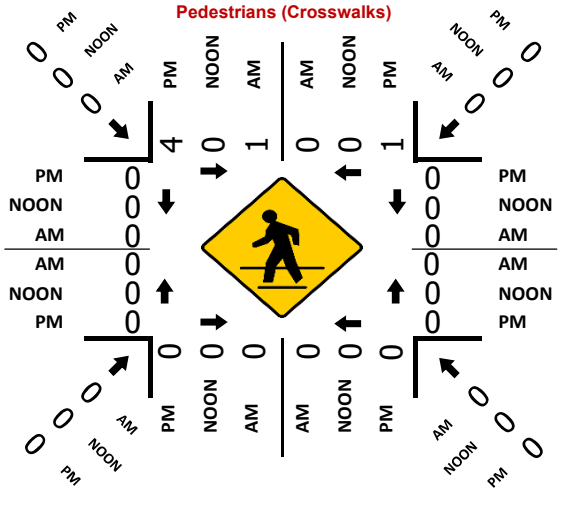
Total Vehicles (Noon)



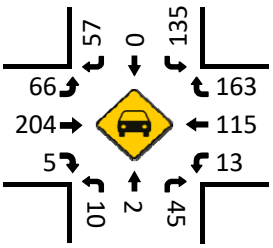
Bikes (NOON)



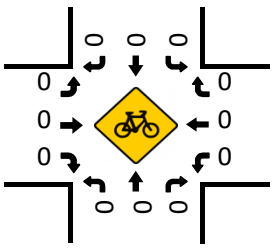
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Harold Pl & Fenton St
City: Chula Vista
Control: 1-Way Stop (SB)

Project ID: 19-04115-001
Date: 3/7/2019

Total

NS/EW Streets:	Harold Pl				Harold Pl				Fenton St				Fenton St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	2	0	12	0	13	18	7	0	3	8	2	0	65
7:15 AM	0	0	0	0	3	0	4	0	21	21	8	0	2	36	2	0	97
7:30 AM	0	0	1	0	1	0	2	0	8	16	26	0	4	18	3	0	79
7:45 AM	1	0	0	0	3	0	13	1	48	26	45	1	11	23	7	0	179
8:00 AM	4	0	0	0	3	0	6	0	39	31	36	0	14	23	12	0	168
8:15 AM	0	0	0	0	4	0	11	1	41	23	25	0	4	26	10	0	145
8:30 AM	2	0	1	0	2	0	8	0	37	34	10	0	3	33	12	0	142
8:45 AM	1	0	0	0	6	0	21	0	52	33	12	0	6	29	17	0	177
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	8	0	2	0	24	0	77	2	259	202	169	1	47	196	65	0	1052
APPROACH %'s :	80.00%	0.00%	20.00%	0.00%	23.30%	0.00%	74.76%	1.94%	41.05%	32.01%	26.78%	0.16%	15.26%	63.64%	21.10%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	7	0	1	0	12	0	38	2	165	114	116	1	32	105	41	0	634
PEAK HR FACTOR :	0.438	0.000	0.250	0.000	0.750	0.000	0.731	0.500	0.859	0.838	0.644	0.250	0.571	0.795	0.854	0.000	0.885
	0.500				0.765				0.825				0.908				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	7	0	0	0	18	0	39	0	45	55	1	0	0	46	15	0	226
4:15 PM	4	0	5	0	10	0	36	0	24	34	5	0	0	26	14	0	158
4:30 PM	14	0	5	0	13	0	40	0	46	38	0	0	1	40	8	0	205
4:45 PM	15	0	15	0	17	1	43	0	71	48	4	0	1	55	32	0	302
5:00 PM	29	0	35	0	25	0	76	0	54	52	0	0	0	55	15	0	341
5:15 PM	15	0	6	0	10	0	39	0	50	44	0	0	1	33	18	0	216
5:30 PM	11	0	5	0	6	0	75	0	56	43	0	0	0	38	8	0	242
5:45 PM	9	0	6	0	13	0	90	1	77	46	0	0	0	34	32	0	308
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	104	0	77	0	112	1	438	1	423	360	10	0	3	327	142	0	1998
APPROACH %'s :	57.46%	0.00%	42.54%	0.00%	20.29%	0.18%	79.35%	0.18%	53.34%	45.40%	1.26%	0.00%	0.64%	69.28%	30.08%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	64	0	52	0	54	0	280	1	237	185	0	0	1	160	73	0	1107
PEAK HR FACTOR :	0.552	0.000	0.371	0.000	0.540	0.000	0.778	0.250	0.769	0.889	0.000	0.000	0.250	0.727	0.570	0.000	0.812
	0.453				0.805				0.858				0.836				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Harold Pl & Fenton St
City: Chula Vista
Control: 1-Way Stop (SB)

Project ID: 19-04115-001
Date: 3/7/2019

Bikes

NS/EW Streets:	Harold Pl				Harold Pl				Fenton St				Fenton St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	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	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	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
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	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
APPROACH %'s :					0.00%	0.00%	100.00%	0.00%									
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250
							0.250										

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	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	0	0	0	0	0	0	0	0	0	0	0	0	0
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	1	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
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
APPROACH %'s :													0.00%	100.00%	0.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
PEAK HR FACTOR :	0.00	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
														0.250			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Harold Pl & Fenton St
City: Chula Vista
Project ID: 19-04115-001
Date: 3/7/2019

Pedestrians (Crosswalks)

NS/EW Streets:	Harold Pl		Harold Pl		Fenton St		Fenton St		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	0	0	0	1	0	0	0	0	1
7:15 AM	1	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	1	0	1	0	0	0	0	0	2
8:30 AM	0	2	0	0	0	0	0	0	2
8:45 AM	1	0	1	0	0	0	0	1	3
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	3	2	2	1	0	0	0	1	9
APPROACH %'s :	60.00%	40.00%	66.67%	33.33%			0.00%	100.00%	
PEAK HR :	07:45 AM - 08:45 AM								TOTAL
PEAK HR VOL :	1	2	1	0	0	0	0	0	4
PEAK HR FACTOR :	0.250	0.250	0.250						0.500
	0.375		0.250						

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	0	0	1	0	0	0	0	0	1
4:15 PM	0	2	0	0	0	0	0	0	2
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	2	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	1	0	0	0	0	0	0	0	1
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	1	2	1	0	0	2	0	0	6
APPROACH %'s :	33.33%	66.67%	100.00%	0.00%	0.00%	100.00%			
PEAK HR :	05:00 PM - 06:00 PM								TOTAL
PEAK HR VOL :	1	0	0	0	0	2	0	0	3
PEAK HR FACTOR :	0.250					0.250			0.375
	0.250				0.250				

Prepared by National Data & Surveying Services

Harold Pl & Fenton St

Peak Hour Turning Movement Count

ID: 19-04115-001
City: Chula Vista

Day: Thursday
Date: 03/07/2019

PEAK HOURS

AM	07:45 AM - 08:45 AM
NOON	NONE
PM	05:00 PM - 06:00 PM

COUNT PERIODS

AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:00 PM - 06:00 PM

Harold Pl — SOUTHBOUND

AM	38	0	12	2	208	AM
NOON	0	0	0	0	0	NOON
PM	280	0	54	1	311	PM

EASTBOUND — Fenton St

AM	NOON	PM		
151	0	504	⇦	
1	0	0	↶	0
165	0	237	↱	1
114	0	185	→	1
116	0	0	↷	0

WESTBOUND — Fenton St

				PM	NOON	AM
			⇧	73	0	41
				160	0	105
				1	0	32
				0	0	0
			⇨	291	0	127

CONTROL

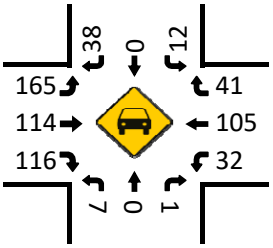
1-Way Stop (SB)

TEV	634 AM	0 NOON	1107 PM
PHF	0.89		0.81

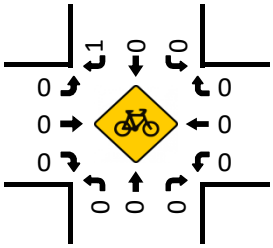
Harold Pl — NORTHBOUND

PM	1	0	64	0	52	PM
NOON	0	0	0	0	0	NOON
AM	148	0	7	0	1	AM

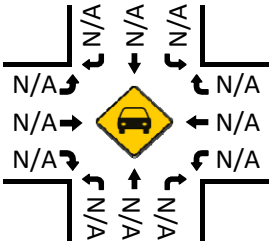
Total Vehicles (AM)



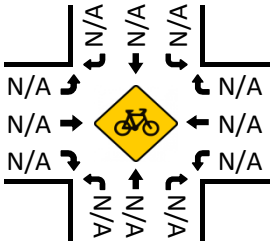
Bikes (AM)



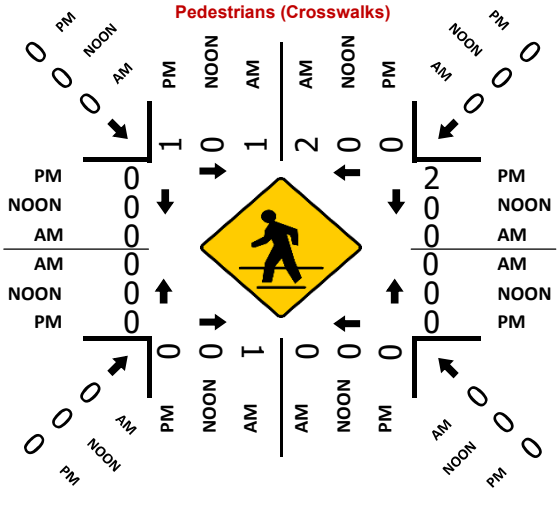
Total Vehicles (Noon)



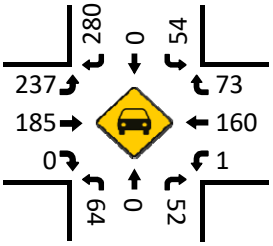
Bikes (NOON)



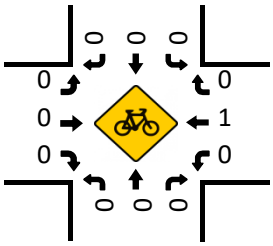
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



Prepared by NDS/ATD

VOLUME

Otay Lakes Rd Bet. SR-125 NB Ramps & Eastlake Pkwy

Day: Tuesday
Date: 12/18/2018

City: Chula Vista
Project #: CA18_4489_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	21,204	22,030	43,234

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			40		35		75		12:00			315		330		645	
00:15			42		18		60		12:15			340		344		684	
00:30			35		28		63		12:30			346		323		669	
00:45			54	171	21	102	75	273	12:45			305	1306	326	1323	631	2629
01:00			58		25		83		13:00			322		334		656	
01:15			28		15		43		13:15			365		304		669	
01:30			24		12		36		13:30			317		366		683	
01:45			10	120	19	71	29	191	13:45			342	1346	345	1349	687	2695
02:00			25		9		34		14:00			327		343		670	
02:15			18		4		22		14:15			363		295		658	
02:30			15		10		25		14:30			370		359		729	
02:45			18	76	9	32	27	108	14:45			320	1380	327	1324	647	2704
03:00			14		18		32		15:00			393		370		763	
03:15			12		15		27		15:15			386		356		742	
03:30			11		33		44		15:30			421		394		815	
03:45			15	52	39	105	54	157	15:45			420	1620	372	1492	792	3112
04:00			26		57		83		16:00			383		391		774	
04:15			45		44		89		16:15			375		351		726	
04:30			35		61		96		16:30			379		389		768	
04:45			65	171	76	238	141	409	16:45			465	1602	387	1518	852	3120
05:00			38		128		166		17:00			402		434		836	
05:15			44		162		206		17:15			444		398		842	
05:30			70		166		236		17:30			413		365		778	
05:45			139	291	213	669	352	960	17:45			443	1702	315	1512	758	3214
06:00			107		214		321		18:00			412		366		778	
06:15			118		231		349		18:15			374		328		702	
06:30			181		279		460		18:30			374		273		647	
06:45			289	695	337	1061	626	1756	18:45			358	1518	284	1251	642	2769
07:00			222		335		557		19:00			330		299		629	
07:15			220		355		575		19:15			307		281		588	
07:30			281		300		581		19:30			255		265		520	
07:45			403	1126	376	1366	779	2492	19:45			293	1185	226	1071	519	2256
08:00			345		356		701		20:00			224		261		485	
08:15			368		405		773		20:15			225		223		448	
08:30			330		349		679		20:30			214		201		415	
08:45			347	1390	364	1474	711	2864	20:45			192	855	165	850	357	1705
09:00			325		302		627		21:00			168		206		374	
09:15			275		354		629		21:15			156		185		341	
09:30			267		355		622		21:30			141		170		311	
09:45			260	1127	366	1377	626	2504	21:45			123	588	153	714	276	1302
10:00			273		327		600		22:00			91		124		215	
10:15			250		326		576		22:15			97		91		188	
10:30			262		364		626		22:30			92		77		169	
10:45			300	1085	297	1314	597	2399	22:45			86	366	68	360	154	726
11:00			257		332		589		23:00			85		52		137	
11:15			308		280		588		23:15			70		43		113	
11:30			282		310		592		23:30			68		56		124	
11:45			302	1149	329	1251	631	2400	23:45			60	283	55	206	115	489
TOTALS				7453		9060		**16513**	**TOTALS**				13751		12970		**26721**
SPLIT %				45.1%		54.9%		**38.2%**	**SPLIT %**				51.5%		48.5%		**61.8%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	21,204	22,030	43,234

AM Peak Hour			07:45	07:45	**07:45**	**PM Peak Hour**			16:45	16:30	**16:45**
AM Pk Volume			1446	1486	**2932**	**PM Pk Volume**			1724	1608	**3308**
Pk Hr Factor			0.897	0.917	**0.941**	**Pk Hr Factor**			0.927	0.926	**0.971**
7 - 9 Volume	0	0	2516	2840	**5356**	**4 - 6 Volume**	0	0	3304	3030	**6334**
7 - 9 Peak Hour			07:45	07:45	**07:45**	**4 - 6 Peak Hour**			16:45	16:30	**16:45**
7 - 9 Pk Volume	0	0	1446	1486	**2932**	**4 - 6 Pk Volume**	0	0	1724	1608	**3308**
Pk Hr Factor	0.000	0.000	0.897	0.917	**0.941**	**Pk Hr Factor**	0.000	0.000	0.927	0.926	**0.971**

Prepared by NDS/ATD

VOLUME

Otay Lakes Rd Bet. Eastlake Pkwy & Lane Ave

Day: Tuesday
Date: 12/18/2018

City: Chula Vista
Project #: CA18_4489_002

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	14,751	14,975	29,726

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			22	18	40	12:00			282	265	547
00:15			24	12	36	12:15			312	249	561
00:30			20	13	33	12:30			266	233	499
00:45			16	16	32	12:45			242	204	446
			82	59	141				1102	951	2053
01:00			18	16	34	13:00			258	221	479
01:15			12	7	19	13:15			245	247	492
01:30			13	4	17	13:30			244	314	558
01:45			8	7	15	13:45			246	247	493
			51	34	85				993	1029	2022
02:00			7	3	10	14:00			210	205	415
02:15			4	2	6	14:15			259	204	463
02:30			4	3	7	14:30			227	232	459
02:45			10	5	15	14:45			243	250	493
			25	13	38				939	891	1830
03:00			8	10	18	15:00			270	267	537
03:15			3	8	11	15:15			260	288	548
03:30			4	11	15	15:30			300	300	600
03:45			7	20	27	15:45			303	287	590
			22	49	71				1133	1142	2275
04:00			14	23	37	16:00			266	272	538
04:15			16	19	35	16:15			301	222	523
04:30			14	27	41	16:30			266	288	554
04:45			33	40	73	16:45			327	256	583
			77	109	186				1160	1038	2198
05:00			17	63	80	17:00			286	331	617
05:15			14	79	93	17:15			295	267	562
05:30			45	76	121	17:30			262	247	509
05:45			69	116	185	17:45			314	209	523
			145	334	479				1157	1054	2211
06:00			68	136	204	18:00			283	268	551
06:15			65	136	201	18:15			266	248	514
06:30			93	200	293	18:30			247	201	448
06:45			198	286	484	18:45			280	191	471
			424	758	1182				1076	908	1984
07:00			227	207	434	19:00			226	215	441
07:15			184	219	403	19:15			235	177	412
07:30			218	215	433	19:30			197	182	379
07:45			283	243	526	19:45			206	131	337
			912	884	1796				864	705	1569
08:00			243	284	527	20:00			154	189	343
08:15			245	305	550	20:15			171	124	295
08:30			221	246	467	20:30			148	109	257
08:45			256	262	518	20:45			159	123	282
			965	1097	2062				632	545	1177
09:00			214	239	453	21:00			109	117	226
09:15			186	201	387	21:15			116	101	217
09:30			164	219	383	21:30			92	105	197
09:45			202	190	392	21:45			93	74	167
			766	849	1615				410	397	807
10:00			165	224	389	22:00			79	70	149
10:15			166	235	401	22:15			80	46	126
10:30			155	236	391	22:30			64	51	115
10:45			191	181	372	22:45			52	39	91
			677	876	1553				275	206	481
11:00			159	223	382	23:00			54	33	87
11:15			170	226	396	23:15			40	31	71
11:30			182	221	403	23:30			47	35	82
11:45			177	252	429	23:45			35	26	61
			688	922	1610				176	125	301
TOTALS			4834	5984	**10818**	**TOTALS**			9917	8991	**18908**
SPLIT %			44.7%	55.3%	**36.4%**	**SPLIT %**			52.4%	47.6%	**63.6%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	14,751	14,975	29,726

AM Peak Hour			11:45	08:00	**07:45**	**PM Peak Hour**			16:15	15:15	**16:30**
AM Pk Volume			1037	1097	**2070**	**PM Pk Volume**			1180	1147	**2316**
Pk Hr Factor			0.831	0.899	**0.941**	**Pk Hr Factor**			0.902	0.956	**0.938**
7 - 9 Volume	0	0	1877	1981	**3858**	**4 - 6 Volume**	0	0	2317	2092	**4409**
7 - 9 Peak Hour			07:45	08:00	**07:45**	**4 - 6 Peak Hour**			16:15	16:30	**16:30**
7 - 9 Pk Volume	0	0	992	1097	**2070**	**4 - 6 Pk Volume**	0	0	1180	1142	**2316**
Pk Hr Factor	0.000	0.000	0.876	0.899	**0.941**	**Pk Hr Factor**	0.000	0.000	0.902	0.863	**0.938**

Prepared by NDS/ATD

VOLUME

Otay Lakes Rd Bet. Lane Ave & Fenton St

Day: Tuesday
Date: 12/18/2018

City: Chula Vista
Project #: CA18_4489_003

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	9,121	10,086	19,207

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			22		11		33		12:00			150		152		302	
00:15			17		6		23		12:15			151		170		321	
00:30			15		12		27		12:30			148		132		280	
00:45			11	65	13	42	24	107	12:45			159	608	121	575	280	1183
01:00			12		6		18		13:00			170		143		313	
01:15			10		9		19		13:15			158		180		338	
01:30			8		4		12		13:30			144		210		354	
01:45			5	35	5	24	10	59	13:45			145	617	176	709	321	1326
02:00			5		0		5		14:00			138		141		279	
02:15			2		1		3		14:15			168		136		304	
02:30			1		3		4		14:30			162		152		314	
02:45			3	11	4	8	7	19	14:45			155	623	167	596	322	1219
03:00			5		6		11		15:00			186		204		390	
03:15			5		8		13		15:15			169		183		352	
03:30			4		9		13		15:30			218		190		408	
03:45			2	16	20	43	22	59	15:45			202	775	198	775	400	1550
04:00			7		23		30		16:00			172		154		326	
04:15			7		20		27		16:15			195		137		332	
04:30			4		21		25		16:30			186		170		356	
04:45			11	29	37	101	48	130	16:45			208	761	156	617	364	1378
05:00			8		52		60		17:00			220		182		402	
05:15			5		66		71		17:15			195		178		373	
05:30			26		76		102		17:30			178		136		314	
05:45			24	63	94	288	118	351	17:45			209	802	134	630	343	1432
06:00			33		120		153		18:00			198		162		360	
06:15			33		112		145		18:15			185		147		332	
06:30			35		158		193		18:30			163		134		297	
06:45			70	171	184	574	254	745	18:45			176	722	125	568	301	1290
07:00			103		161		264		19:00			143		125		268	
07:15			99		186		285		19:15			155		112		267	
07:30			117		195		312		19:30			136		107		243	
07:45			159	478	202	744	361	1222	19:45			148	582	95	439	243	1021
08:00			113		239		352		20:00			102		113		215	
08:15			126		254		380		20:15			117		83		200	
08:30			123		188		311		20:30			109		68		177	
08:45			118	480	180	861	298	1341	20:45			113	441	72	336	185	777
09:00			107		163		270		21:00			86		53		139	
09:15			107		138		245		21:15			88		64		152	
09:30			91		144		235		21:30			64		46		110	
09:45			127	432	131	576	258	1008	21:45			63	301	44	207	107	508
10:00			97		163		260		22:00			57		42		99	
10:15			94		162		256		22:15			58		24		82	
10:30			95		145		240		22:30			40		33		73	
10:45			109	395	118	588	227	983	22:45			30	185	28	127	58	312
11:00			87		159		246		23:00			32		28		60	
11:15			93		125		218		23:15			30		21		51	
11:30			124		128		252		23:30			30		25		55	
11:45			111	415	157	569	268	984	23:45			22	114	15	89	37	203
TOTALS				2590		4418		**7008**	**TOTALS**				6531		5668		**12199**
SPLIT %				37.0%		63.0%		**36.5%**	**SPLIT %**				53.5%		46.5%		**63.5%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	9,121	10,086	19,207

AM Peak Hour			11:45	07:30	**07:30**	**PM Peak Hour**			16:15	15:00	**15:00**
AM Pk Volume			560	890	**1405**	**PM Pk Volume**			809	775	**1550**
Pk Hr Factor			0.927	0.876	**0.924**	**Pk Hr Factor**			0.919	0.950	**0.950**
7 - 9 Volume	0	0	958	1605	**2563**	**4 - 6 Volume**	0	0	1563	1247	**2810**
7 - 9 Peak Hour			07:45	07:30	**07:30**	**4 - 6 Peak Hour**			16:15	16:30	**16:30**
7 - 9 Pk Volume	0	0	521	890	**1405**	**4 - 6 Pk Volume**	0	0	809	686	**1495**
Pk Hr Factor	0.000	0.000	0.819	0.876	**0.924**	**Pk Hr Factor**	0.000	0.000	0.919	0.942	**0.930**

Prepared by NDS/ATD

VOLUME

Otay Lakes Rd Bet. Fenton St & Hunte Pkwy

Day: Tuesday
Date: 12/18/2018

City: Chula Vista
Project #: CA18_4489_004

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	9,000	9,747	18,747

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			17		2		19		12:00			127		140		267	
00:15			17		7		24		12:15			146		131		277	
00:30			15		12		27		12:30			127		119		246	
00:45			12	61	12	33	24	94	12:45			156	556	106	496	262	1052
01:00			12		6		18		13:00			157		137		294	
01:15			12		11		23		13:15			165		170		335	
01:30			7		4		11		13:30			147		225		372	
01:45			5	36	5	26	10	62	13:45			148	617	172	704	320	1321
02:00			5		0		5		14:00			132		124		256	
02:15			2		1		3		14:15			145		137		282	
02:30			2		3		5		14:30			153		141		294	
02:45			4	13	5	9	9	22	14:45			146	576	160	562	306	1138
03:00			4		5		9		15:00			166		201		367	
03:15			5		9		14		15:15			176		163		339	
03:30			4		8		12		15:30			192		142		334	
03:45			1	14	18	40	19	54	15:45			178	712	169	675	347	1387
04:00			7		22		29		16:00			201		157		358	
04:15			3		21		24		16:15			208		158		366	
04:30			4		22		26		16:30			195		171		366	
04:45			6	20	44	109	50	129	16:45			174	778	181	667	355	1445
05:00			5		60		65		17:00			267		147		414	
05:15			3		76		79		17:15			226		155		381	
05:30			19		81		100		17:30			211		128		339	
05:45			25	52	103	320	128	372	17:45			213	917	162	592	375	1509
06:00			32		112		144		18:00			211		140		351	
06:15			33		116		149		18:15			182		128		310	
06:30			32		149		181		18:30			179		142		321	
06:45			59	156	180	557	239	713	18:45			171	743	130	540	301	1283
07:00			92		159		251		19:00			180		91		271	
07:15			95		187		282		19:15			160		68		228	
07:30			111		208		319		19:30			135		77		212	
07:45			125	423	229	783	354	1206	19:45			145	620	74	310	219	930
08:00			104		279		383		20:00			135		91		226	
08:15			112		288		400		20:15			123		69		192	
08:30			115		216		331		20:30			126		51		177	
08:45			94	425	215	998	309	1423	20:45			131	515	61	272	192	787
09:00			75		172		247		21:00			95		70		165	
09:15			80		149		229		21:15			90		42		132	
09:30			87		130		217		21:30			72		56		128	
09:45			107	349	130	581	237	930	21:45			66	323	35	203	101	526
10:00			105		145		250		22:00			60		59		119	
10:15			88		155		243		22:15			64		40		104	
10:30			88		141		229		22:30			48		23		71	
10:45			91	372	115	556	206	928	22:45			29	201	13	135	42	336
11:00			94		146		240		23:00			35		15		50	
11:15			86		114		200		23:15			33		11		44	
11:30			112		127		239		23:30			31		15		46	
11:45			106	398	141	528	247	926	23:45			24	123	10	51	34	174
TOTALS				2319		4540		6859	TOTALS				6681		5207		11888
SPLIT %				33.8%		66.2%		36.6%	SPLIT %				56.2%		43.8%		63.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	9,000	9,747	18,747

AM Peak Hour			11:45	07:45	07:45	PM Peak Hour			17:00	13:00	16:30
AM Pk Volume			506	1012	1468	PM Pk Volume			917	704	1516
Pk Hr Factor			0.866	0.878	0.918	Pk Hr Factor			0.859	0.782	0.915
7 - 9 Volume	0	0	848	1781	2629	4 - 6 Volume	0	0	1695	1259	2954
7 - 9 Peak Hour			07:45	07:45	07:45	4 - 6 Peak Hour			17:00	16:00	16:30
7 - 9 Pk Volume	0	0	456	1012	1468	4 - 6 Pk Volume	0	0	917	667	1516
Pk Hr Factor	0.000	0.000	0.912	0.878	0.918	Pk Hr Factor	0.000	0.000	0.859	0.921	0.915

Prepared by NDS/ATD

VOLUME

Otay Lakes Rd E/O Hunte Pkwy

Day: Tuesday
Date: 12/18/2018

City: Chula Vista
Project #: CA18_4489_005

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,023	5,651	10,674

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			11		5		16		12:00			83		78		161	
00:15			7		2		9		12:15			78		80		158	
00:30			6		10		16		12:30			72		75		147	
00:45			6	30	8	25	14	55	12:45			86	319	59	292	145	611
01:00			8		3		11		13:00			75		85		160	
01:15			8		6		14		13:15			106		127		233	
01:30			6		5		11		13:30			99		169		268	
01:45			3	25	6	20	9	45	13:45			77	357	97	478	174	835
02:00			2		0		2		14:00			82		77		159	
02:15			1		1		2		14:15			76		81		157	
02:30			3		3		6		14:30			73		97		170	
02:45			1	7	3	7	4	14	14:45			89	320	135	390	224	710
03:00			3		2		5		15:00			89		143		232	
03:15			2		6		8		15:15			95		98		193	
03:30			6		5		11		15:30			109		96		205	
03:45			1	12	9	22	10	34	15:45			110	403	110	447	220	850
04:00			7		8		15		16:00			102		96		198	
04:15			0		8		8		16:15			97		89		186	
04:30			4		11		15		16:30			118		70		188	
04:45			4	15	15	42	19	57	16:45			110	427	91	346	201	773
05:00			3		16		19		17:00			128		69		197	
05:15			3		31		34		17:15			106		90		196	
05:30			12		28		40		17:30			108		56		164	
05:45			11	29	47	122	58	151	17:45			123	465	68	283	191	748
06:00			12		55		67		18:00			112		84		196	
06:15			18		77		95		18:15			93		54		147	
06:30			28		92		120		18:30			101		54		155	
06:45			40	98	114	338	154	436	18:45			110	416	59	251	169	667
07:00			60		79		139		19:00			70		71		141	
07:15			47		82		129		19:15			93		64		157	
07:30			49		117		166		19:30			73		53		126	
07:45			68	224	159	437	227	661	19:45			82	318	49	237	131	555
08:00			56		234		290		20:00			58		46		104	
08:15			66		167		233		20:15			78		31		109	
08:30			61		101		162		20:30			81		23		104	
08:45			64	247	74	576	138	823	20:45			89	306	36	136	125	442
09:00			59		87		146		21:00			48		29		77	
09:15			55		78		133		21:15			56		25		81	
09:30			42		87		129		21:30			38		27		65	
09:45			59	215	73	325	132	540	21:45			45	187	24	105	69	292
10:00			58		87		145		22:00			41		25		66	
10:15			52		76		128		22:15			38		20		58	
10:30			48		96		144		22:30			27		24		51	
10:45			45	203	61	320	106	523	22:45			14	120	17	86	31	206
11:00			48		82		130		23:00			22		16		38	
11:15			46		65		111		23:15			14		13		27	
11:30			57		86		143		23:30			17		20		37	
11:45			59	210	75	308	134	518	23:45			17	70	9	58	26	128
TOTALS				1315		2542		**3857**	**TOTALS**				3708		3109		**6817**
SPLIT %				34.1%		65.9%		**36.1%**	**SPLIT %**				54.4%		45.6%		**63.9%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,023	5,651	10,674

AM Peak Hour			11:45	07:30	**07:30**	**PM Peak Hour**			17:00	13:00	**14:45**
AM Pk Volume			292	677	**916**	**PM Pk Volume**			465	478	**854**
Pk Hr Factor			0.880	0.723	**0.790**	**Pk Hr Factor**			0.908	0.707	**0.920**
7 - 9 Volume	0	0	471	1013	**1484**	**4 - 6 Volume**	0	0	892	629	**1521**
7 - 9 Peak Hour			07:45	07:30	**07:30**	**4 - 6 Peak Hour**			17:00	16:00	**16:30**
7 - 9 Pk Volume	0	0	251	677	**916**	**4 - 6 Pk Volume**	0	0	465	346	**782**
Pk Hr Factor	0.000	0.000	0.923	0.723	**0.790**	**Pk Hr Factor**	0.000	0.000	0.908	0.901	**0.973**

Prepared by NDS/ATD

VOLUME

Eastlake Pkwy Bet. Fenton St & Otay Lakes Rd

Day: Tuesday
Date: 12/18/2018

City: Chula Vista
Project #: CA18_4489_006

DAILY TOTALS	NB	SB	EB	WB	Total
	11,174	12,075	0	0	23,249

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	15		9				24		12:00	231		227				458	
00:15	11		14				25		12:15	244		214				458	
00:30	21		7				28		12:30	214		224				438	
00:45	32	79	8	38			40	117	12:45	262	951	225	890			487	1841
01:00	43		7				50		13:00	189		188				377	
01:15	19		5				24		13:15	215		218				433	
01:30	12		6				18		13:30	231		222				453	
01:45	3	77	4	22			7	99	13:45	222	857	238	866			460	1723
02:00	6		6				12		14:00	195		239				434	
02:15	3		3				6		14:15	205		249				454	
02:30	8		3				11		14:30	237		231				468	
02:45	11	28	4	16			15	44	14:45	222	859	214	933			436	1792
03:00	10		13				23		15:00	223		254				477	
03:15	3		4				7		15:15	239		217				456	
03:30	6		5				11		15:30	210		248				458	
03:45	18	37	8	30			26	67	15:45	244	916	215	934			459	1850
04:00	12		30				42		16:00	211		280				491	
04:15	21		7				28		16:15	220		217				437	
04:30	20		6				26		16:30	206		246				452	
04:45	29	82	10	53			39	135	16:45	223	860	260	1003			483	1863
05:00	21		15				36		17:00	182		284				466	
05:15	30		17				47		17:15	175		282				457	
05:30	36		10				46		17:30	192		227				419	
05:45	48	135	31	73			79	208	17:45	208	757	200	993			408	1750
06:00	34		39				73		18:00	171		249				420	
06:15	34		71				105		18:15	153		231				384	
06:30	66		100				166		18:30	178		161				339	
06:45	93	227	192	402			285	629	18:45	178	680	170	811			348	1491
07:00	117		89				206		19:00	158		198				356	
07:15	119		58				177		19:15	151		200				351	
07:30	117		85				202		19:30	141		195				336	
07:45	181	534	94	326			275	860	19:45	135	585	153	746			288	1331
08:00	191		100				291		20:00	127		170				297	
08:15	172		113				285		20:15	94		132				226	
08:30	102		130				232		20:30	97		162				259	
08:45	98	563	149	492			247	1055	20:45	67	385	130	594			197	979
09:00	201		155				356		21:00	66		116				182	
09:15	162		152				314		21:15	71		88				159	
09:30	171		190				361		21:30	52		90				142	
09:45	172	706	204	701			376	1407	21:45	35	224	72	366			107	590
10:00	160		181				341		22:00	25		57				82	
10:15	172		175				347		22:15	26		31				57	
10:30	181		154				335		22:30	29		41				70	
10:45	172	685	191	701			363	1386	22:45	33	113	28	157			61	270
11:00	171		197				368		23:00	28		30				58	
11:15	208		222				430		23:15	17		14				31	
11:30	193		212				405		23:30	14		18				32	
11:45	185	757	223	854			408	1611	23:45	18	77	12	74			30	151
TOTALS		3910		3708				7618	TOTALS		7264		8367				15631
SPLIT %		51.3%		48.7%				32.8%	SPLIT %		46.5%		53.5%				67.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	11,174	12,075	0	0	23,249

AM Peak Hour	11:45	11:45			11:45	PM Peak Hour	12:00	16:30			15:15
AM Pk Volume	874	888			1762	PM Pk Volume	951	1072			1864
Pk Hr Factor	0.895	0.978			0.962	Pk Hr Factor	0.907	0.944			0.949
7 - 9 Volume	1097	818	0	0	1915	4 - 6 Volume	1617	1996	0	0	3613
7 - 9 Peak Hour	07:30	08:00			07:45	4 - 6 Peak Hour	16:00	16:30			16:00
7 - 9 Pk Volume	661	492	0	0	1083	4 - 6 Pk Volume	860	1072	0	0	1863
Pk Hr Factor	0.865	0.826	0.000	0.000	0.930	Pk Hr Factor	0.964	0.944	0.000	0.000	0.949

Prepared by NDS/ATD

VOLUME

Fenton St Bet. Lane Ave & Showroom Pl

Day: Tuesday
Date: 12/18/2018

City: Chula Vista
Project #: CA18_4489_007

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	4,025	4,177	8,202

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00					3		5		8		12:00					68		89		157	
00:15					2		4		6		12:15					58		77		135	
00:30					1		2		3		12:30					74		76		150	
00:45					2	8	2	13	4	21	12:45					67	267	71	313	138	580
01:00					0		1		1		13:00					83		67		150	
01:15					1		1		2		13:15					57		74		131	
01:30					0		0		0		13:30					69		83		152	
01:45					0	1	0	2	0	3	13:45					85	294	63	287	148	581
02:00					0		0		0		14:00					59		72		131	
02:15					0		0		0		14:15					60		48		108	
02:30					1		0		1		14:30					55		49		104	
02:45					2	3	0		2	3	14:45					55	229	74	243	129	472
03:00					0		0		0		15:00					63		71		134	
03:15					1		0		1		15:15					62		57		119	
03:30					0		0		0		15:30					65		89		154	
03:45					0	1	0		0	1	15:45					93	283	69	286	162	569
04:00					0		0		0		16:00					91		90		181	
04:15					0		1		1		16:15					75		89		164	
04:30					3		0		3		16:30					57		100		157	
04:45					25	28	0	1	25	29	16:45					119	342	139	418	258	760
05:00					15		2		17		17:00					92		190		282	
05:15					8		6		14		17:15					75		112		187	
05:30					8		4		12		17:30					68		77		145	
05:45					20	51	26	38	46	89	17:45					100	335	97	476	197	811
06:00					19		8		27		18:00					80		138		218	
06:15					12		6		18		18:15					78		93		171	
06:30					11		9		20		18:30					58		71		129	
06:45					32	74	23	46	55	120	18:45					79	295	66	368	145	663
07:00					34		10		44		19:00					65		135		200	
07:15					51		18		69		19:15					54		89		143	
07:30					50		21		71		19:30					52		60		112	
07:45					110	245	33	82	143	327	19:45					33	204	41	325	74	529
08:00					116		39		155		20:00					43		83		126	
08:15					87		35		122		20:15					19		41		60	
08:30					77		51		128		20:30					28		26		54	
08:45					109	389	54	179	163	568	20:45					40	130	40	190	80	320
09:00					82		51		133		21:00					20		51		71	
09:15					84		57		141		21:15					19		30		49	
09:30					51		50		101		21:30					5		36		41	
09:45					64	281	44	202	108	483	21:45					15	59	21	138	36	197
10:00					59		68		127		22:00					12		15		27	
10:15					55		71		126		22:15					9		17		26	
10:30					47		59		106		22:30					9		17		26	
10:45					64	225	53	251	117	476	22:45					5	35	7	56	12	91
11:00					51		65		116		23:00					7		6		13	
11:15					50		59		109		23:15					2		5		7	
11:30					52		49		101		23:30					5		4		9	
11:45					75	228	71	244	146	472	23:45					4	18	4	19	8	37
TOTALS						1534		1058		**2592**	**TOTALS**						2491		3119		**5610**
SPLIT %						59.2%		40.8%		**31.6%**	**SPLIT %**						44.4%		55.6%		**68.4%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	4,025	4,177	8,202

AM Peak Hour			07:45	11:45	**11:45**	**PM Peak Hour**			16:45	16:30	**16:30**
AM Pk Volume			390	313	**588**	**PM Pk Volume**			354	541	**884**
Pk Hr Factor			0.841	0.879	**0.936**	**Pk Hr Factor**			0.744	0.712	**0.784**
7 - 9 Volume	0	0	634	261	**895**	**4 - 6 Volume**	0	0	677	894	**1571**
7 - 9 Peak Hour			07:45	08:00	**08:00**	**4 - 6 Peak Hour**			16:45	16:30	**16:30**
7 - 9 Pk Volume	0	0	390	179	**568**	**4 - 6 Pk Volume**	0	0	354	541	**884**
Pk Hr Factor	0.000	0.000	0.841	0.829	**0.871**	**Pk Hr Factor**	0.000	0.000	0.744	0.712	**0.784**

Prepared by NDS/ATD

VOLUME

Fenton St Bet. Showroom Pl & Otay Lakes Rd

Day: Tuesday
Date: 12/18/2018

City: Chula Vista
Project #: CA18_4489_008

DAILY TOTALS	NB	SB	EB	WB	Total
	3,118	3,138	0	0	6,256

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	2		2				4		12:00	49		67				116	
00:15	0		2				2		12:15	48		65				113	
00:30	2		2				4		12:30	36		54				90	
00:45	2	6	4	10			6	16	12:45	55	188	59	245			114	433
01:00	0		0				0		13:00	41		60				101	
01:15	1		1				2		13:15	49		57				106	
01:30	0		0				0		13:30	54		50				104	
01:45	0	1	0	1			0	2	13:45	40	184	38	205			78	389
02:00	0		1				1		14:00	41		35				76	
02:15	0		0				0		14:15	44		29				73	
02:30	2		1				3		14:30	43		55				98	
02:45	0	2	1	3			1	5	14:45	55	183	45	164			100	347
03:00	0		0				0		15:00	65		59				124	
03:15	1		1				2		15:15	64		56				120	
03:30	0		0				0		15:30	80		42				122	
03:45	0	1	0	1			0	2	15:45	85	294	70	227			155	521
04:00	1		0				1		16:00	65		80				145	
04:15	2		0				2		16:15	50		74				124	
04:30	0		0				0		16:30	41		63				104	
04:45	17	20	0				17	20	16:45	124	280	56	273			180	553
05:00	12		0				12		17:00	71		162				233	
05:15	17		0				17		17:15	47		87				134	
05:30	15		1				16		17:30	57		72				129	
05:45	14	58	7	8			21	66	17:45	104	279	74	395			178	674
06:00	16		12				28		18:00	69		101				170	
06:15	12		6				18		18:15	50		72				122	
06:30	15		16				31		18:30	40		72				112	
06:45	35	78	16	50			51	128	18:45	56	215	61	306			117	521
07:00	39		19				58		19:00	57		96				153	
07:15	44		32				76		19:15	33		60				93	
07:30	39		19				58		19:30	23		52				75	
07:45	74	196	15	85			89	281	19:45	39	152	46	254			85	406
08:00	58		17				75		20:00	26		95				121	
08:15	73		17				90		20:15	20		40				60	
08:30	77		32				109		20:30	15		46				61	
08:45	100	308	29	95			129	403	20:45	24	85	47	228			71	313
09:00	73		30				103		21:00	14		30				44	
09:15	65		28				93		21:15	10		27				37	
09:30	41		38				79		21:30	8		18				26	
09:45	48	227	27	123			75	350	21:45	3	35	10	85			13	120
10:00	39		49				88		22:00	2		24				26	
10:15	42		45				87		22:15	5		13				18	
10:30	48		32				80		22:30	3		8				11	
10:45	37	166	30	156			67	322	22:45	3	13	1	46			4	59
11:00	30		35				65		23:00	1		8				9	
11:15	29		32				61		23:15	3		4				7	
11:30	34		43				77		23:30	3		8				11	
11:45	45	138	46	156			91	294	23:45	2	9	2	22			4	31
TOTALS		1201		688				1889	TOTALS		1917		2450				4367
SPLIT %		63.6%		36.4%				30.2%	SPLIT %		43.9%		56.1%				69.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	3,118	3,138	0	0	6,256

AM Peak Hour	08:15	11:45			08:30	PM Peak Hour	16:45	17:00			16:45
AM Pk Volume	323	232			434	PM Pk Volume	299	395			676
Pk Hr Factor	0.808	0.866			0.841	Pk Hr Factor	0.603	0.610			0.725
7 - 9 Volume	504	180	0	0	684	4 - 6 Volume	559	668	0	0	1227
7 - 9 Peak Hour	08:00	08:00			08:00	4 - 6 Peak Hour	16:45	17:00			16:45
7 - 9 Pk Volume	308	95	0	0	403	4 - 6 Pk Volume	299	395	0	0	676
Pk Hr Factor	0.770	0.742	0.000	0.000	0.781	Pk Hr Factor	0.603	0.610	0.000	0.000	0.725

Prepared by NDS/ATD

VOLUME

Hunte Pkwy Bet. Otay Lakes Rd & Clubhouse Dr

Day: Tuesday
Date: 12/18/2018

City: Chula Vista
Project #: CA18_4489_009

DAILY TOTALS	NB	SB	EB	WB	Total
	7,605	7,306	0	0	14,911

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	6		7				13		12:00	156		98				254	
00:15	9		13				22		12:15	130		99				229	
00:30	7		18				25		12:30	120		87				207	
00:45	13	35	21	59			34	94	12:45	116	522	95	379			211	901
01:00	5		2				7		13:00	132		108				240	
01:15	7		4				11		13:15	194		157				351	
01:30	2		3				5		13:30	133		257				390	
01:45	3	17	4	13			7	30	13:45	97	556	139	661			236	1217
02:00	5		7				12		14:00	101		98				199	
02:15	1		2				3		14:15	108		102				210	
02:30	1		1				2		14:30	94		131				225	
02:45	1	8	4	14			5	22	14:45	98	401	143	474			241	875
03:00	2		2				4		15:00	110		150				260	
03:15	5		5				10		15:15	165		140				305	
03:30	5		0				5		15:30	203		157				360	
03:45	5	17	2	9			7	26	15:45	157	635	150	597			307	1232
04:00	12		1				13		16:00	99		142				241	
04:15	15		6				21		16:15	104		166				270	
04:30	12		7				19		16:30	127		137				264	
04:45	30	69	5	19			35	88	16:45	170	500	144	589			314	1089
05:00	45		6				51		17:00	110		179				289	
05:15	46		7				53		17:15	102		168				270	
05:30	55		11				66		17:30	112		132				244	
05:45	61	207	18	42			79	249	17:45	123	447	146	625			269	1072
06:00	67		24				91		18:00	118		152				270	
06:15	71		44				115		18:15	105		129				234	
06:30	90		78				168		18:30	89		134				223	
06:45	148	376	151	297			299	673	18:45	100	412	119	534			219	946
07:00	192		71				263		19:00	83		125				208	
07:15	169		71				240		19:15	60		112				172	
07:30	257		117				374		19:30	82		99				181	
07:45	313	931	139	398			452	1329	19:45	58	283	93	429			151	712
08:00	240		234				474		20:00	50		105				155	
08:15	179		198				377		20:15	65		76				141	
08:30	185		105				290		20:30	38		60				98	
08:45	189	793	57	594			246	1387	20:45	22	175	73	314			95	489
09:00	110		64				174		21:00	50		76				126	
09:15	93		66				159		21:15	37		67				104	
09:30	71		53				124		21:30	39		65				104	
09:45	74	348	70	253			144	601	21:45	22	148	40	248			62	396
10:00	71		60				131		22:00	22		40				62	
10:15	81		42				123		22:15	20		44				64	
10:30	62		63				125		22:30	17		28				45	
10:45	71	285	56	221			127	506	22:45	20	79	17	129			37	208
11:00	89		61				150		23:00	9		31				40	
11:15	79		55				134		23:15	14		17				31	
11:30	74		106				180		23:30	7		17				24	
11:45	73	315	115	337			188	652	23:45	16	46	6	71			22	117
TOTALS		3401		2256				**5657**	**TOTALS**		4204		5050				**9254**
SPLIT %		60.1%		39.9%				**37.9%**	**SPLIT %**		45.4%		54.6%				**62.1%**

DAILY TOTALS	NB	SB	EB	WB	Total
	7,605	7,306	0	0	14,911

AM Peak Hour	07:30	07:30				**07:30**	**PM Peak Hour**	15:00	13:00				**15:00**
AM Pk Volume	989	688				**1677**	**PM Pk Volume**	635	661				**1232**
Pk Hr Factor	0.790	0.735				**0.884**	**Pk Hr Factor**	0.782	0.643				**0.856**
7 - 9 Volume	1724	992	0	0		**2716**	**4 - 6 Volume**	947	1214	0	0		**2161**
7 - 9 Peak Hour	07:30	07:30				**07:30**	**4 - 6 Peak Hour**	16:15	16:30				**16:15**
7 - 9 Pk Volume	989	688	0	0		**1677**	**4 - 6 Pk Volume**	511	628	0	0		**1137**
Pk Hr Factor	0.790	0.735	0.000	0.000		**0.884**	**Pk Hr Factor**	0.751	0.877	0.000	0.000		**0.905**

TRAFFIC SIGNAL TIMING SHEET -- CITY OF CHULA VISTA

EASTLAKE / OTAY LAKES

SCN: 123 ADDRESS: 1

Program:233; SET CLOCK: SET DATE:81=ddyym ; SET TIME:80=hhmms [day]; 8F=mmss.s ; E KEY ENABLE: F-9-E = 9 ;SET MODE:{C-0-C=0} C-A-1=0 ; F-C-0=3.0 ; F-O-F=3.0 ;
ESTABLISH COMM: C-0-0=ADDRESS ; C-0-1=1 ; C-0-2=1 ; C-0-3=SCN ; SET PED PHASES: {C-0-E=125} E-F-5=[2] ; E-F-6=[6] ; E-F-7=[4] ; E-F-8=[8] ;
SET OPTICOM: {C-0-E=125} E-E-A=[2,5] ; E-E-B=[4,7] ; E-E-C=[1,6] ; E-E-D=[3,8] ; E-F-F=[3,5] ; F-0-8=F-0-9=2 ; F-E-2=F-E-4=F-E-6=F-E-8=2 ;

PHASE FLAGS {C-0-F = 1} (F-F-X)

PHASE	0	1	2	3	4	6	7	8	9	A	B	C	D	E	F
1	X														
→ 2	X			X											X
3	X														
↓ 4	X														
5	X														
← 6	X			X											X
7	X														
↑ 8	X														

PHASE TIMING BANK 1 {C-0-F = 1} (F-PHASE-X)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
1			2	0.0	2.0	2.0	2.0	26							3.0	1.0
2	6	26	6	1.0	4.0	4.5	2.0	40			4		1.3		4.7	2.3
3			2	0.0	3.5	3.5	3.5	50							3.0	1.0
4	6	30	4	0.0	3.5	3.8	2.0	30			4		1.3		4.0	1.5
5			2	0.0	2.0	2.0	2.0	30							3.0	1.0
6	6	24	6	1.0	4.0	4.5	2.0	40			4		1.3		4.7	2.3
7			2	0.0	2.0	2.0	2.0	22							3.0	1.0
8	6	25	4	0.0	3.5	3.8	2.0	30			4		1.3		4.0	1.5

LOCAL SCHEDULER{C-0-9 = 0.1}(PAGE 1)

9-EVENT	TIME	PLAN/OS		DAY
0 =	0000	E	A	[1,2,3,4,5,6,7]
1 =	0700	4	A	[2,3,4,5,6]
2 =	1030	3	A	[2,3,4,5,6]
3 =	1230	4	A	[2,3,4,5,6]
4 =	1800	3	A	[2,3,4,5,6]
5 =	1930	E	A	[1,2,3,4,5,6,7]
6 =			A	
7 =			A	
8 =			A	
9 =			A	
A =			A	
B =			A	
C =			A	
D =			A	
E =			A	
F =			A	

NOTE:Plan E=Free ; Plan F=Flash

OTHER INPUTS: {C-0-E = 126} E-1-8 = E-1-9 = E-1-A = E-1-B = [4,5,7]
{C-0-C = 1} C-F-0 = [2,4,6,8] ;

DETECTOR PARAM: {C-0-D = 0}

COORDINATION TIMING PLAN {C-0-C = 1} (C-PLAN-X)

PLAN	CYCLE	FORCE-OFF							OFFSET								[SYNC ϕ s]	[LAG ϕ s]
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	C-E-PLAN	C-F-PLAN
1																		
2																		
3	108	72	0	28	48	72	0	23	48	0	39	0	0	0	255	0	[2,6]	[2,4,6,8]
4	128	86	0	37	61	88	0	25	61	0	39	0	0	0	255	0	[2,6]	[2,4,6,8]
5																		
6																		
7																		
8																		
9																		

TIMING PLAN FUNCTIONS {C-0-C = 2} (C-PLAN-X)

PLAN	PED-ADJ	RSRV-TIME	[RESERVED ϕs]	[PRETIMED ϕs]	[MAX RECALL ϕs]
	0	5	6	8	9
1					
2					
3					10
4					8
5					
6					
7					
8					
9					

NOTE: VIEW CURRENT BANK: {C-0-F = 0} F-C-E = (Current Bank) ; BATT. CHECK: {C-0-E = 112} E-0-A = (85 is OK) = (84 is BAD) ; DATE : May 4, 2010 VERSION: 3.0

TRAFFIC SIGNAL TIMING SHEET -- CITY OF CHULA VISTA

LANE / OTAY LAKES

SCN: 157 ADDRESS: 5

Program:233; SET CLOCK: SET DATE:81=ddyym ; SET TIME:80=hhmms [day]; 8F=mmss.s ; E KEY ENABLE: F-9-E = 9 ;SET MODE:{C-0-C=0} C-A-1=0 ; F-C-0=3.0 ; F-O-F=3.0 ;
ESTABLISH COMM: C-0-0=ADDRESS ; C-0-1=1 ; C-0-2=1 ; C-0-3=SCN ; SET PED PHASES: {C-0-E=125} E-F-5=[ ] ; E-F-6=[6] ; E-F-7=[4] ; E-F-8=[ ] ;
SET OPTICOM: {C-0-E=125} E-E-A=[2,5] ; E-E-B=[4] ; E-E-C=[6] ; E-E-D=[ ] ; E-F-F=[3,5] ; F-0-8=F-0-9=2 ; F-E-2=F-E-4=F-E-6=F-E-8=2 ;

PHASE FLAGS {C-0-F = 1} (F-F-X)

PHASE	0	1	2	3	4	6	7	8	9	A	B	C	D	E	F
1															
→ 2	X			X											X
3															
↓ 4	X														
5	X														
← 6	X			X											X
7															
8															

PHASE TIMING BANK 1 {C-0-F = 1} (F-PHASE-X)

0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
		8	1.2	6.0	7.1	2.0	50					0.8	4.7	1.3
6	22	3	0.0	2.0	2.0	2.0	28			4			4.0	1.0
		2	0.0	1.2	1.2	1.2	26						3.0	0.5
7	13	8	1.2	6.0	7.1	2.0	50			4		0.8	4.7	1.3

LOCAL SCHEDULER{C-0-9 = 0.1}(PAGE 1)

9-EVENT	TIME	PLAN/OS	[DAY]
0 =	0000	E A	[1,2,3,4,5,6,7]
1 =		A	
2 =		A	
3 =		A	
4 =		A	
5 =		A	
6 =		A	
7 =		A	
8 =		A	
9 =		A	
A =		A	
B =		A	
C =		A	
D =		A	
E =		A	
F =		A	

NOTE:Plan E=Free ; Plan F=Flash

OTHER INPUTS: {C-0-E = 126} E-1-8 = E-1-9 = E-1-A = E-1-B = [4,5,7]
{C-0-C = 1} C-F-0 = [2,4,6] ;

DETECTOR PARAM: {C-0-D = 0} D-2-0 = 2.0 ; D-4-0 = 1.5 ; D-1-9 = 8.0 ; D-1-A = 12.0 ;

COORDINATION TIMING PLAN {C-0-C = 1} (C-PLAN-X)

PLAN	CYCLE	FORCE-OFF										OFFSET					[SYNC ϕ s]	[LAG ϕ s]
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	C-E-PLAN	C-F-PLAN
1																		
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		

TIMING PLAN FUNCTIONS {C-0-C = 2} (C-PLAN-X)

PLAN	PED-ADJ	RSRV-TIME	[RESERVED ϕs]			[PRETIMED ϕs]			[MAX RECALL ϕs]	
	0	5	6			8			9	
1										
2										
3										
4										
5										
6										
7										
8										
9										

NOTE: VIEW CURRENT BANK: {C-0-F = 0} F-C-E = (Current Bank) ; BATT. CHECK: {C-0-E = 112} E-0-A = (85 is OK) = (84 is BAD) ; DATE : May 15, 2007 VERSION: 1.5

TRAFFIC SIGNAL TIMING SHEET -- CITY OF CHULA VISTA

HUNTE / OTAY LAKES

SCN: 158 ADDRESS: 6

Program:233; SET CLOCK: SET DATE:81=ddyym ; SET TIME:80=hhmms [day]; 8F=mmss.s ; E KEY ENABLE: F-9-E = 9 ;SET MODE:{C-0-C=0} C-A-1=0 ; F-C-0=3.0 ; F-O-F=3.0 ;
ESTABLISH COMM: C-0-0=ADDRESS ; C-0-1=1 ; C-0-2=1 ; C-0-3=SCN ; SET PED PHASES: {C-0-E=125} E-F-5=[2] ; E-F-6=[6] ; E-F-7=[4] ; E-F-8=[8] ;
SET OPTICOM: {C-0-E=125} E-E-A=[2,5] ; E-E-B=[4,7] ; E-E-C=[1,6] ; E-E-D=[3,8] ; E-F-F=[3,5] ; F-0-8=F-0-9=2 ; F-E-2=F-E-4=F-E-6=F-E-8=2 ;

PHASE FLAGS {C-0-F = 1} (F-F-X)

PHASE	0	1	2	3	4	6	7	8	9	A	B	C	D	E	F
1	X														
→ 2	X														X
3	X														
↓ 4	X														
5	X														
← 6	X														X
7	X														
↑ 8	X														

PHASE TIMING BANK 1 {C-0-F = 1} (F-PHASE-X)

PHASE	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
1			2	0.0	2.0	2.0	2.0	20							3.0	1.0
→ 2	7	21	4	0.0	3.8	3.8	3.8	24			4	0.0			4.7	2.3
3			3	0.0	1.5	1.5	1.5	38							3.0	1.0
↓ 4	7	24	4	0.0	3.5	3.5	3.5	30			4	0.0			4.3	1.7
5			3	0.0	1.5	1.5	1.5	38							3.0	1.0
← 6	7	21	4	0.0	3.8	3.8	3.8	24			4	0.0			4.7	2.3
7			3	0.0	1.2	1.2	1.2	30							3.0	1.0
↑ 8	7	24	4	0.0	3.5	3.5	3.5	30			4	0.0			4.3	1.7

LOCAL SCHEDULER{C-0-9 = 0.1}(PAGE 1)

9-EVENT TIME PLAN/OS [DAY]

0 =	0000	E	A	[1,2,3,4,5,6,7]
1 =			A	
2 =			A	
3 =			A	
4 =			A	
5 =			A	
6 =			A	
7 =			A	
8 =			A	
9 =			A	
A =			A	
B =			A	
C =			A	
D =			A	
E =			A	
F =			A	

NOTE:Plan E=Free ; Plan F=Flash

OTHER INPUTS: {C-0-E = 126} E-1-8 = E-1-9 = E-1-A = E-1-B = [4,5,7]
{C-0-C = 1} C-F-0 = [2,4,6,8] ;

DETECTOR PARAM: {C-0-D = 0} D-1-0 = 2.0 ; D-3-0 = 1.5 ; D-2-0 = 2.0 ; D-4-0 = 1.5 ; D-1-6 = 2.0 ; D-3-6 = 1.5 ; D-2-6 = 2.0 ; D-4-6 = 1.5 ;

COORDINATION TIMING PLAN {C-0-C = 1} (C-PLAN-X)

PLAN	CYCLE	FORCE-OFF														OFFSET		[SYNC ϕ s]	[LAG ϕ s]
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	C-E-PLAN	C-F-PLAN
1																		
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		

TIMING PLAN FUNCTIONS {C-0-C = 2} (C-PLAN-X)

PED-ADJ	RSRV-TIME[	RESERVED ϕs][	PRETIMED ϕs	][MAX RECALL ϕs]
| 0	5	6	8	9 |

NOTE: VIEW CURRENT BANK: {C-0-F = 0} F-C-E = (Current Bank) ; BATT. CHECK: {C-0-E = 112} E-0-A = (85 is OK) = (84 is BAD) ; DATE : May 15, 2007 VERSION: 1.6

TRAFFIC SIGNAL TIMING SHEET -- CITY OF CHULA VISTA

EASTLAKE / FENTON

SCN: 188 ADDRESS: 25

Program:233; SET CLOCK: SET DATE:81=ddyym ; SET TIME:80=hhmms [day]; 8F=mmss.s ; E KEY ENABLE: F-9-E = 9 ;SET MODE:{C-0-C=0} C-A-1=0 ; F-C-0=3.0 ; F-O-F=3.0 ;
ESTABLISH COMM: C-0-0=ADDRESS ; C-0-1=1 ; C-0-2=1 ; C-0-3=SCN ; SET PED PHASES: {C-0-E=125} E-F-5=[2] ; E-F-6=[1] ; E-F-7=[4] ; E-F-8=[8] ;
SET OPTICOM: {C-0-E=125} E-E-A=[2] ; E-E-B=[4,7] ; E-E-C=[1]; E-E-D=[3,8] ; E-F-F=[3,5] ; F-0-8=F-0-9=2 ; F-E-2=F-E-4=F-E-6=F-E-8=2 ;

PHASE FLAGS {C-0-F = 1} (F-F-X)

PHASE	0	1	2	3	4	6	7	8	9	A	B	C	D	E	F
← 1	X														
→ 2	X														
3	X														
↓ 4	X		X												X
5															
6															
7	X														
↑ 8	X		X												X

PHASE TIMING BANK 1 {C-0-F = 1} (F-PHASE-X)

PHASE	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
← 1	7	16	3	0.0	3.0	3.0	3.0	32			4			4.0	1.0	
→ 2	7	16	3	0.0	3.0	3.0	3.0	40			4			4.0	1.0	
3			2	0.0	1.2	1.2	1.2	30						3.0	0.5	
↓ 4	7	10	8	1.0	4.0	4.7	2.0	40			3		1.2	4.0	1.0	
5																
6																
7			2	0.0	1.2	1.2	1.2	25						3.0	0.5	
↑ 8	7	12	8	1.0	4.0	4.7	2.0	40			3		1.2	4.0	1.0	

LOCAL SCHEDULER{C-0-9 = 0.1}(PAGE 1)

9-EVENT TIME PLAN/OS [DAY]

0 = 0000 E A [1,2,3,4,5,6,7]
1 = A
2 = A
3 = A
4 = A
5 = A
6 = A
7 = A
8 = A
9 = A
A = A
B = A
C = A
D = A
E = A
F = A

NOTE:Plan E=Free ; Plan F=Flash

OTHER INPUTS: {C-0-E = 126} E-1-8 = E-1-9 = E-1-A = E-1-B = [4,5,7] ; E-6-9 = [1] ;
{C-0-C = 1} C-F-0 = [2,4,6,8] ;

DETECTOR PARAM: {C-0-D = 0} D-1-6 = 2.0 ; D-3-6 = 1.5 ; D-2-6 = 2.0 ; D-4-6 = 1.5 ;

COORDINATION TIMING PLAN {C-0-C = 1} (C-PLAN-X)

PLAN	CYCLE 0	FORCE-OFF 1	2	3	4	5	6	7	OFFSET 8	9	A	B	C	D	E	F	[SYNC ϕ s] C-E-PLAN	[LAG ϕ s] C-F-PLAN
1																		
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		

TIMING PLAN FUNCTIONS {C-0-C = 2} (C-PLAN-X)

PLAN	PED-ADJ 0	RSRV-TIME[RESERVED ϕs] 5	6	[PRETIMED ϕs] 8	[MAX RECALL ϕs] 9
1					
2					
3					
4					
5					
6					
7					
8					
9					

NOTE: VIEW CURRENT BANK: {C-0-F = 0} F-C-E = (Current Bank) ; BATT. CHECK: {C-0-E = 112} E-0-A = (85 is OK) = (84 is BAD) ; DATE : June 21, 2005 VERSION: 1.3

TRAFFIC SIGNAL TIMING SHEET -- CITY OF CHULA VISTA

FENTON / OTAY LAKES

SCN: 208 ADDRESS: 31

Program:233; SET CLOCK: SET DATE:81=ddyym ; SET TIME:80=hhmms [day]; 8F=mmss.s ; E KEY ENABLE: F-9-E = 9 ;SET MODE:{C-0-C=0} C-A-1=0 ; F-C-0=3.0 ; F-O-F=3.0 ;
ESTABLISH COMM: C-0-0=ADDRESS ; C-0-1=1 ; C-0-2=1 ; C-0-3=SCN ; SET PED PHASES: {C-0-E=125} E-F-5=[ ] ; E-F-6=[6] ; E-F-7=[4] ; E-F-8=[ ] ;
SET OPTICOM: {C-0-E=125} E-E-A=[2,5] ; E-E-B=[4] ; E-E-C=[6] ; E-E-D=[ ] ; E-F-F=[3,5] ; F-0-8=F-0-9=2 ; F-E-2=F-E-4=F-E-6=F-E-8=2 ;

PHASE FLAGS {C-0-F = 1} (F-F-X)

	PHASE	0	1	2	3	4	6	7	8	9	A	B	C	D	E	F
	1															
→	2	X			X											X
	3															
↓	4	X														
	5	X														
←	6	X			X											X
	7															
	8															

PHASE TIMING BANK 1 {C-0-F = 1} (F-PHASE-X)

PHASE	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
1																
2			8	0.0	5.0	5.8	2.0	50					1.1	4.7	1.5	
3																
4	7	24	2	0.0	2.8	2.8	2.8	30			4			4.0	1.0	
5			2	0.0	1.2	1.2	1.2	22						3.0	1.0	
6	7	13	8	0.0	5.0	5.8	2.0	50			3		1.1	4.7	1.5	
7																
8																

LOCAL SCHEDULER{C-0-9 = 0.1}(PAGE 1)

9-EVENT	TIME	PLAN/OS	[DAY]
0 =	0000	E A	[1,2,3,4,5,6,7]
1 =		A	
2 =		A	
3 =		A	
4 =		A	
5 =		A	
6 =		A	
7 =		A	
8 =		A	
9 =		A	
A =		A	
B =		A	
C =		A	
D =		A	
E =		A	
F =		A	

NOTE:Plan E=Free ; Plan F=Flash

OTHER INPUTS: {C-0-E = 126} E-1-8 = E-1-9 = E-1-A = E-1-B = [4,5,7]
{C-0-C = 1} C-F-0 = [2,4,6] ;

DETECTOR PARAM: {C-0-D = 0}

COORDINATION TIMING PLAN {C-0-C = 1} (C-PLAN-X)

PLAN	CYCLE 0	FORCE-OFF 1	2	3	OFFSET 4	5	6	7	8	9	A	B	C	D	E	F	[SYNC ϕ s] C-E-PLAN	[LAG ϕ s] C-F-PLAN
1																		
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		

TIMING PLAN FUNCTIONS {C-0-C = 2} (C-PLAN-X)

PLAN	PED-ADJ	RSRV-TIME	[RESERVED ϕs] 0	5	6	[PRETIMED ϕs] 8	[MAX RECALL ϕs] 9
1							
2							
3							
4							
5							
6							
7							
8							
9							

NOTE: VIEW CURRENT BANK: {C-0-F = 0} F-C-E = (Current Bank) ; BATT. CHECK: {C-0-E = 112} E-0-A = (85 is OK) = (84 is BAD) ; DATE : May 15, 2007 VERSION: 1.2

TRAFFIC SIGNAL TIMING SHEET -- CITY OF CHULA VISTA

FENTON / LANE

SCN: 223 ADDRESS: 32

Program:233; SET CLOCK: SET DATE:81=ddyym ; SET TIME:80=hhmms [day]; 8F=mmss.s ; E KEY ENABLE: F-9-E = 9 ;SET MODE:{C-0-C=0} C-A-1=0 ; F-C-0=3.0 ; F-O-F=3.0 ;
ESTABLISH COMM: C-0-0=ADDRESS ; C-0-1=1 ; C-0-2=1 ; C-0-3=SCN ; SET PED PHASES: {C-0-E=125} E-F-5=[2] ; E-F-6=[6] ; E-F-7=[4] ; E-F-8=[8] ;
SET OPTICOM: {C-0-E=125} E-E-A=[2,5] ; E-E-B=[4,7] ; E-E-C=[1,6] ; E-E-D=[3,8] ; E-F-F=[3,5] ; F-0-8=F-0-9=2 ; F-E-2=F-E-4=F-E-6=F-E-8=2 ;

PHASE FLAGS {C-0-F = 1} (F-F-X)

PHASE	0	1	2	3	4	6	7	8	9	A	B	C	D	E	F
1	X														
→ 2	X							X							
3	X														
↓ 4	X			X											X
5	X														
← 6	X							X							
7	X														
↑ 8	X			X											X

PHASE TIMING BANK 1 {C-0-F = 1} (F-PHASE-X)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
1			2	0.0	1.1	1.1	1.1	22							3.0	0.5
2	7	14	3	0.0	2.2	2.2	2.2	24				3			4.0	1.0
3			2	0.0	1.1	1.1	1.1	22							3.0	0.5
4	7	14	8	0.0	3.5	3.9	2.0	50				3		2.0	4.0	1.0
5			2	0.0	1.1	1.1	1.1	22							3.0	0.5
6	7	14	3	0.0	2.2	2.2	2.2	24				3			4.0	1.0
7			2	0.0	1.1	1.1	1.1	22							3.0	0.5
8	7	14	8	0.0	3.5	3.9	2.0	50				3		2.0	4.0	1.0

LOCAL SCHEDULER{C-0-9 = 0.1}(PAGE 1)

9-EVENT TIME PLAN/OS [DAY]

0 =	0000	E	A	[1,2,3,4,5,6,7]
1 =			A	
2 =			A	
3 =			A	
4 =			A	
5 =			A	
6 =			A	
7 =			A	
8 =			A	
9 =			A	
A =			A	
B =			A	
C =			A	
D =			A	
E =			A	
F =			A	

NOTE:Plan E=Free ; Plan F=Flash

OTHER INPUTS: {C-0-E = 126} E-1-8 = E-1-9 = E-1-A = E-1-B = [4,5,7]
{C-0-C = 1} C-F-0 = [2,4,6,8] ;

DETECTOR PARAM: {C-0-D = 0} D-1-0 = 2.0 ; D-3-0 = 1.5 ; D-2-0 = 2.0 ; D-4-0 = 1.5 ; D-1-6 = 2.0 ; D-3-6 = 1.5 ; D-2-6 = 2.0 ; D-4-6 = 1.5 ;

COORDINATION TIMING PLAN {C-0-C = 1} (C-PLAN-X)

PLAN	CYCLE	FORCE-OFF 0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	OFFSET C-E-PLAN	OFFSET C-F-PLAN	[SYNC ϕ s]	[LAG ϕ s]
1																					
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					

TIMING PLAN FUNCTIONS {C-0-C = 2} (C-PLAN-X)

PED-ADJ	RSRV-TIME	[RESERVED ϕs]	[PRETIMED ϕs]	[MAX RECALL ϕs]
0	5	6	8	9

NOTE: VIEW CURRENT BANK: {C-0-F = 0} F-C-E = (Current Bank) ; BATT. CHECK: {C-0-E = 112} E-0-A = (85 is OK) = (84 is BAD) ; DATE : December 13, 2005 VERSION: 1.0

TRAFFIC SIGNAL TIMING SHEET -- CITY OF CHULA VISTA

OTAY LAKES / SR125 SB

SCN: 270 (255+15) **ADDRESS: 29**

Program:233; SET CLOCK: SET DATE:81=ddyym ; SET TIME:80=hhmms [day]; 8F=mmss.s ; E KEY ENABLE: F-9-E = 9 ;SET MODE:{C-0-C=0} C-A-1=0 ; F-C-0=3.0 ; F-O-F=3.0 ;
ESTABLISH COMM: C-0-0=ADDRESS ; C-0-1=1 ; C-0-2=2 ; C-0-3=15 ; SET PED PHASES: {C-0-E=125} E-F-5=[2] ; E-F-6=[6] ; E-F-7=[ ] ; E-F-8=[ ] ;
SET OPTICOM: {C-0-E=125} E-E-A=[ ] ; E-E-B=[ ] ; E-E-C=[ ] ; E-E-D=[ ] ; E-F-F=[3,5] ; F-0-8=F-0-9=2 ; F-E-2=F-E-4=F-E-6=F-E-8=2 ;

PHASE FLAGS {C-0-F = 1} (F-F-X)

PHASE	0	1	2	3	4	6	7	8	9	A	B	C	D	E	F
1															
→ 2	X			X											X
3															
↓ 4	X														
5															
← 6	X			X											X
7															
8															

PHASE TIMING BANK 1 {C-0-F = 1} (F-PHASE-X)

PHASE	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
1																
→ 2	7	10	6	0.0	5.0	5.5	2.0	50			3		1.1	4.3	1.5	
3																
↓ 4			4	0.0	3.2	3.2	3.2	40						4.0	1.5	
5																
← 6	7	28	6	0.0	5.0	5.5	2.0	50			4		1.1	4.3	1.5	
7																
8																

LOCAL SCHEDULER{C-0-9 = 0.1}(PAGE 1)

9-EVENT	TIME	PLAN/OS		DAY
0 =	0000	E	A	[1,2,3,4,5,6,7]
1 =	0600	1	A	[2,3,4,5,6,7]
2 =	0700	1	B	[2,3,4,5,6]
3 =	1030	1	C	[1,2,3,4,5,6,7]
4 =	1400	2	A	[2,3,4,5,6]
5 =	1830	2	B	[1,2,3,4,5,6,7]
6 =	1930	E	A	[1,2,3,4,5,6,7]
7 =			A	
8 =			A	
9 =			A	
A =			A	
B =			A	
C =			A	
D =			A	
E =			A	
F =			A	

OTHER INPUTS: {C-0-E = 126} E-1-8 = E-1-9 = E-1-A = E-1-B = [4,5,7]
{C-0-C = 1} C-F-0 = [2,4,6] ;

NOTE:Plan E=Free ; Plan F=Flash

DETECTOR PARAM: {C-0-D = 0}

COORDINATION TIMING PLAN {C-0-C = 1} (C-PLAN-X)

PLAN	CYCLE	FORCE-OFF 0	1	2	3	4	OFFSET 5	6	7	8	9	A	B	C	D	E	F	[SYNC ϕ s] C-E-PLAN	[LAG ϕ s] C-F-PLAN
1	64	0	0	0	36	0	0	0	0	0	32	10	33	0	255	0		[2,6]	[2,4,6]
2	64	0	0	0	36	0	0	0	0	0	25	43	0	0	255	0		[2,6]	[2,4,6]
3																			
4																			
5																			
6																			
7																			
8																			
9																			

TIMING PLAN FUNCTIONS {C-0-C = 2} (C-PLAN-X)

PLAN	PED-ADJ	RSRV-TIME[	RESERVED ϕs][	PRETIMED ϕs	][MAX RECALL ϕs]
	0	5	6	8	9

TRAFFIC SIGNAL TIMING SHEET -- CITY OF CHULA VISTA

OTAY LAKES / SR125 NB

SCN: 271 (255+16) ADDRESS: 30

Program:233; SET CLOCK: SET DATE:81=ddyym ; SET TIME:80=hhmms [day]; 8F=mmss.s ; E KEY ENABLE: F-9-E = 9 ;SET MODE:{C-0-C=0} C-A-1=0 ; F-C-0=3.0 ; F-O-F=3.0 ;
ESTABLISH COMM: C-0-0=ADDRESS ; C-0-1=1 ; C-0-2=2 ; C-0-3=16 ; SET PED PHASES: {C-0-E=125} E-F-5=[2] ; E-F-6=[6] ; E-F-7=[ ] ; E-F-8=[ ] ;
SET OPTICOM: {C-0-E=125} E-E-A=[ ] ; E-E-B=[ ] ; E-E-C=[ ] ; E-E-D=[ ] ; E-F-F=[3,5] ; F-0-8=F-0-9=2 ; F-E-2=F-E-4=F-E-6=F-E-8=2 ;

PHASE FLAGS {C-0-F = 1} (F-F-X)

PHASE	0	1	2	3	4	6	7	8	9	A	B	C	D	E	F
1															
→ 2	X			X											X
3															
4															
5															
← 6	X			X											X
7															
↑ 8	X														

PHASE TIMING BANK 1 {C-0-F = 1} (F-PHASE-X)

PHASE	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
1																
2	7	26	6	0.0	5.0	5.5	2.0	50				4		1.1	4.3	1.5
3																
4																
5																
6	7	8	6	0.0	5.0	5.5	2.0	50				3		1.1	4.3	1.5
7																
8			4	0.0	3.2	3.2	3.2	30							4.0	1.5

LOCAL SCHEDULER{C-0-9 = 0.1}(PAGE 1)

9-EVENT	TIME	PLAN/OS		DAY
0 =	0000	E	A	[1,2,3,4,5,6,7]
1 =	0600	1	A	[2,3,4,5,6,7]
2 =	0700	1	B	[2,3,4,5,6]
3 =	1030	1	C	[1,2,3,4,5,6,7]
4 =	1400	2	A	[2,3,4,5,6]
5 =	1830	2	B	[1,2,3,4,5,6,7]
6 =	1930	E	A	[1,2,3,4,5,6,7]
7 =			A	
8 =			A	
9 =			A	
A =			A	
B =			A	
C =			A	
D =			A	
E =			A	
F =			A	

NOTE:Plan E=Free ; Plan F=Flash

OTHER INPUTS: {C-0-E = 126} E-1-8 = E-1-9 = E-1-A = E-1-B = [4,5,7]
{C-0-C = 1} C-F-0 = [2,6,8] ;

DETECTOR PARAM: {C-0-D = 0}

COORDINATION TIMING PLAN {C-0-C = 1} (C-PLAN-X)

PLAN	CYCLE	FORCE-OFF							OFFSET							[SYNC ϕ s] C-E-PLAN	[LAG ϕ s] C-F-PLAN
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	
1	64	0	0	0	0	0	0	0	36	0	12	54	1	0	255	0	[2,6] [2,6,8]
2	64	0	0	0	0	0	0	0	36	0	45	11	0	0	255	0	[2,6] [2,6,8]
3																	
4																	
5																	
6																	
7																	
8																	
9																	

TIMING PLAN FUNCTIONS {C-0-C = 2} (C-PLAN-X)

PLAN	PED-ADJ	RSRV-TIME	[RESERVED ϕs]	[PRETIMED ϕs]	[MAX RECALL ϕs]
	0	5	6	8	9
1					
2					
3					
4					
5					
6					
7					
8					
9					

NOTE: VIEW CURRENT BANK: {C-0-F = 0} F-C-E = (Current Bank) ; BATT. CHECK: {C-0-E = 112} E-0-A = (85 is OK) = (84 is BAD) ; DATE : September 10, 2008 VERSION: 1.1

NOTES ON THE TRAFFIC SIGNAL TIMING SHEET - FOR Bi-Tran 233 PROGRAM
CITY OF CHULA VISTA

PHASE FLAG -- X shows the 'On' state of phase flags
i.e. the flag is set to the active status

FLAG	FUNCTION
0	PERMIT
1	RED LOCK (vehicle detector)
2	YELLOW LOCK (vehicle detector)
3	VEHICLE PHASE MINIMUM RECALL
4	PEDESTRIAN PHASE RECALL
6	REST IN WALK
7	RED REST
8	DOUBLE ENTRY
9	VEHICLE MAXIMUM RECALL
A	SOFT RECALL
B	MAX II (vehicle maximum recall II)
C	CONDITIONAL SERVICE
D	RECALL DURING MANUAL OPERATION
E	START UP PHASE WITH YELLOW
F	FIRST PHASE GREEN FOR ALL RED START UP

PHASE TIMING BANK (1-3) -- all data are decimal numbers

TIMING	INTERVAL NAME
0	WALK
1	FLASHING DON'T WALK
2	MINIMUM GREEN
3	TYPE 3 CALL DETECTOR MAXIMUM LIMIT
4	VARIABLE INITIAL (added per vehicle actuation)
5	VEHICLE EXTENSION
6	MAXIMUM GAP
7	MINIMUM GAP
8	MAXIMUM LIMIT
9	MAXIMUM LIMIT II
A	ADVANCE/DELAYED WALK
B	MINIMUM PED CLEARANCE DURING PREEMPTION
C	CONDITIONAL SERVICE MINIMUM GREEN TIME
D	REDUCED EVERY
E	AMBER (yellow)
F	ALL RED

LOCAL SCHEDULER

A, B, or C are OFFSET (OS) for the timing plan
'DAY' is the day of the week
with day 1 = Sunday and day 7 = Saturday.
'PLAN' is the coordination timing plan

COORDINATION TIMING PLAN

PLAN DATA

0	is the Cycle length in seconds
1 to 8	are the FORCE OFF time in the cycle for phase 1 to 8 respectively.
9	is the Ring Offset
A,B & C	are Offsets for this timing plan
D	is the Permissive Period
E	is HOLD RELEASE
F	is the Zone Offset

TIMING PLAN FUNCTIONS

FUNCTION	NAME
0	Pedestrian clearance time compensation
5	Re-serviced time for non-sync phases
6	Re-serviced phases
8	Phase(s) running on pre-time (with both vehicle and pedestrian demands on recall)
9	Phase(s) running on maximum recall

LOCAL T.O.D. FUNCTIONS

FUNCTION	NAME
0	PERMIT
1	RED LOCK (vehicle detector)
2	YELLOW LOCK (vehicle detector)
3	VEHICLE PHASE MINIMUM RECALL
4	PEDESTRIAN PHASE RECALL
6	REST IN WALK
7	RED REST
8	DOUBLE ENTRY
9	VEHICLE MAXIMUM RECALL
A	VEHICLE 'Soft' RECALL
B	VEHICLE MAXIMUM LIMIT II
C	CONDITIONAL SERVICE
D	LOCAL TOD LAG FREE
E	Bit1=LOCAL TOD OVERRIDE
E	Bit4=DISABLE DET (OFF MONITOR)
E	Bit7=COUNT DET RECORDING
E	Bit8=REAL TIME SPLIT MONITOR
F	TIME-OF-DAY OUTPUT Bits (1-8) FOR SPECIAL FUNCTIONS

HOLIDAY EVENTS SCHEDULER

Same as the Local Scheduler except that each event is programmed for the day and month of the year through the use of 'Type' in both tables.

HOLIDAY T.O.D. FUNCTIONS

Same as the Local Functions except that each event is programmed for the day and month of the year through the use of 'Type' in both tables.

OTHER INPUTS

C-A-1 Manual operation modes selection
F-C-0 sets the time for the ALL RED START UP
F-0-F sets the time for Red Revert
F-0-8 sets Minimum green overwrite during preempt
F-0-9 sets Maximum Preempt time
E-E-E sets up the TIME BASE COORDINATION mode, daylight Saving Time, and Expanded Status Reporting.
C-F-0 sets the LAG phases during FREE OPERATION
E-E-4 sets the protected/permissive phases
F-E-0 to F-E-B set the RR/EV pre-emption parameters
E-E-1 to E-E-B set the phases for preemption
E-F-5 to E-F-8 set the pedestrian phases
E-F-F disables check for 4 sec. min. WALK and ignore protected/permissive during preemption
{C-0-E = 126} E-1-8 to E-1-B set input files attributes and then E-6-A to E-6-B set input phases assignment
{C-0-E = 125} E-D-0 switch pack redirection switch
{C-0-E = 127} E-3-0 to E-7-1 output redirection
{C-0-F = 2} F-F-6 sets advance WALK phases
F-F-7 sets delayed WALK phases
{C-0-E = 125} F-E-2 to F-E-8 set EVPE delay

DETECTOR PARAMETERS

D-1-0 to D-2-B set the vehicle detectors delay
D-3-0 to D-2-B set the detection carryover time

Legend:

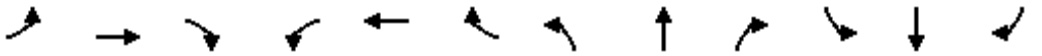
{ } Inside the brackets it shows the CONTROL KEY
[ ] Inside the brackets it shows Binary data
( ) Inside the brackets it shows the INPUT key sequence or additional information. "X" means from left to right.
9-EVENT or 7-EVENT are the INPUT key sequence.

REMARKS:

The Local and Holiday Functions, Local Scheduler Page 2, and Timing Banks 2 & 3 tables printed on the back of the Timing Sheet are omitted whenever they are not being used by the local traffic control program.

APPENDIX B

EXISTING PEAK HOUR
INTERSECTION ANALYSIS WORKSHEETS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰↰		↱
Traffic Volume (veh/h)	0	1605	49	0	1113	131	0	0	0	265	0	72
Future Volume (veh/h)	0	1605	49	0	1113	131	0	0	0	265	0	72
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870				1870	0	1870
Adj Flow Rate, veh/h	0	1689	52	0	1172	138				279	0	76
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	2	2	0	2	2				2	0	2
Cap, veh/h	0	3591	1079	0	3591	1277				415	0	191
Arrive On Green	0.00	0.70	0.70	0.00	1.00	1.00				0.12	0.00	0.12
Sat Flow, veh/h	0	5274	1534	0	5274	1545				3456	0	1585
Grp Volume(v), veh/h	0	1689	52	0	1172	138				279	0	76
Grp Sat Flow(s),veh/h/ln	0	1702	1534	0	1702	1545				1728	0	1585
Q Serve(g_s), s	0.0	9.4	0.7	0.0	0.0	0.0				4.9	0.0	2.8
Cycle Q Clear(g_c), s	0.0	9.4	0.7	0.0	0.0	0.0				4.9	0.0	2.8
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3591	1079	0	3591	1277				415	0	191
V/C Ratio(X)	0.00	0.47	0.05	0.00	0.33	0.11				0.67	0.00	0.40
Avail Cap(c_a), veh/h	0	3591	1079	0	3591	1277				729	0	334
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.94	0.94				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	4.2	2.9	0.0	0.0	0.0				26.9	0.0	26.0
Incr Delay (d2), s/veh	0.0	0.4	0.1	0.0	0.2	0.2				2.1	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.1	0.2	0.0	0.1	0.1				2.1	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	4.7	3.0	0.0	0.2	0.2				29.0	0.0	27.5
LnGrp LOS	A	A	A	A	A	A				C	A	C
Approach Vol, veh/h		1741			1310						355	
Approach Delay, s/veh		4.6			0.2						28.7	
Approach LOS		A			A						C	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		50.8		13.2		50.8						
Change Period (Y+Rc), s		5.8		5.5		5.8						
Max Green Setting (Gmax), s		39.2		13.5		39.2						
Max Q Clear Time (g_c+I1), s		11.4		6.9		2.0						
Green Ext Time (p_c), s		22.7		0.8		21.1						

Intersection Summary	
HCM 6th Ctrl Delay	5.4
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1724	146	0	1220	506	24	0	128	0	0	0
Future Volume (veh/h)	0	1724	146	0	1220	506	24	0	128	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870	1870	0	1870			
Adj Flow Rate, veh/h	0	1815	154	0	1284	533	25	0	135			
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	2	2	0	2	2	2	0	2			
Cap, veh/h	0	3813	1268	0	3813	1146	137	0	214			
Arrive On Green	0.00	0.75	0.75	0.00	1.00	1.00	0.08	0.00	0.08			
Sat Flow, veh/h	0	5274	1535	0	5274	1535	1781	0	2790			
Grp Volume(v), veh/h	0	1815	154	0	1284	533	25	0	135			
Grp Sat Flow(s),veh/h/ln	0	1702	1535	0	1702	1535	1781	0	1395			
Q Serve(g_s), s	0.0	8.9	1.3	0.0	0.0	0.0	0.8	0.0	3.0			
Cycle Q Clear(g_c), s	0.0	8.9	1.3	0.0	0.0	0.0	0.8	0.0	3.0			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3813	1268	0	3813	1146	137	0	214			
V/C Ratio(X)	0.00	0.48	0.12	0.00	0.34	0.46	0.18	0.00	0.63			
Avail Cap(c_a), veh/h	0	3813	1268	0	3813	1146	264	0	414			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.86	0.86	0.00	0.71	0.71	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	3.2	1.1	0.0	0.0	0.0	27.7	0.0	28.7			
Incr Delay (d2), s/veh	0.0	0.4	0.2	0.0	0.2	1.0	0.7	0.0	3.3			
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	1.7	0.3	0.0	0.1	0.3	0.4	0.0	1.1			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	3.6	1.3	0.0	0.2	1.0	28.4	0.0	32.0			
LnGrp LOS	A	A	A	A	A	A	C	A	C			
Approach Vol, veh/h		1969			1817			160				
Approach Delay, s/veh		3.4			0.4			31.4				
Approach LOS		A			A			C				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		53.6				53.6		10.4				
Change Period (Y+Rc), s		5.8				5.8		5.5				
Max Green Setting (Gmax), s		43.2				43.2		9.5				
Max Q Clear Time (g_c+I1), s		10.9				2.0		5.0				
Green Ext Time (p_c), s		27.5				29.9		0.2				
Intersection Summary												
HCM 6th Ctrl Delay			3.1									
HCM 6th LOS			A									

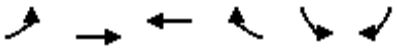
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	459	815	279	224	813	75	537	364	164	42	198	225
Future Volume (veh/h)	459	815	279	224	813	75	537	364	164	42	198	225
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.97	1.00		0.97	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	483	858	294	236	856	79	565	383	173	44	208	237
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	513	1991	1027	290	1544	142	594	1201	654	98	690	531
Arrive On Green	0.30	0.78	0.78	0.08	0.33	0.33	0.17	0.34	0.34	0.03	0.19	0.19
Sat Flow, veh/h	3456	5106	2634	3456	4745	436	3456	3554	1542	3456	3554	1524
Grp Volume(v), veh/h	483	858	294	236	613	322	565	383	173	44	208	237
Grp Sat Flow(s),veh/h/ln	1728	1702	1317	1728	1702	1777	1728	1777	1542	1728	1777	1524
Q Serve(g_s), s	17.5	7.1	4.1	8.6	19.0	19.1	20.7	10.2	9.4	1.6	6.4	15.5
Cycle Q Clear(g_c), s	17.5	7.1	4.1	8.6	19.0	19.1	20.7	10.2	9.4	1.6	6.4	15.5
Prop In Lane	1.00		1.00	1.00		0.25	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	513	1991	1027	290	1107	578	594	1201	654	98	690	531
V/C Ratio(X)	0.94	0.43	0.29	0.81	0.55	0.56	0.95	0.32	0.26	0.45	0.30	0.45
Avail Cap(c_a), veh/h	513	1991	1027	378	1107	578	594	1471	771	135	999	664
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	0.86	0.81	0.81	0.81	1.00	1.00	1.00	0.94	0.94	0.94
Uniform Delay (d), s/veh	44.5	9.4	9.0	57.6	35.5	35.6	52.5	31.5	24.1	61.2	44.1	32.7
Incr Delay (d2), s/veh	23.1	0.6	0.6	6.3	1.6	3.1	25.4	0.2	0.3	3.7	0.3	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	8.1	2.2	1.1	4.0	8.1	8.8	11.1	4.5	3.5	0.8	2.9	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.6	10.0	9.7	64.0	37.1	38.7	77.9	31.6	24.4	64.9	44.4	33.4
LnGrp LOS	E	A	A	E	D	D	E	C	C	E	D	C
Approach Vol, veh/h		1635			1171			1121			489	
Approach Delay, s/veh		26.9			43.0			53.8			40.9	
Approach LOS		C			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.7	56.9	26.0	30.4	23.0	48.6	7.6	48.7
Change Period (Y+Rc), s	4.0	* 7	4.0	5.5	4.0	* 7	4.0	5.5
Max Green Setting (Gmax), s	14.0	* 36	22.0	36.0	19.0	* 31	5.0	53.0
Max Q Clear Time (g_c+I1), s	10.6	9.1	22.7	17.5	19.5	21.1	3.6	12.2
Green Ext Time (p_c), s	0.2	11.4	0.0	2.5	0.0	5.2	0.0	4.2

Intersection Summary	
HCM 6th Ctrl Delay	39.6
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	510	511	854	94	59	258
Future Volume (veh/h)	510	511	854	94	59	258
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.96	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	543	544	909	100	63	274
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	680	3239	1694	185	242	431
Arrive On Green	0.20	0.63	0.36	0.36	0.14	0.14
Sat Flow, veh/h	3456	5274	4815	509	1781	3170
Grp Volume(v), veh/h	543	544	665	344	63	274
Grp Sat Flow(s),veh/h/ln	1728	1702	1702	1751	1781	1585
Q Serve(g_s), s	7.2	2.1	7.4	7.4	1.5	3.9
Cycle Q Clear(g_c), s	7.2	2.1	7.4	7.4	1.5	3.9
Prop In Lane	1.00			0.29	1.00	1.00
Lane Grp Cap(c), veh/h	680	3239	1241	638	242	431
V/C Ratio(X)	0.80	0.17	0.54	0.54	0.26	0.64
Avail Cap(c_a), veh/h	902	3839	1422	731	1042	1854
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	18.3	3.6	12.0	12.0	18.5	19.6
Incr Delay (d2), s/veh	2.7	0.1	1.3	2.6	0.2	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.4	2.5	2.8	0.6	3.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.1	3.7	13.3	14.6	18.7	20.1
LnGrp LOS	C	A	B	B	B	C
Approach Vol, veh/h		1087	1009		337	
Approach Delay, s/veh		12.4	13.8		19.9	
Approach LOS		B	B		B	

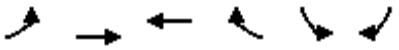
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		36.4		11.5	12.9	23.5
Change Period (Y+Rc), s		* 6		5.0	3.5	* 6
Max Green Setting (Gmax), s		* 36		28.0	12.5	* 20
Max Q Clear Time (g_c+I1), s		4.1		5.9	9.2	9.4
Green Ext Time (p_c), s		9.5		0.7	0.3	7.8

Intersection Summary		
HCM 6th Ctrl Delay		14.0
HCM 6th LOS		B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	138	432	908	186	53	40
Future Volume (veh/h)	138	432	908	186	53	40
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.96	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	148	465	976	200	57	43
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	229	3395	1844	377	104	92
Arrive On Green	0.13	0.66	0.44	0.44	0.06	0.06
Sat Flow, veh/h	1781	5274	4385	861	1781	1585
Grp Volume(v), veh/h	148	465	787	389	57	43
Grp Sat Flow(s),veh/h/ln	1781	1702	1702	1673	1781	1585
Q Serve(g_s), s	3.2	1.4	6.9	6.9	1.3	1.1
Cycle Q Clear(g_c), s	3.2	1.4	6.9	6.9	1.3	1.1
Prop In Lane	1.00			0.51	1.00	1.00
Lane Grp Cap(c), veh/h	229	3395	1489	732	104	92
V/C Ratio(X)	0.65	0.14	0.53	0.53	0.55	0.47
Avail Cap(c_a), veh/h	352	4138	1750	860	1364	1214
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	16.7	2.5	8.3	8.3	18.5	18.4
Incr Delay (d2), s/veh	1.1	0.0	0.6	1.3	4.1	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.2	1.9	2.0	0.6	1.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.9	2.5	9.0	9.6	22.6	21.7
LnGrp LOS	B	A	A	A	C	C
Approach Vol, veh/h		613	1176		100	
Approach Delay, s/veh		6.2	9.2		22.2	
Approach LOS		A	A		C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		33.1		7.4	9.2	23.9
Change Period (Y+Rc), s		6.2		5.0	4.0	6.2
Max Green Setting (Gmax), s		32.8		31.0	8.0	20.8
Max Q Clear Time (g_c+I1), s		3.4		3.3	5.2	8.9
Green Ext Time (p_c), s		6.2		0.2	0.0	8.7

Intersection Summary		
HCM 6th Ctrl Delay		8.9
HCM 6th LOS		A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	175	142	168	172	458	60	385	551	75	25	370	251
Future Volume (veh/h)	175	142	168	172	458	60	385	551	75	25	370	251
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	201	163	193	198	526	69	443	633	86	29	425	289
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	290	662	308	287	989	307	540	1409	628	64	919	410
Arrive On Green	0.08	0.19	0.19	0.08	0.19	0.19	0.16	0.40	0.40	0.02	0.26	0.26
Sat Flow, veh/h	3456	3404	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	201	163	193	198	526	69	443	633	86	29	425	289
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	3.9	2.8	7.6	3.8	6.3	2.5	8.5	8.9	2.4	0.6	6.9	11.3
Cycle Q Clear(g_c), s	3.9	2.8	7.6	3.8	6.3	2.5	8.5	8.9	2.4	0.6	6.9	11.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	290	662	308	287	989	307	540	1409	628	64	919	410
V/C Ratio(X)	0.69	0.25	0.63	0.69	0.53	0.22	0.82	0.45	0.14	0.45	0.46	0.70
Avail Cap(c_a), veh/h	304	1445	673	304	2168	673	658	2133	951	152	1613	719
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	30.4	23.3	25.2	30.5	24.8	23.2	27.9	15.1	13.2	33.2	21.3	23.0
Incr Delay (d2), s/veh	5.1	0.3	2.8	4.8	0.6	0.5	5.7	0.3	0.1	1.8	0.4	2.7
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	1.8	1.1	3.0	1.7	2.5	0.9	3.8	3.4	0.8	0.2	2.8	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.5	23.5	28.0	35.3	25.4	23.7	33.6	15.4	13.3	35.0	21.8	25.6
LnGrp LOS	D	C	C	D	C	C	C	B	B	D	C	C
Approach Vol, veh/h		557			793			1162			743	
Approach Delay, s/veh		29.4			27.7			22.2			23.8	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	20.3	14.7	23.7	9.7	20.2	5.3	33.1
Change Period (Y+Rc), s	4.0	* 7	4.0	* 6	4.0	* 7	4.0	* 6
Max Green Setting (Gmax), s	6.0	* 29	13.0	* 31	6.0	* 29	3.0	* 41
Max Q Clear Time (g_c+I1), s	5.8	9.6	10.5	13.3	5.9	8.3	2.6	10.9
Green Ext Time (p_c), s	0.0	2.8	0.2	4.4	0.0	4.9	0.0	6.2

Intersection Summary	
HCM 6th Ctrl Delay	25.1
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	118	49	191	103	47	112	423	229	89	270	97
Future Volume (veh/h)	64	118	49	191	103	47	112	423	229	89	270	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	68	126	52	203	110	50	119	450	244	95	287	103
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	108	201	255	567	197	89	202	617	332	122	741	259
Arrive On Green	0.17	0.17	0.17	0.16	0.16	0.16	0.06	0.28	0.28	0.07	0.29	0.29
Sat Flow, veh/h	644	1194	1518	3456	1199	545	3456	2205	1185	1781	2559	895
Grp Volume(v), veh/h	194	0	52	203	0	160	119	362	332	95	197	193
Grp Sat Flow(s),veh/h/ln	1838	0	1518	1728	0	1743	1728	1777	1613	1781	1777	1677
Q Serve(g_s), s	5.7	0.0	1.7	3.0	0.0	4.9	1.9	10.6	10.8	3.0	5.1	5.3
Cycle Q Clear(g_c), s	5.7	0.0	1.7	3.0	0.0	4.9	1.9	10.6	10.8	3.0	5.1	5.3
Prop In Lane	0.35		1.00	1.00		0.31	1.00		0.73	1.00		0.53
Lane Grp Cap(c), veh/h	309	0	255	567	0	286	202	497	452	122	515	486
V/C Ratio(X)	0.63	0.00	0.20	0.36	0.00	0.56	0.59	0.73	0.74	0.78	0.38	0.40
Avail Cap(c_a), veh/h	731	0	604	1375	0	693	418	584	530	200	568	537
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.4	0.0	20.7	21.5	0.0	22.2	26.5	18.8	18.9	26.5	16.4	16.5
Incr Delay (d2), s/veh	2.1	0.0	0.4	0.4	0.0	1.7	1.0	4.4	5.1	4.1	0.7	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	2.5	0.0	0.6	1.2	0.0	2.0	0.8	4.6	4.3	1.3	2.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.5	0.0	21.1	21.9	0.0	24.0	27.6	23.2	24.0	30.6	17.1	17.2
LnGrp LOS	C	A	C	C	A	C	C	C	C	C	B	B
Approach Vol, veh/h		246			363			813			485	
Approach Delay, s/veh		23.8			22.8			24.2			19.8	
Approach LOS		C			C			C			B	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	14.7	6.9	21.7	14.5	7.4	21.2
Change Period (Y+Rc), s	5.0	3.5	5.0	5.0	3.5	5.0
Max Green Setting (Gmax), s	23.0	7.0	18.5	23.0	6.5	19.0
Max Q Clear Time (g_c+I1), s	7.7	3.9	7.3	6.9	5.0	12.8
Green Ext Time (p_c), s	1.1	0.0	2.3	1.5	0.0	2.9

Intersection Summary	
HCM 6th Ctrl Delay	22.7
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	136	33	61	94	68	46	211	231	141	243	119
Future Volume (veh/h)	72	136	33	61	94	68	46	211	231	141	243	119
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.95	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	83	156	38	70	108	78	53	243	266	162	279	137
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	104	321	318	87	303	429	64	511	433	206	850	404
Arrive On Green	0.06	0.17	0.17	0.05	0.16	0.16	0.04	0.29	0.29	0.12	0.37	0.37
Sat Flow, veh/h	1781	1870	1519	1781	1870	1516	1781	1777	1506	1781	2314	1101
Grp Volume(v), veh/h	83	156	38	70	108	78	53	243	266	162	212	204
Grp Sat Flow(s),veh/h/ln	1781	1870	1519	1781	1870	1516	1781	1777	1506	1781	1777	1638
Q Serve(g_s), s	2.1	3.4	0.9	1.8	2.3	1.8	1.3	5.1	6.9	4.0	3.9	4.1
Cycle Q Clear(g_c), s	2.1	3.4	0.9	1.8	2.3	1.8	1.3	5.1	6.9	4.0	3.9	4.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.67
Lane Grp Cap(c), veh/h	104	321	318	87	303	429	64	511	433	206	653	602
V/C Ratio(X)	0.80	0.49	0.12	0.81	0.36	0.18	0.83	0.48	0.61	0.79	0.32	0.34
Avail Cap(c_a), veh/h	162	882	773	150	869	888	248	826	700	272	849	783
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.0	16.9	14.5	21.3	16.8	12.4	21.6	13.3	13.9	19.4	10.3	10.3
Incr Delay (d2), s/veh	6.7	0.6	0.1	6.5	0.4	0.1	9.7	0.8	1.7	7.7	0.3	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	1.0	1.3	0.3	0.8	0.9	0.5	0.7	1.8	2.2	1.9	1.3	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.7	17.5	14.6	27.8	17.2	12.5	31.3	14.1	15.6	27.1	10.6	10.7
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		277			256			562			578	
Approach Delay, s/veh		20.2			18.7			16.4			15.3	
Approach LOS		C			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.7	12.8	5.1	21.6	6.1	12.3	8.7	18.0
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0
Max Green Setting (Gmax), s	3.8	21.3	6.3	21.6	4.1	21.0	6.9	21.0
Max Q Clear Time (g_c+I1), s	3.8	5.4	3.3	6.1	4.1	4.3	6.0	8.9
Green Ext Time (p_c), s	0.0	0.6	0.0	2.6	0.0	0.5	0.0	3.0

Intersection Summary	
HCM 6th Ctrl Delay	17.0
HCM 6th LOS	B

Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	41	51	19	46	190	88	3	0	11	31	0	26
Future Vol, veh/h	41	51	19	46	190	88	3	0	11	31	0	26
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	58	72	27	65	268	124	4	0	15	44	0	37
Number of Lanes	1	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	8.7	10.9	8.2	8.9
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	21%	100%	0%	19%	0%	54%
Vol Thru, %	0%	0%	73%	81%	0%	0%
Vol Right, %	79%	0%	27%	0%	100%	46%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	14	41	70	236	88	57
LT Vol	3	41	0	46	0	31
Through Vol	0	0	51	190	0	0
RT Vol	11	0	19	0	88	26
Lane Flow Rate	20	58	99	332	124	80
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.027	0.091	0.137	0.464	0.146	0.115
Departure Headway (Hd)	4.977	5.691	4.996	5.03	4.229	5.141
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	716	629	717	715	847	696
Service Time	3.027	3.431	2.736	2.761	1.96	3.179
HCM Lane V/C Ratio	0.028	0.092	0.138	0.464	0.146	0.115
HCM Control Delay	8.2	9	8.5	12.1	7.7	8.9
HCM Lane LOS	A	A	A	B	A	A
HCM 95th-tile Q	0.1	0.3	0.5	2.5	0.5	0.4

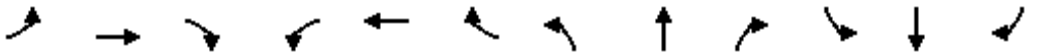
Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	166	114	116	32	105	41	7	0	1	14	0	38
Future Vol, veh/h	166	114	116	32	105	41	7	0	1	14	0	38
Conflicting Peds, #/hr	0	0	10	0	0	10	0	0	10	0	0	10
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	187	128	130	36	118	46	8	0	1	16	0	43

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	174	0	0	268	0	0	822	823	213	801	865	161
Stage 1	-	-	-	-	-	-	577	577	-	223	223	-
Stage 2	-	-	-	-	-	-	245	246	-	578	642	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1403	-	-	1296	-	-	293	309	827	303	292	884
Stage 1	-	-	-	-	-	-	502	502	-	780	719	-
Stage 2	-	-	-	-	-	-	759	703	-	501	469	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1390	-	-	1284	-	-	239	254	811	260	240	867
Mov Cap-2 Maneuver	-	-	-	-	-	-	239	254	-	260	240	-
Stage 1	-	-	-	-	-	-	430	430	-	668	690	-
Stage 2	-	-	-	-	-	-	693	674	-	429	401	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.3	1.4	19.2	12.6
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	262	1390	-	-	1284	-	-	532
HCM Lane V/C Ratio	0.034	0.134	-	-	0.028	-	-	0.11
HCM Control Delay (s)	19.2	8	-	-	7.9	0	-	12.6
HCM Lane LOS	C	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0.5	-	-	0.1	-	-	0.4



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰↰		↱
Traffic Volume (veh/h)	0	1858	24	0	1802	102	0	0	0	506	0	102
Future Volume (veh/h)	0	1858	24	0	1802	102	0	0	0	506	0	102
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870				1870	0	1870
Adj Flow Rate, veh/h	0	1915	25	0	1858	105				522	0	105
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	2	2	0	2	2				2	0	2
Cap, veh/h	0	3217	965	0	3217	1272				669	0	307
Arrive On Green	0.00	0.63	0.63	0.00	0.21	0.21				0.19	0.00	0.19
Sat Flow, veh/h	0	5274	1532	0	5274	1532				3456	0	1585
Grp Volume(v), veh/h	0	1915	25	0	1858	105				522	0	105
Grp Sat Flow(s),veh/h/ln	0	1702	1532	0	1702	1532				1728	0	1585
Q Serve(g_s), s	0.0	14.2	0.4	0.0	21.0	1.7				9.2	0.0	3.7
Cycle Q Clear(g_c), s	0.0	14.2	0.4	0.0	21.0	1.7				9.2	0.0	3.7
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3217	965	0	3217	1272				669	0	307
V/C Ratio(X)	0.00	0.60	0.03	0.00	0.58	0.08				0.78	0.00	0.34
Avail Cap(c_a), veh/h	0	3217	965	0	3217	1272				859	0	394
HCM Platoon Ratio	1.00	1.00	1.00	1.00	0.33	0.33				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.82	0.82				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	7.0	4.5	0.0	17.7	2.5				24.5	0.0	22.3
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.0	0.6	0.1				3.7	0.0	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
%ile BackOfQ(50%),veh/ln	0.0	4.0	0.1	0.0	9.4	1.0				3.9	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	7.8	4.5	0.0	18.3	2.6				28.2	0.0	23.0
LnGrp LOS	A	A	A	A	B	A				C	A	C
Approach Vol, veh/h		1940			1963						627	
Approach Delay, s/veh		7.8			17.5						27.3	
Approach LOS		A			B						C	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		46.1		17.9		46.1						
Change Period (Y+Rc), s		5.8		5.5		5.8						
Max Green Setting (Gmax), s		36.8		15.9		36.8						
Max Q Clear Time (g_c+I1), s		16.2		11.2		23.0						
Green Ext Time (p_c), s		18.5		1.2		12.8						

Intersection Summary	
HCM 6th Ctrl Delay	14.7
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2263	101	0	1873	356	31	0	164	0	0	0
Future Volume (veh/h)	0	2263	101	0	1873	356	31	0	164	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870	1870	0	1870			
Adj Flow Rate, veh/h	0	2407	107	0	1993	379	33	0	174			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	0	2	2	0	2	2	2	0	2			
Cap, veh/h	0	3733	1268	0	3733	1122	164	0	257			
Arrive On Green	0.00	1.00	1.00	0.00	1.00	1.00	0.09	0.00	0.09			
Sat Flow, veh/h	0	5274	1535	0	5274	1535	1781	0	2790			
Grp Volume(v), veh/h	0	2407	107	0	1993	379	33	0	174			
Grp Sat Flow(s),veh/h/ln	0	1702	1535	0	1702	1535	1781	0	1395			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	3.9			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	3.9			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3733	1268	0	3733	1122	164	0	257			
V/C Ratio(X)	0.00	0.64	0.08	0.00	0.53	0.34	0.20	0.00	0.68			
Avail Cap(c_a), veh/h	0	3733	1268	0	3733	1122	237	0	371			
HCM Platoon Ratio	1.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.73	0.73	0.00	0.59	0.59	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	26.9	0.0	28.1			
Incr Delay (d2), s/veh	0.0	0.6	0.1	0.0	0.3	0.5	0.6	0.0	3.3			
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	0.2	0.0	0.0	0.1	0.2	0.5	0.0	1.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.6	0.1	0.0	0.3	0.5	27.5	0.0	31.5			
LnGrp LOS	A	A	A	A	A	A	C	A	C			
Approach Vol, veh/h		2514			2372			207				
Approach Delay, s/veh		0.6			0.4			30.8				
Approach LOS		A			A			C				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		52.6				52.6		11.4				
Change Period (Y+Rc), s		5.8				5.8		5.5				
Max Green Setting (Gmax), s		44.2				44.2		8.5				
Max Q Clear Time (g_c+I1), s		2.0				2.0		5.9				
Green Ext Time (p_c), s		39.8				38.0		0.2				
Intersection Summary												
HCM 6th Ctrl Delay			1.7									
HCM 6th LOS			A									

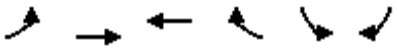
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	460	848	680	353	850	70	452	444	222	140	644	515
Future Volume (veh/h)	460	848	680	353	850	70	452	444	222	140	644	515
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	474	874	701	364	876	72	466	458	229	144	664	531
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	521	1466	761	419	1236	101	519	1328	770	199	999	671
Arrive On Green	0.25	0.48	0.48	0.12	0.26	0.26	0.15	0.37	0.37	0.06	0.28	0.28
Sat Flow, veh/h	3456	5106	2651	3456	4796	393	3456	3554	1544	3456	3554	1537
Grp Volume(v), veh/h	474	874	701	364	621	327	466	458	229	144	664	531
Grp Sat Flow(s),veh/h/ln	1728	1702	1325	1728	1702	1784	1728	1777	1544	1728	1777	1537
Q Serve(g_s), s	17.0	16.0	31.6	13.2	21.2	21.3	17.0	11.9	11.3	5.2	21.1	36.0
Cycle Q Clear(g_c), s	17.0	16.0	31.6	13.2	21.2	21.3	17.0	11.9	11.3	5.2	21.1	36.0
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	521	1466	761	419	877	460	519	1328	770	199	999	671
V/C Ratio(X)	0.91	0.60	0.92	0.87	0.71	0.71	0.90	0.34	0.30	0.72	0.66	0.79
Avail Cap(c_a), veh/h	567	1466	761	513	877	460	540	1328	770	270	999	671
HCM Platoon Ratio	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.70	0.70	0.70	0.86	0.86	0.86	1.00	1.00	1.00	0.55	0.55	0.55
Uniform Delay (d), s/veh	47.0	27.9	32.0	55.2	43.1	43.2	53.4	28.8	19.2	59.3	40.7	31.5
Incr Delay (d2), s/veh	12.9	1.3	13.9	9.7	4.1	7.8	17.6	0.2	0.3	3.9	1.0	3.7
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	7.6	5.8	10.1	6.3	9.4	10.4	8.6	5.1	4.1	2.4	9.4	14.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.0	29.2	45.9	64.9	47.3	51.0	71.1	29.0	19.4	63.2	41.6	35.3
LnGrp LOS	E	C	D	E	D	D	E	C	B	E	D	D
Approach Vol, veh/h		2049			1312			1153			1339	
Approach Delay, s/veh		42.0			53.1			44.1			41.4	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.5	43.7	23.2	41.5	23.3	40.0	11.4	53.3
Change Period (Y+Rc), s	4.0	* 7	4.0	5.5	4.0	* 7	4.0	5.5
Max Green Setting (Gmax), s	19.0	* 33	20.0	36.0	21.0	* 31	10.0	46.0
Max Q Clear Time (g_c+I1), s	15.2	33.6	19.0	38.0	19.0	23.3	7.2	13.9
Green Ext Time (p_c), s	0.3	0.0	0.3	0.0	0.3	4.2	0.1	5.2

Intersection Summary	
HCM 6th Ctrl Delay	44.8
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	410	800	639	80	108	524
Future Volume (veh/h)	410	800	639	80	108	524
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.95	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	441	860	687	86	116	563
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	528	2760	1447	179	419	746
Arrive On Green	0.15	0.54	0.32	0.32	0.24	0.24
Sat Flow, veh/h	3456	5274	4742	566	1781	3170
Grp Volume(v), veh/h	441	860	509	264	116	563
Grp Sat Flow(s),veh/h/ln	1728	1702	1702	1736	1781	1585
Q Serve(g_s), s	6.1	4.6	5.9	6.0	2.6	8.1
Cycle Q Clear(g_c), s	6.1	4.6	5.9	6.0	2.6	8.1
Prop In Lane	1.00			0.33	1.00	1.00
Lane Grp Cap(c), veh/h	528	2760	1077	549	419	746
V/C Ratio(X)	0.83	0.31	0.47	0.48	0.28	0.76
Avail Cap(c_a), veh/h	528	3227	1388	708	1017	1810
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	20.2	6.2	13.5	13.5	15.3	17.4
Incr Delay (d2), s/veh	10.5	0.2	1.2	2.4	0.1	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	1.2	2.1	2.4	0.9	6.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.7	6.5	14.7	15.9	15.5	18.0
LnGrp LOS	C	A	B	B	B	B
Approach Vol, veh/h		1301	773		679	
Approach Delay, s/veh		14.7	15.1		17.6	
Approach LOS		B	B		B	

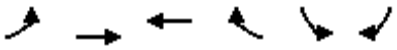
Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	32.5		16.5	11.0	21.5
Change Period (Y+Rc), s	* 6		5.0	3.5	* 6
Max Green Setting (Gmax), s	* 31		28.0	7.5	* 20
Max Q Clear Time (g_c+I1), s	6.6		10.1	8.1	8.0
Green Ext Time (p_c), s	13.3		1.4	0.0	7.2

Intersection Summary	
HCM 6th Ctrl Delay	15.5
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	151	757	533	149	198	186
Future Volume (veh/h)	151	757	533	149	198	186
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.95	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	172	860	606	169	225	211
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	245	2834	1297	352	347	309
Arrive On Green	0.14	0.56	0.33	0.33	0.19	0.19
Sat Flow, veh/h	1781	5274	4116	1073	1781	1585
Grp Volume(v), veh/h	172	860	520	255	225	211
Grp Sat Flow(s),veh/h/ln	1781	1702	1702	1616	1781	1585
Q Serve(g_s), s	4.1	4.0	5.4	5.6	5.2	5.5
Cycle Q Clear(g_c), s	4.1	4.0	5.4	5.6	5.2	5.5
Prop In Lane	1.00			0.66	1.00	1.00
Lane Grp Cap(c), veh/h	245	2834	1118	531	347	309
V/C Ratio(X)	0.70	0.30	0.47	0.48	0.65	0.68
Avail Cap(c_a), veh/h	318	3741	1581	751	1233	1098
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	18.4	5.3	11.9	12.0	16.6	16.7
Incr Delay (d2), s/veh	2.6	0.1	0.6	1.4	1.9	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.9	1.8	1.9	2.0	4.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.1	5.5	12.6	13.4	18.5	19.2
LnGrp LOS	C	A	B	B	B	B
Approach Vol, veh/h		1032	775		436	
Approach Delay, s/veh		8.1	12.8		18.8	
Approach LOS		A	B		B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		31.1		13.7	10.1	20.9
Change Period (Y+Rc), s		6.2		5.0	4.0	6.2
Max Green Setting (Gmax), s		32.8		31.0	8.0	20.8
Max Q Clear Time (g_c+I1), s		6.0		7.5	6.1	7.6
Green Ext Time (p_c), s		11.7		1.2	0.0	6.7

Intersection Summary		
HCM 6th Ctrl Delay		11.8
HCM 6th LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	386	399	64	281	14	276	193	39	53	187	125
Future Volume (veh/h)	170	386	399	64	281	14	276	193	39	53	187	125
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	177	402	416	67	293	15	288	201	41	55	195	130
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	236	1218	567	122	1658	515	355	772	344	105	515	230
Arrive On Green	0.07	0.36	0.36	0.04	0.32	0.32	0.10	0.22	0.22	0.03	0.15	0.15
Sat Flow, veh/h	3456	3404	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	177	402	416	67	293	15	288	201	41	55	195	130
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	2.9	5.0	13.4	1.1	2.4	0.4	4.8	2.7	1.2	0.9	2.9	4.5
Cycle Q Clear(g_c), s	2.9	5.0	13.4	1.1	2.4	0.4	4.8	2.7	1.2	0.9	2.9	4.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	236	1218	567	122	1658	515	355	772	344	105	515	230
V/C Ratio(X)	0.75	0.33	0.73	0.55	0.18	0.03	0.81	0.26	0.12	0.53	0.38	0.57
Avail Cap(c_a), veh/h	236	1630	759	236	2445	759	355	2006	895	236	1884	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	26.7	13.7	16.3	27.7	14.1	13.5	25.7	19.0	18.4	27.9	22.6	23.3
Incr Delay (d2), s/veh	11.1	0.2	3.0	1.4	0.1	0.0	12.5	0.2	0.2	1.5	0.6	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	1.5	1.8	4.7	0.5	0.8	0.1	2.5	1.1	0.4	0.4	1.2	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.8	13.9	19.4	29.2	14.2	13.5	38.2	19.2	18.6	29.4	23.2	25.9
LnGrp LOS	D	B	B	C	B	B	D	B	B	C	C	C
Approach Vol, veh/h		995			375			530			380	
Approach Delay, s/veh		20.4			16.8			29.5			25.0	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.1	27.9	10.0	14.5	8.0	26.0	5.8	18.7
Change Period (Y+Rc), s	4.0	* 7	4.0	* 6	4.0	* 7	4.0	* 6
Max Green Setting (Gmax), s	4.6	* 28	6.0	* 31	4.0	* 28	4.0	* 33
Max Q Clear Time (g_c+I1), s	3.1	15.4	6.8	6.5	4.9	4.4	2.9	4.7
Green Ext Time (p_c), s	0.0	5.6	0.0	2.0	0.0	2.6	0.0	1.7

Intersection Summary	
HCM 6th Ctrl Delay	22.7
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	194	83	388	160	88	171	532	189	106	699	159
Future Volume (veh/h)	154	194	83	388	160	88	171	532	189	106	699	159
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	162	204	87	408	168	93	180	560	199	112	736	167
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	188	237	369	655	215	119	253	729	258	141	833	189
Arrive On Green	0.23	0.23	0.23	0.19	0.19	0.19	0.07	0.28	0.28	0.08	0.29	0.29
Sat Flow, veh/h	810	1020	1585	3456	1131	626	3456	2572	911	1781	2877	653
Grp Volume(v), veh/h	366	0	87	408	0	261	180	386	373	112	454	449
Grp Sat Flow(s),veh/h/ln	1830	0	1585	1728	0	1758	1728	1777	1706	1781	1777	1753
Q Serve(g_s), s	16.5	0.0	3.8	9.3	0.0	12.2	4.4	17.1	17.2	5.3	21.0	21.0
Cycle Q Clear(g_c), s	16.5	0.0	3.8	9.3	0.0	12.2	4.4	17.1	17.2	5.3	21.0	21.0
Prop In Lane	0.44		1.00	1.00		0.36	1.00		0.53	1.00		0.37
Lane Grp Cap(c), veh/h	426	0	369	655	0	333	253	504	484	141	515	508
V/C Ratio(X)	0.86	0.00	0.24	0.62	0.00	0.78	0.71	0.77	0.77	0.79	0.88	0.88
Avail Cap(c_a), veh/h	553	0	479	923	0	470	261	504	484	176	537	529
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.7	0.0	26.8	32.0	0.0	33.2	39.0	28.2	28.3	38.9	29.2	29.2
Incr Delay (d2), s/veh	10.4	0.0	0.3	1.0	0.0	5.6	7.2	7.4	7.9	14.1	16.0	16.2
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	8.3	0.0	1.5	3.9	0.0	5.6	2.1	8.1	7.9	2.8	10.9	10.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.1	0.0	27.1	33.0	0.0	38.8	46.2	35.7	36.2	53.0	45.2	45.4
LnGrp LOS	D	A	C	C	A	D	D	D	D	D	D	D
Approach Vol, veh/h		453			669			939			1015	
Approach Delay, s/veh		39.2			35.3			37.9			46.2	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	25.0	9.8	29.9	21.3	10.3	29.4
Change Period (Y+Rc), s	5.0	3.5	5.0	5.0	3.5	5.0
Max Green Setting (Gmax), s	26.0	6.5	26.0	23.0	8.5	24.0
Max Q Clear Time (g_c+I1), s	18.5	6.4	23.0	14.2	7.3	19.2
Green Ext Time (p_c), s	1.5	0.0	1.9	2.2	0.0	2.5

Intersection Summary	
HCM 6th Ctrl Delay	40.2
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	160	60	194	228	185	51	293	147	121	296	156
Future Volume (veh/h)	167	160	60	194	228	185	51	293	147	121	296	156
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.95	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	190	182	68	220	259	210	58	333	167	138	336	177
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	237	367	363	270	402	484	72	555	271	176	680	350
Arrive On Green	0.13	0.20	0.20	0.15	0.21	0.21	0.04	0.24	0.24	0.10	0.30	0.30
Sat Flow, veh/h	1781	1870	1525	1781	1870	1528	1781	2267	1106	1781	2244	1155
Grp Volume(v), veh/h	190	182	68	220	259	210	58	259	241	138	264	249
Grp Sat Flow(s),veh/h/ln	1781	1870	1525	1781	1870	1528	1781	1777	1596	1781	1777	1622
Q Serve(g_s), s	5.7	4.8	2.0	6.6	6.9	6.0	1.8	7.1	7.4	4.2	6.7	6.9
Cycle Q Clear(g_c), s	5.7	4.8	2.0	6.6	6.9	6.0	1.8	7.1	7.4	4.2	6.7	6.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.69	1.00		0.71
Lane Grp Cap(c), veh/h	237	367	363	270	402	484	72	435	391	176	538	492
V/C Ratio(X)	0.80	0.50	0.19	0.82	0.64	0.43	0.81	0.60	0.62	0.79	0.49	0.51
Avail Cap(c_a), veh/h	388	748	674	405	765	781	223	678	609	243	697	637
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	23.2	19.7	16.8	22.6	19.7	15.0	26.2	18.4	18.5	24.2	15.7	15.8
Incr Delay (d2), s/veh	2.4	0.6	0.1	4.5	0.9	0.3	7.6	1.6	1.9	7.2	0.8	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	2.4	2.0	0.6	2.9	2.8	1.9	0.9	2.8	2.7	2.0	2.5	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.6	20.3	16.9	27.1	20.6	15.4	33.8	19.9	20.4	31.4	16.5	16.8
LnGrp LOS	C	C	B	C	C	B	C	B	C	C	B	B
Approach Vol, veh/h		440			689			558			651	
Approach Delay, s/veh		22.0			21.1			21.6			19.8	
Approach LOS		C			C			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.8	15.8	5.7	21.7	10.8	16.8	8.9	18.5
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0
Max Green Setting (Gmax), s	12.5	22.0	6.9	21.6	12.0	22.5	7.5	21.0
Max Q Clear Time (g_c+I1), s	9.6	6.8	3.8	8.9	7.7	8.9	6.2	9.4
Green Ext Time (p_c), s	0.0	0.7	0.0	3.0	0.0	1.3	0.0	2.8

Intersection Summary	
HCM 6th Ctrl Delay	21.0
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	12.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	66	204	5	13	124	163	10	2	45	135	0	57
Future Vol, veh/h	66	204	5	13	124	163	10	2	45	135	0	57
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	86	265	6	17	161	212	13	3	58	175	0	74
Number of Lanes	1	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	13	11	9.8	13
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	18%	100%	0%	9%	0%	70%
Vol Thru, %	4%	0%	98%	91%	0%	0%
Vol Right, %	79%	0%	2%	0%	100%	30%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	57	66	209	137	163	192
LT Vol	10	66	0	13	0	135
Through Vol	2	0	204	124	0	0
RT Vol	45	0	5	0	163	57
Lane Flow Rate	74	86	271	178	212	249
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.122	0.156	0.455	0.302	0.314	0.408
Departure Headway (Hd)	5.921	6.562	6.037	6.103	5.344	5.892
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	602	546	594	587	671	608
Service Time	3.992	4.314	3.788	3.854	3.094	3.946
HCM Lane V/C Ratio	0.123	0.158	0.456	0.303	0.316	0.41
HCM Control Delay	9.8	10.5	13.8	11.5	10.5	13
HCM Lane LOS	A	B	B	B	B	B
HCM 95th-tile Q	0.4	0.5	2.4	1.3	1.3	2

Intersection	
Int Delay, s/veh	47.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	237	185	10	1	160	73	64	0	52	55	0	280
Future Vol, veh/h	237	185	10	1	160	73	64	0	52	55	0	280
Conflicting Peds, #/hr	0	0	10	0	0	10	0	0	10	0	0	10
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	293	228	12	1	198	90	79	0	64	68	0	346

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	298	0	0	250	0	0	1258	1130	254	1117	1091	263
Stage 1	-	-	-	-	-	-	830	830	-	255	255	-
Stage 2	-	-	-	-	-	-	428	300	-	862	836	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1263	-	-	1316	-	-	148	204	785	185	215	776
Stage 1	-	-	-	-	-	-	364	385	-	749	696	-
Stage 2	-	-	-	-	-	-	605	666	-	350	382	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1251	-	-	1303	-	-	~ 65	153	770	136	161	761
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 65	153	-	136	161	-
Stage 1	-	-	-	-	-	-	276	292	-	568	688	-
Stage 2	-	-	-	-	-	-	327	659	-	243	290	-

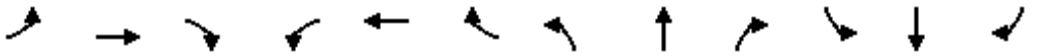
Approach	EB	WB	NB	SB
HCM Control Delay, s	4.8	0	259.9	63.3
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	110	1251	-	-	1303	-	-	434
HCM Lane V/C Ratio	1.302	0.234	-	-	0.001	-	-	0.953
HCM Control Delay (s)	259.9	8.8	-	-	7.8	0	-	63.3
HCM Lane LOS	F	A	-	-	A	A	-	F
HCM 95th %tile Q(veh)	9.7	0.9	-	-	0	-	-	11.2

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

APPENDIX C

EXISTING WITH PROJECT PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1652	49	0	1133	138	0	0	0	292	0	72
Future Volume (veh/h)	0	1652	49	0	1133	138	0	0	0	292	0	72
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870				1870	0	1870
Adj Flow Rate, veh/h	0	1739	52	0	1193	145				307	0	76
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	2	2	0	2	2				2	0	2
Cap, veh/h	0	3548	1066	0	3548	1277				444	0	204
Arrive On Green	0.00	0.69	0.69	0.00	1.00	1.00				0.13	0.00	0.13
Sat Flow, veh/h	0	5274	1534	0	5274	1545				3456	0	1585
Grp Volume(v), veh/h	0	1739	52	0	1193	145				307	0	76
Grp Sat Flow(s),veh/h/ln	0	1702	1534	0	1702	1545				1728	0	1585
Q Serve(g_s), s	0.0	10.1	0.7	0.0	0.0	0.0				5.4	0.0	2.8
Cycle Q Clear(g_c), s	0.0	10.1	0.7	0.0	0.0	0.0				5.4	0.0	2.8
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3548	1066	0	3548	1277				444	0	204
V/C Ratio(X)	0.00	0.49	0.05	0.00	0.34	0.11				0.69	0.00	0.37
Avail Cap(c_a), veh/h	0	3548	1066	0	3548	1277				729	0	334
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.94	0.94				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	4.5	3.1	0.0	0.0	0.0				26.7	0.0	25.5
Incr Delay (d2), s/veh	0.0	0.5	0.1	0.0	0.2	0.2				2.1	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	2.4	0.2	0.0	0.1	0.1				2.3	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	5.0	3.2	0.0	0.2	0.2				28.8	0.0	26.8
LnGrp LOS	A	A	A	A	A	A				C	A	C
Approach Vol, veh/h		1791			1338						383	
Approach Delay, s/veh		4.9			0.2						28.4	
Approach LOS		A			A						C	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		50.3		13.7		50.3						
Change Period (Y+Rc), s		5.8		5.5		5.8						
Max Green Setting (Gmax), s		39.2		13.5		39.2						
Max Q Clear Time (g_c+I1), s		12.1		7.4		2.0						
Green Ext Time (p_c), s		22.6		0.8		21.6						

Intersection Summary	
HCM 6th Ctrl Delay	5.7
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1798	146	0	1247	518	24	0	144	0	0	0
Future Volume (veh/h)	0	1798	146	0	1247	518	24	0	144	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870	1870	0	1870			
Adj Flow Rate, veh/h	0	1893	154	0	1313	545	25	0	152			
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	2	2	0	2	2	2	0	2			
Cap, veh/h	0	3776	1268	0	3776	1135	149	0	234			
Arrive On Green	0.00	0.74	0.74	0.00	1.00	1.00	0.08	0.00	0.08			
Sat Flow, veh/h	0	5274	1535	0	5274	1535	1781	0	2790			
Grp Volume(v), veh/h	0	1893	154	0	1313	545	25	0	152			
Grp Sat Flow(s),veh/h/ln	0	1702	1535	0	1702	1535	1781	0	1395			
Q Serve(g_s), s	0.0	9.8	1.3	0.0	0.0	0.0	0.8	0.0	3.4			
Cycle Q Clear(g_c), s	0.0	9.8	1.3	0.0	0.0	0.0	0.8	0.0	3.4			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3776	1268	0	3776	1135	149	0	234			
V/C Ratio(X)	0.00	0.50	0.12	0.00	0.35	0.48	0.17	0.00	0.65			
Avail Cap(c_a), veh/h	0	3776	1268	0	3776	1135	264	0	414			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.84	0.84	0.00	0.69	0.69	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	3.4	1.1	0.0	0.0	0.0	27.2	0.0	28.4			
Incr Delay (d2), s/veh	0.0	0.4	0.2	0.0	0.2	1.0	0.6	0.0	3.3			
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	1.9	0.4	0.0	0.1	0.3	0.4	0.0	1.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	3.9	1.3	0.0	0.2	1.0	27.8	0.0	31.7			
LnGrp LOS	A	A	A	A	A	A	C	A	C			
Approach Vol, veh/h		2047			1858			177				
Approach Delay, s/veh		3.7			0.4			31.1				
Approach LOS		A			A			C				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		53.1				53.1		10.9				
Change Period (Y+Rc), s		5.8				5.8		5.5				
Max Green Setting (Gmax), s		43.2				43.2		9.5				
Max Q Clear Time (g_c+I1), s		11.8				2.0		5.4				
Green Ext Time (p_c), s		27.5				30.5		0.2				
Intersection Summary												
HCM 6th Ctrl Delay			3.4									
HCM 6th LOS			A									

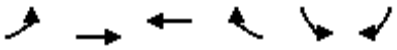
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	486	878	279	227	840	75	537	369	169	42	200	237
Future Volume (veh/h)	486	878	279	227	840	75	537	369	169	42	200	237
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.97	1.00		0.97	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	512	924	294	239	884	79	565	388	178	44	211	249
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	513	1963	1012	293	1527	136	594	1217	663	98	707	539
Arrive On Green	0.30	0.77	0.77	0.08	0.32	0.32	0.17	0.34	0.34	0.03	0.20	0.20
Sat Flow, veh/h	3456	5106	2633	3456	4760	424	3456	3554	1542	3456	3554	1525
Grp Volume(v), veh/h	512	924	294	239	631	332	565	388	178	44	211	249
Grp Sat Flow(s),veh/h/ln	1728	1702	1317	1728	1702	1780	1728	1777	1542	1728	1777	1525
Q Serve(g_s), s	18.9	8.4	4.3	8.7	19.8	19.9	20.7	10.3	9.6	1.6	6.5	16.3
Cycle Q Clear(g_c), s	18.9	8.4	4.3	8.7	19.8	19.9	20.7	10.3	9.6	1.6	6.5	16.3
Prop In Lane	1.00		1.00	1.00		0.24	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	513	1963	1012	293	1092	571	594	1217	663	98	707	539
V/C Ratio(X)	1.00	0.47	0.29	0.82	0.58	0.58	0.95	0.32	0.27	0.45	0.30	0.46
Avail Cap(c_a), veh/h	513	1963	1012	378	1092	571	594	1471	773	135	999	664
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	0.79	0.79	0.79	1.00	1.00	1.00	0.95	0.95	0.95
Uniform Delay (d), s/veh	45.0	10.1	9.6	57.6	36.3	36.3	52.5	31.1	23.7	61.2	43.7	32.6
Incr Delay (d2), s/veh	35.9	0.7	0.6	6.5	1.8	3.4	25.4	0.2	0.3	3.7	0.3	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	9.5	2.5	1.2	4.1	8.5	9.2	11.1	4.5	3.6	0.8	2.9	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.9	10.8	10.2	64.0	38.0	39.7	77.9	31.2	24.0	64.9	43.9	33.3
LnGrp LOS	F	B	B	E	D	D	E	C	C	E	D	C
Approach Vol, veh/h		1730			1202			1131			504	
Approach Delay, s/veh		31.4			43.7			53.4			40.5	
Approach LOS		C			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.9	56.2	26.0	31.0	23.0	48.0	7.6	49.3
Change Period (Y+Rc), s	4.0	* 7	4.0	5.5	4.0	* 7	4.0	5.5
Max Green Setting (Gmax), s	14.0	* 36	22.0	36.0	19.0	* 31	5.0	53.0
Max Q Clear Time (g_c+I1), s	10.7	10.4	22.7	18.3	20.9	21.9	3.6	12.3
Green Ext Time (p_c), s	0.1	11.9	0.0	2.5	0.0	4.9	0.0	4.3

Intersection Summary	
HCM 6th Ctrl Delay	41.1
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	510	579	884	94	59	258
Future Volume (veh/h)	510	579	884	94	59	258
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.96	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	543	616	940	100	63	274
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	679	3248	1712	181	242	430
Arrive On Green	0.20	0.64	0.37	0.37	0.14	0.14
Sat Flow, veh/h	3456	5274	4833	494	1781	3170
Grp Volume(v), veh/h	543	616	685	355	63	274
Grp Sat Flow(s),veh/h/ln	1728	1702	1702	1755	1781	1585
Q Serve(g_s), s	7.2	2.4	7.7	7.7	1.5	3.9
Cycle Q Clear(g_c), s	7.2	2.4	7.7	7.7	1.5	3.9
Prop In Lane	1.00			0.28	1.00	1.00
Lane Grp Cap(c), veh/h	679	3248	1249	644	242	430
V/C Ratio(X)	0.80	0.19	0.55	0.55	0.26	0.64
Avail Cap(c_a), veh/h	896	3814	1413	728	1035	1842
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	18.5	3.6	12.1	12.1	18.7	19.7
Incr Delay (d2), s/veh	2.8	0.1	1.4	2.7	0.2	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.5	2.6	3.0	0.6	3.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.3	3.7	13.5	14.8	18.9	20.3
LnGrp LOS	C	A	B	B	B	C
Approach Vol, veh/h		1159	1040		337	
Approach Delay, s/veh		12.0	13.9		20.0	
Approach LOS		B	B		C	

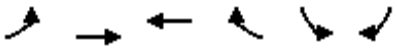
Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	36.7		11.5	13.0	23.7
Change Period (Y+Rc), s	* 6		5.0	3.5	* 6
Max Green Setting (Gmax), s	* 36		28.0	12.5	* 20
Max Q Clear Time (g_c+I1), s	4.4		5.9	9.2	9.7
Green Ext Time (p_c), s	10.8		0.7	0.3	7.8

Intersection Summary	
HCM 6th Ctrl Delay	13.8
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	206	432	908	208	62	70
Future Volume (veh/h)	206	432	908	208	62	70
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.96	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	222	465	976	224	67	75
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	293	3401	1694	388	145	129
Arrive On Green	0.16	0.67	0.41	0.41	0.08	0.08
Sat Flow, veh/h	1781	5274	4284	942	1781	1585
Grp Volume(v), veh/h	222	465	807	393	67	75
Grp Sat Flow(s),veh/h/ln	1781	1702	1702	1654	1781	1585
Q Serve(g_s), s	5.3	1.5	8.1	8.1	1.6	2.0
Cycle Q Clear(g_c), s	5.3	1.5	8.1	8.1	1.6	2.0
Prop In Lane	1.00			0.57	1.00	1.00
Lane Grp Cap(c), veh/h	293	3401	1401	681	145	129
V/C Ratio(X)	0.76	0.14	0.58	0.58	0.46	0.58
Avail Cap(c_a), veh/h	321	3774	1595	775	1244	1107
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	17.7	2.7	10.1	10.1	19.5	19.6
Incr Delay (d2), s/veh	7.8	0.0	0.8	1.7	2.1	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.2	2.5	2.6	0.7	1.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	25.5	2.8	10.9	11.8	21.5	23.3
LnGrp LOS	C	A	B	B	C	C
Approach Vol, veh/h		687	1200		142	
Approach Delay, s/veh		10.1	11.2		22.5	
Approach LOS		B	B		C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		35.8		8.6	11.3	24.5
Change Period (Y+Rc), s		6.2		5.0	4.0	6.2
Max Green Setting (Gmax), s		32.8		31.0	8.0	20.8
Max Q Clear Time (g_c+I1), s		3.5		4.0	7.3	10.1
Green Ext Time (p_c), s		6.2		0.4	0.0	8.0

Intersection Summary		
HCM 6th Ctrl Delay		11.6
HCM 6th LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	179	143	172	172	462	60	394	551	75	25	370	260
Future Volume (veh/h)	179	143	172	172	462	60	394	551	75	25	370	260
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	206	164	198	198	531	69	453	633	86	29	425	299
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	294	665	310	286	985	306	547	1430	638	64	933	416
Arrive On Green	0.09	0.20	0.20	0.08	0.19	0.19	0.16	0.40	0.40	0.02	0.26	0.26
Sat Flow, veh/h	3456	3404	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	206	164	198	198	531	69	453	633	86	29	425	299
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	4.0	2.8	8.0	3.9	6.5	2.6	8.9	9.0	2.4	0.6	7.0	12.0
Cycle Q Clear(g_c), s	4.0	2.8	8.0	3.9	6.5	2.6	8.9	9.0	2.4	0.6	7.0	12.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	294	665	310	286	985	306	547	1430	638	64	933	416
V/C Ratio(X)	0.70	0.25	0.64	0.69	0.54	0.23	0.83	0.44	0.13	0.45	0.46	0.72
Avail Cap(c_a), veh/h	297	1415	659	297	2123	659	644	2089	932	149	1579	704
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	31.0	23.7	25.8	31.1	25.4	23.7	28.4	15.2	13.2	33.9	21.5	23.4
Incr Delay (d2), s/veh	6.0	0.3	2.9	5.3	0.6	0.5	6.6	0.3	0.1	1.9	0.4	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	1.9	1.1	3.1	1.8	2.6	1.0	4.0	3.4	0.8	0.3	2.8	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.0	24.0	28.7	36.4	26.0	24.2	35.1	15.4	13.3	35.7	22.0	26.2
LnGrp LOS	D	C	C	D	C	C	D	B	B	D	C	C
Approach Vol, veh/h		568			798			1172			753	
Approach Delay, s/veh		30.4			28.4			22.9			24.2	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.8	20.6	15.0	24.3	9.9	20.5	5.3	34.1
Change Period (Y+Rc), s	4.0	* 7	4.0	* 6	4.0	* 7	4.0	* 6
Max Green Setting (Gmax), s	6.0	* 29	13.0	* 31	6.0	* 29	3.0	* 41
Max Q Clear Time (g_c+I1), s	5.9	10.0	10.9	14.0	6.0	8.5	2.6	11.0
Green Ext Time (p_c), s	0.0	2.8	0.2	4.4	0.0	4.9	0.0	6.2

Intersection Summary	
HCM 6th Ctrl Delay	25.8
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	118	49	205	103	49	112	423	261	93	270	97
Future Volume (veh/h)	64	118	49	205	103	49	112	423	261	93	270	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	68	126	52	218	110	52	119	450	278	99	287	103
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	108	199	253	569	195	92	201	594	364	127	760	266
Arrive On Green	0.17	0.17	0.17	0.16	0.16	0.16	0.06	0.28	0.28	0.07	0.30	0.30
Sat Flow, veh/h	644	1194	1518	3456	1182	559	3456	2089	1280	1781	2559	895
Grp Volume(v), veh/h	194	0	52	218	0	162	119	382	346	99	197	193
Grp Sat Flow(s),veh/h/ln	1838	0	1518	1728	0	1740	1728	1777	1593	1781	1777	1677
Q Serve(g_s), s	5.8	0.0	1.7	3.3	0.0	5.1	2.0	11.6	11.7	3.2	5.2	5.4
Cycle Q Clear(g_c), s	5.8	0.0	1.7	3.3	0.0	5.1	2.0	11.6	11.7	3.2	5.2	5.4
Prop In Lane	0.35		1.00	1.00		0.32	1.00		0.80	1.00		0.53
Lane Grp Cap(c), veh/h	307	0	253	569	0	287	201	505	453	127	528	498
V/C Ratio(X)	0.63	0.00	0.21	0.38	0.00	0.56	0.59	0.76	0.76	0.78	0.37	0.39
Avail Cap(c_a), veh/h	715	0	591	1345	0	677	409	571	512	196	556	525
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.9	0.0	21.2	22.0	0.0	22.7	27.1	19.3	19.3	27.0	16.4	16.5
Incr Delay (d2), s/veh	2.2	0.0	0.4	0.4	0.0	1.7	1.0	5.7	6.7	4.3	0.6	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	2.5	0.0	0.6	1.3	0.0	2.1	0.8	5.1	4.8	1.4	2.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.1	0.0	21.6	22.4	0.0	24.5	28.2	25.0	26.0	31.3	17.0	17.2
LnGrp LOS	C	A	C	C	A	C	C	C	C	C	B	B
Approach Vol, veh/h		246			380			847			489	
Approach Delay, s/veh		24.3			23.3			25.9			20.0	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	14.9	6.9	22.5	14.7	7.7	21.8
Change Period (Y+Rc), s	5.0	3.5	5.0	5.0	3.5	5.0
Max Green Setting (Gmax), s	23.0	7.0	18.5	23.0	6.5	19.0
Max Q Clear Time (g_c+I1), s	7.8	4.0	7.4	7.1	5.2	13.7
Green Ext Time (p_c), s	1.1	0.0	2.3	1.5	0.0	2.6

Intersection Summary	
HCM 6th Ctrl Delay	23.7
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	172	33	61	110	71	46	211	231	149	243	119
Future Volume (veh/h)	72	172	33	61	110	71	46	211	231	149	243	119
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.95	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	83	198	38	70	126	82	53	243	266	171	279	137
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	104	355	346	87	336	466	64	501	424	216	849	404
Arrive On Green	0.06	0.19	0.19	0.05	0.18	0.18	0.04	0.28	0.28	0.12	0.37	0.37
Sat Flow, veh/h	1781	1870	1523	1781	1870	1521	1781	1777	1505	1781	2314	1101
Grp Volume(v), veh/h	83	198	38	70	126	82	53	243	266	171	212	204
Grp Sat Flow(s),veh/h/ln	1781	1870	1523	1781	1870	1521	1781	1777	1505	1781	1777	1638
Q Serve(g_s), s	2.2	4.5	0.9	1.8	2.8	1.9	1.4	5.4	7.3	4.4	4.1	4.3
Cycle Q Clear(g_c), s	2.2	4.5	0.9	1.8	2.8	1.9	1.4	5.4	7.3	4.4	4.1	4.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.67
Lane Grp Cap(c), veh/h	104	355	346	87	336	466	64	501	424	216	652	601
V/C Ratio(X)	0.79	0.56	0.11	0.80	0.37	0.18	0.82	0.49	0.63	0.79	0.33	0.34
Avail Cap(c_a), veh/h	154	840	742	143	828	866	237	787	667	259	809	746
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	22.0	17.4	14.6	22.3	17.1	12.2	22.7	14.2	14.9	20.2	10.8	10.8
Incr Delay (d2), s/veh	9.2	0.7	0.1	6.4	0.4	0.1	9.4	0.9	1.8	10.6	0.3	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	1.1	1.8	0.3	0.9	1.1	0.6	0.7	2.0	2.3	2.3	1.4	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.2	18.2	14.7	28.7	17.5	12.3	32.1	15.0	16.7	30.8	11.1	11.3
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		319			278			562			587	
Approach Delay, s/veh		21.1			18.8			17.4			16.9	
Approach LOS		C			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.8	14.0	5.2	22.4	6.3	13.5	9.3	18.4
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0
Max Green Setting (Gmax), s	3.8	21.3	6.3	21.6	4.1	21.0	6.9	21.0
Max Q Clear Time (g_c+I1), s	3.8	6.5	3.4	6.3	4.2	4.8	6.4	9.3
Green Ext Time (p_c), s	0.0	0.7	0.0	2.6	0.0	0.6	0.0	3.0

Intersection Summary	
HCM 6th Ctrl Delay	18.2
HCM 6th LOS	B

Intersection	
Intersection Delay, s/veh	11
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	85	51	19	46	190	178	3	0	11	70	0	45
Future Vol, veh/h	85	51	19	46	190	178	3	0	11	70	0	45
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	120	72	27	65	268	251	4	0	15	99	0	63
Number of Lanes	1	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	9.9	11.7	8.8	10.4
HCM LOS	A	B	A	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	21%	100%	0%	19%	0%	61%
Vol Thru, %	0%	0%	73%	81%	0%	0%
Vol Right, %	79%	0%	27%	0%	100%	39%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	14	85	70	236	178	115
LT Vol	3	85	0	46	0	70
Through Vol	0	0	51	190	0	0
RT Vol	11	0	19	0	178	45
Lane Flow Rate	20	120	99	332	251	162
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.031	0.203	0.148	0.496	0.318	0.248
Departure Headway (Hd)	5.606	6.117	5.42	5.369	4.566	5.519
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	642	581	654	665	780	645
Service Time	3.606	3.917	3.22	3.145	2.341	3.605
HCM Lane V/C Ratio	0.031	0.207	0.151	0.499	0.322	0.251
HCM Control Delay	8.8	10.5	9.2	13.4	9.5	10.4
HCM Lane LOS	A	B	A	B	A	B
HCM 95th-tile Q	0.1	0.8	0.5	2.8	1.4	1

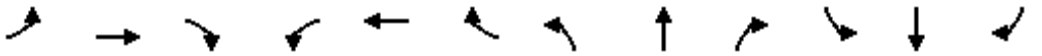
Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	166	158	116	32	124	41	7	0	1	14	0	38
Future Vol, veh/h	166	158	116	32	124	41	7	0	1	14	0	38
Conflicting Peds, #/hr	0	0	10	0	0	10	0	0	10	0	0	10
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	187	178	130	36	139	46	8	0	1	16	0	43

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	195	0	0	318	0	0	893	894	263	872	936	182
Stage 1	-	-	-	-	-	-	627	627	-	244	244	-
Stage 2	-	-	-	-	-	-	266	267	-	628	692	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1378	-	-	1242	-	-	262	280	776	271	265	861
Stage 1	-	-	-	-	-	-	471	476	-	760	704	-
Stage 2	-	-	-	-	-	-	739	688	-	471	445	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1365	-	-	1230	-	-	213	229	761	232	217	845
Mov Cap-2 Maneuver	-	-	-	-	-	-	213	229	-	232	217	-
Stage 1	-	-	-	-	-	-	403	407	-	650	674	-
Stage 2	-	-	-	-	-	-	672	658	-	402	380	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3	1.3	21	13.3
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	234	1365	-	-	1230	-	-	494
HCM Lane V/C Ratio	0.038	0.137	-	-	0.029	-	-	0.118
HCM Control Delay (s)	21	8.1	-	-	8	0	-	13.3
HCM Lane LOS	C	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0.5	-	-	0.1	-	-	0.4



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1892	24	0	1852	119	0	0	0	525	0	102
Future Volume (veh/h)	0	1892	24	0	1852	119	0	0	0	525	0	102
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870				1870	0	1870
Adj Flow Rate, veh/h	0	1951	25	0	1909	123				541	0	105
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	2	2	0	2	2				2	0	2
Cap, veh/h	0	3192	957	0	3192	1272				686	0	314
Arrive On Green	0.00	0.63	0.63	0.00	0.21	0.21				0.20	0.00	0.20
Sat Flow, veh/h	0	5274	1532	0	5274	1532				3456	0	1585
Grp Volume(v), veh/h	0	1951	25	0	1909	123				541	0	105
Grp Sat Flow(s),veh/h/ln	0	1702	1532	0	1702	1532				1728	0	1585
Q Serve(g_s), s	0.0	14.8	0.4	0.0	21.7	2.0				9.5	0.0	3.6
Cycle Q Clear(g_c), s	0.0	14.8	0.4	0.0	21.7	2.0				9.5	0.0	3.6
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3192	957	0	3192	1272				686	0	314
V/C Ratio(X)	0.00	0.61	0.03	0.00	0.60	0.10				0.79	0.00	0.33
Avail Cap(c_a), veh/h	0	3192	957	0	3192	1272				859	0	394
HCM Platoon Ratio	1.00	1.00	1.00	1.00	0.33	0.33				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.80	0.80				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	7.3	4.6	0.0	18.1	2.5				24.4	0.0	22.0
Incr Delay (d2), s/veh	0.0	0.9	0.1	0.0	0.7	0.1				4.1	0.0	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
%ile BackOfQ(50%),veh/ln	0.0	4.2	0.1	0.0	9.7	1.2				4.0	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	8.2	4.6	0.0	18.8	2.6				28.5	0.0	22.7
LnGrp LOS	A	A	A	A	B	A				C	A	C
Approach Vol, veh/h		1976			2032						646	
Approach Delay, s/veh		8.1			17.8						27.5	
Approach LOS		A			B						C	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		45.8		18.2		45.8						
Change Period (Y+Rc), s		5.8		5.5		5.8						
Max Green Setting (Gmax), s		36.8		15.9		36.8						
Max Q Clear Time (g_c+I1), s		16.8		11.5		23.7						
Green Ext Time (p_c), s		18.1		1.2		12.3						

Intersection Summary												
HCM 6th Ctrl Delay			15.0									
HCM 6th LOS			B									

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2316	101	0	1941	385	31	0	176	0	0	0
Future Volume (veh/h)	0	2316	101	0	1941	385	31	0	176	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870	1870	0	1870			
Adj Flow Rate, veh/h	0	2464	107	0	2065	410	33	0	187			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	0	2	2	0	2	2	2	0	2			
Cap, veh/h	0	3709	1269	0	3709	1115	173	0	271			
Arrive On Green	0.00	1.00	1.00	0.00	1.00	1.00	0.10	0.00	0.10			
Sat Flow, veh/h	0	5274	1535	0	5274	1535	1781	0	2790			
Grp Volume(v), veh/h	0	2464	107	0	2065	410	33	0	187			
Grp Sat Flow(s),veh/h/ln	0	1702	1535	0	1702	1535	1781	0	1395			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	4.2			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	4.2			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3709	1269	0	3709	1115	173	0	271			
V/C Ratio(X)	0.00	0.66	0.08	0.00	0.56	0.37	0.19	0.00	0.69			
Avail Cap(c_a), veh/h	0	3709	1269	0	3709	1115	237	0	371			
HCM Platoon Ratio	1.00	2.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00			
Upstream Filter(I)	0.00	0.71	0.71	0.00	0.54	0.54	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	26.6	0.0	28.0			
Incr Delay (d2), s/veh	0.0	0.7	0.1	0.0	0.3	0.5	0.6	0.0	3.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	0.2	0.0	0.0	0.1	0.2	0.5	0.0	1.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.7	0.1	0.0	0.3	0.5	27.2	0.0	31.5			
LnGrp LOS	A	A	A	A	A	A	C	A	C			
Approach Vol, veh/h		2571			2475			220				
Approach Delay, s/veh		0.7			0.4			30.8				
Approach LOS		A			A			C				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		52.3				52.3		11.7				
Change Period (Y+Rc), s		5.8				5.8		5.5				
Max Green Setting (Gmax), s		44.2				44.2		8.5				
Max Q Clear Time (g_c+I1), s		2.0				2.0		6.2				
Green Ext Time (p_c), s		40.1				38.7		0.2				
Intersection Summary												
HCM 6th Ctrl Delay			1.8									
HCM 6th LOS			A									

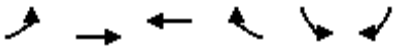
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	479	893	680	359	918	70	452	448	226	140	650	544
Future Volume (veh/h)	479	893	680	359	918	70	452	448	226	140	650	544
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	494	921	701	370	946	72	466	462	233	144	670	561
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	539	1457	757	425	1219	93	519	1328	772	199	999	679
Arrive On Green	0.26	0.48	0.48	0.12	0.25	0.25	0.15	0.37	0.37	0.06	0.28	0.28
Sat Flow, veh/h	3456	5106	2650	3456	4828	366	3456	3554	1544	3456	3554	1537
Grp Volume(v), veh/h	494	921	701	370	666	352	466	462	233	144	670	561
Grp Sat Flow(s),veh/h/ln	1728	1702	1325	1728	1702	1790	1728	1777	1544	1728	1777	1537
Q Serve(g_s), s	17.8	17.3	31.7	13.5	23.3	23.4	17.0	12.0	11.4	5.2	21.4	36.0
Cycle Q Clear(g_c), s	17.8	17.3	31.7	13.5	23.3	23.4	17.0	12.0	11.4	5.2	21.4	36.0
Prop In Lane	1.00		1.00	1.00		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	539	1457	757	425	860	452	519	1328	772	199	999	679
V/C Ratio(X)	0.92	0.63	0.93	0.87	0.77	0.78	0.90	0.35	0.30	0.72	0.67	0.83
Avail Cap(c_a), veh/h	567	1457	757	513	860	452	540	1328	772	270	999	679
HCM Platoon Ratio	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.68	0.68	0.68	0.85	0.85	0.85	1.00	1.00	1.00	0.53	0.53	0.53
Uniform Delay (d), s/veh	46.5	28.5	32.2	55.1	44.5	44.5	53.4	28.8	19.1	59.3	40.7	31.9
Incr Delay (d2), s/veh	14.0	1.4	14.3	10.0	5.8	10.7	17.6	0.2	0.3	3.8	1.0	4.7
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	8.0	6.2	10.2	6.5	10.5	11.7	8.6	5.2	4.2	2.4	9.5	16.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.5	29.9	46.5	65.2	50.2	55.2	71.1	29.0	19.3	63.1	41.7	36.6
LnGrp LOS	E	C	D	E	D	E	E	C	B	E	D	D
Approach Vol, veh/h		2116			1388			1161			1375	
Approach Delay, s/veh		42.5			55.5			44.0			41.9	
Approach LOS		D			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.7	43.5	23.2	41.5	24.0	39.3	11.4	53.3
Change Period (Y+Rc), s	4.0	* 7	4.0	5.5	4.0	* 7	4.0	5.5
Max Green Setting (Gmax), s	15.6	* 33	20.0	36.0	21.0	* 31	10.0	46.0
Max Q Clear Time (g_c+I1), s	15.5	33.7	19.0	38.0	19.8	25.4	7.2	14.0
Green Ext Time (p_c), s	0.3	0.0	0.3	0.0	0.2	3.4	0.1	5.3

Intersection Summary	
HCM 6th Ctrl Delay	45.6
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	410	849	712	80	108	524
Future Volume (veh/h)	410	849	712	80	108	524
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.95	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	441	913	766	86	116	563
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	517	2790	1515	169	417	742
Arrive On Green	0.15	0.55	0.33	0.33	0.23	0.23
Sat Flow, veh/h	3456	5274	4804	516	1781	3170
Grp Volume(v), veh/h	441	913	561	291	116	563
Grp Sat Flow(s),veh/h/ln	1728	1702	1702	1748	1781	1585
Q Serve(g_s), s	6.2	4.9	6.7	6.7	2.7	8.3
Cycle Q Clear(g_c), s	6.2	4.9	6.7	6.7	2.7	8.3
Prop In Lane	1.00			0.30	1.00	1.00
Lane Grp Cap(c), veh/h	517	2790	1112	571	417	742
V/C Ratio(X)	0.85	0.33	0.50	0.51	0.28	0.76
Avail Cap(c_a), veh/h	517	3160	1359	698	996	1772
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	20.8	6.3	13.6	13.6	15.7	17.9
Incr Delay (d2), s/veh	12.3	0.2	1.3	2.5	0.1	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	1.3	2.4	2.7	1.0	7.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	33.1	6.5	14.9	16.2	15.9	18.5
LnGrp LOS	C	A	B	B	B	B
Approach Vol, veh/h		1354	852		679	
Approach Delay, s/veh		15.2	15.3		18.0	
Approach LOS		B	B		B	

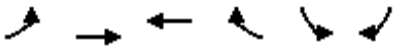
Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	33.4		16.7	11.0	22.4
Change Period (Y+Rc), s	* 6		5.0	3.5	* 6
Max Green Setting (Gmax), s	* 31		28.0	7.5	* 20
Max Q Clear Time (g_c+I1), s	6.9		10.3	8.2	8.7
Green Ext Time (p_c), s	13.9		1.4	0.0	7.4

Intersection Summary	
HCM 6th Ctrl Delay	15.9
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	200	757	533	164	221	259
Future Volume (veh/h)	200	757	533	164	221	259
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.95	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	227	860	606	186	251	294
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	278	2753	1173	350	431	383
Arrive On Green	0.16	0.54	0.30	0.30	0.24	0.24
Sat Flow, veh/h	1781	5274	4018	1149	1781	1585
Grp Volume(v), veh/h	227	860	534	258	251	294
Grp Sat Flow(s),veh/h/ln	1781	1702	1702	1595	1781	1585
Q Serve(g_s), s	6.3	4.8	6.6	6.9	6.4	8.8
Cycle Q Clear(g_c), s	6.3	4.8	6.6	6.9	6.4	8.8
Prop In Lane	1.00			0.72	1.00	1.00
Lane Grp Cap(c), veh/h	278	2753	1038	486	431	383
V/C Ratio(X)	0.82	0.31	0.51	0.53	0.58	0.77
Avail Cap(c_a), veh/h	278	3272	1383	648	1079	960
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	20.9	6.5	14.7	14.8	17.1	18.1
Incr Delay (d2), s/veh	15.8	0.1	0.8	1.9	1.1	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	1.3	2.3	2.4	2.4	7.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	36.7	6.7	15.5	16.7	18.3	21.0
LnGrp LOS	D	A	B	B	B	C
Approach Vol, veh/h		1087	792		545	
Approach Delay, s/veh		12.9	15.9		19.7	
Approach LOS		B	B		B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		33.8		17.4	12.0	21.8
Change Period (Y+Rc), s		6.2		5.0	4.0	6.2
Max Green Setting (Gmax), s		32.8		31.0	8.0	20.8
Max Q Clear Time (g_c+I1), s		6.8		10.8	8.3	8.9
Green Ext Time (p_c), s		11.5		1.6	0.0	6.4

Intersection Summary		
HCM 6th Ctrl Delay		15.4
HCM 6th LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	389	409	64	283	14	283	193	39	53	187	132
Future Volume (veh/h)	180	389	409	64	283	14	283	193	39	53	187	132
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	188	405	426	67	295	15	295	201	41	55	195	138
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	233	1228	572	122	1679	521	349	782	349	104	530	237
Arrive On Green	0.07	0.36	0.36	0.04	0.33	0.33	0.10	0.22	0.22	0.03	0.15	0.15
Sat Flow, veh/h	3456	3404	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	188	405	426	67	295	15	295	201	41	55	195	138
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	3.2	5.1	14.0	1.1	2.4	0.4	5.0	2.8	1.2	0.9	2.9	4.8
Cycle Q Clear(g_c), s	3.2	5.1	14.0	1.1	2.4	0.4	5.0	2.8	1.2	0.9	2.9	4.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	233	1228	572	122	1679	521	349	782	349	104	530	237
V/C Ratio(X)	0.81	0.33	0.74	0.55	0.18	0.03	0.84	0.26	0.12	0.53	0.37	0.58
Avail Cap(c_a), veh/h	233	1605	747	233	2407	747	349	1975	881	233	1855	827
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.3	13.8	16.6	28.2	14.2	13.5	26.2	19.1	18.5	28.4	22.7	23.5
Incr Delay (d2), s/veh	17.5	0.2	3.5	1.4	0.1	0.0	16.3	0.2	0.2	1.5	0.5	2.7
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	1.8	1.8	5.0	0.5	0.9	0.1	2.7	1.1	0.4	0.4	1.2	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.8	14.0	20.1	29.6	14.3	13.5	42.5	19.3	18.7	29.9	23.3	26.3
LnGrp LOS	D	B	C	C	B	B	D	B	B	C	C	C
Approach Vol, veh/h		1019			377			537			388	
Approach Delay, s/veh		22.2			17.0			32.0			25.3	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.1	28.4	10.0	14.9	8.0	26.5	5.8	19.1
Change Period (Y+Rc), s	4.0	* 7	4.0	* 6	4.0	* 7	4.0	* 6
Max Green Setting (Gmax), s	4.6	* 28	6.0	* 31	4.0	* 28	4.0	* 33
Max Q Clear Time (g_c+I1), s	3.1	16.0	7.0	6.8	5.2	4.4	2.9	4.8
Green Ext Time (p_c), s	0.0	5.5	0.0	2.0	0.0	2.6	0.0	1.7

Intersection Summary	
HCM 6th Ctrl Delay	24.1
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	194	83	423	160	92	171	532	212	109	699	159
Future Volume (veh/h)	154	194	83	423	160	92	171	532	212	109	699	159
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	162	204	87	445	168	97	180	560	223	115	736	167
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	188	237	368	666	214	124	252	696	277	145	830	188
Arrive On Green	0.23	0.23	0.23	0.19	0.19	0.19	0.07	0.28	0.28	0.08	0.29	0.29
Sat Flow, veh/h	810	1020	1585	3456	1112	642	3456	2483	986	1781	2877	653
Grp Volume(v), veh/h	366	0	87	445	0	265	180	400	383	115	454	449
Grp Sat Flow(s),veh/h/ln	1830	0	1585	1728	0	1755	1728	1777	1693	1781	1777	1753
Q Serve(g_s), s	16.6	0.0	3.9	10.3	0.0	12.4	4.4	18.1	18.2	5.5	21.2	21.2
Cycle Q Clear(g_c), s	16.6	0.0	3.9	10.3	0.0	12.4	4.4	18.1	18.2	5.5	21.2	21.2
Prop In Lane	0.44		1.00	1.00		0.37	1.00		0.58	1.00		0.37
Lane Grp Cap(c), veh/h	425	0	368	666	0	338	252	498	475	145	513	506
V/C Ratio(X)	0.86	0.00	0.24	0.67	0.00	0.78	0.71	0.80	0.81	0.80	0.89	0.89
Avail Cap(c_a), veh/h	549	0	476	917	0	466	259	498	475	175	533	526
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	0.0	27.0	32.4	0.0	33.3	39.3	29.0	29.0	39.1	29.5	29.5
Incr Delay (d2), s/veh	10.7	0.0	0.3	1.2	0.0	5.9	7.3	9.7	10.3	15.4	16.5	16.7
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	8.4	0.0	1.5	4.3	0.0	5.7	2.1	8.8	8.5	3.0	11.0	10.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.6	0.0	27.3	33.6	0.0	39.2	46.6	38.6	39.3	54.5	46.0	46.2
LnGrp LOS	D	A	C	C	A	D	D	D	D	D	D	D
Approach Vol, veh/h		453			710			963			1018	
Approach Delay, s/veh		39.7			35.7			40.4			47.0	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	25.1	9.8	30.0	21.7	10.5	29.3
Change Period (Y+Rc), s	5.0	3.5	5.0	5.0	3.5	5.0
Max Green Setting (Gmax), s	26.0	6.5	26.0	23.0	8.5	24.0
Max Q Clear Time (g_c+I1), s	18.6	6.4	23.2	14.4	7.5	20.2
Green Ext Time (p_c), s	1.5	0.0	1.8	2.2	0.0	2.1

Intersection Summary	
HCM 6th Ctrl Delay	41.4
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	186	60	194	267	194	51	293	147	127	296	156
Future Volume (veh/h)	167	186	60	194	267	194	51	293	147	127	296	156
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.94	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	190	211	68	220	303	220	58	333	167	144	336	177
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	236	399	391	268	433	517	72	543	265	182	676	348
Arrive On Green	0.13	0.21	0.21	0.15	0.23	0.23	0.04	0.24	0.24	0.10	0.30	0.30
Sat Flow, veh/h	1781	1870	1528	1781	1870	1531	1781	2266	1105	1781	2244	1154
Grp Volume(v), veh/h	190	211	68	220	303	220	58	259	241	144	264	249
Grp Sat Flow(s),veh/h/ln	1781	1870	1528	1781	1870	1531	1781	1777	1595	1781	1777	1622
Q Serve(g_s), s	6.0	5.8	2.0	6.9	8.6	6.5	1.9	7.5	7.8	4.6	7.1	7.3
Cycle Q Clear(g_c), s	6.0	5.8	2.0	6.9	8.6	6.5	1.9	7.5	7.8	4.6	7.1	7.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.69	1.00		0.71
Lane Grp Cap(c), veh/h	236	399	391	268	433	517	72	426	382	182	535	489
V/C Ratio(X)	0.81	0.53	0.17	0.82	0.70	0.43	0.80	0.61	0.63	0.79	0.49	0.51
Avail Cap(c_a), veh/h	370	712	646	385	728	758	213	645	579	231	664	606
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	24.4	20.2	16.8	23.8	20.4	15.0	27.5	19.6	19.7	25.3	16.6	16.7
Incr Delay (d2), s/veh	3.2	0.6	0.1	6.0	1.1	0.3	7.5	1.7	2.1	10.2	0.9	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	2.6	2.4	0.7	3.1	3.6	2.0	0.9	3.0	2.9	2.3	2.7	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.6	20.7	16.9	29.8	21.5	15.3	35.0	21.3	21.8	35.6	17.4	17.7
LnGrp LOS	C	C	B	C	C	B	C	C	C	D	B	B
Approach Vol, veh/h		469			743			558			657	
Approach Delay, s/veh		23.0			22.1			22.9			21.5	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.2	17.3	5.8	22.4	11.2	18.4	9.4	18.9
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0
Max Green Setting (Gmax), s	12.5	22.0	6.9	21.6	12.0	22.5	7.5	21.0
Max Q Clear Time (g_c+I1), s	8.9	7.8	3.9	9.3	8.0	10.6	6.6	9.8
Green Ext Time (p_c), s	0.0	0.8	0.0	3.0	0.0	1.5	0.0	2.8

Intersection Summary	
HCM 6th Ctrl Delay	22.3
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	19.7
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	98	204	5	13	124	227	10	2	45	231	0	105
Future Vol, veh/h	98	204	5	13	124	227	10	2	45	231	0	105
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	127	265	6	17	161	295	13	3	58	300	0	136
Number of Lanes	1	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	16.6	15.3	11.5	28.7
HCM LOS	C	C	B	D

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	18%	100%	0%	9%	0%	69%
Vol Thru, %	4%	0%	98%	91%	0%	0%
Vol Right, %	79%	0%	2%	0%	100%	31%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	57	98	209	137	227	336
LT Vol	10	98	0	13	0	231
Through Vol	2	0	204	124	0	0
RT Vol	45	0	5	0	227	105
Lane Flow Rate	74	127	271	178	295	436
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.148	0.272	0.54	0.355	0.525	0.78
Departure Headway (Hd)	7.202	7.688	7.157	7.175	6.407	6.436
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	496	467	502	500	563	563
Service Time	5.276	5.443	4.911	4.927	4.159	4.479
HCM Lane V/C Ratio	0.149	0.272	0.54	0.356	0.524	0.774
HCM Control Delay	11.5	13.3	18.1	13.9	16.1	28.7
HCM Lane LOS	B	B	C	B	C	D
HCM 95th-tile Q	0.5	1.1	3.2	1.6	3	7.2

Intersection	
Int Delay, s/veh	71

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	237	217	10	1	208	73	64	0	52	55	0	280
Future Vol, veh/h	237	217	10	1	208	73	64	0	52	55	0	280
Conflicting Peds, #/hr	0	0	10	0	0	10	0	0	10	0	0	10
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	293	268	12	1	257	90	79	0	64	68	0	346

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	357	0	0	290	0	0	1357	1229	294	1216	1190	322
Stage 1	-	-	-	-	-	-	870	870	-	314	314	-
Stage 2	-	-	-	-	-	-	487	359	-	902	876	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1202	-	-	1272	-	-	126	178	745	158	188	719
Stage 1	-	-	-	-	-	-	346	369	-	697	656	-
Stage 2	-	-	-	-	-	-	562	627	-	332	367	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1191	-	-	1260	-	-	~ 51	131	731	115	139	705
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 51	131	-	115	139	-
Stage 1	-	-	-	-	-	-	258	275	-	521	649	-
Stage 2	-	-	-	-	-	-	283	620	-	226	274	-

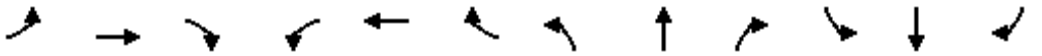
Approach	EB	WB	NB	SB
HCM Control Delay, s	4.6	0	$ 419.3	102.3
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	87	1191	-	-	1260	-	-	383
HCM Lane V/C Ratio	1.646	0.246	-	-	0.001	-	-	1.08
HCM Control Delay (s)	$ 419.3	9	-	-	7.9	0	-	102.3
HCM Lane LOS	F	A	-	-	A	A	-	F
HCM 95th %tile Q(veh)	11.6	1	-	-	0	-	-	14.5

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

APPENDIX D

NEAR-TERM PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰↰		↱
Traffic Volume (veh/h)	0	1774	54	0	1230	145	0	0	0	293	0	80
Future Volume (veh/h)	0	1774	54	0	1230	145	0	0	0	293	0	80
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870				1870	0	1870
Adj Flow Rate, veh/h	0	1867	57	0	1295	153				308	0	84
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	2	2	0	2	2				2	0	2
Cap, veh/h	0	3408	1023	0	3408	1232				439	0	201
Arrive On Green	0.00	0.67	0.67	0.00	0.67	0.67				0.13	0.00	0.13
Sat Flow, veh/h	0	5274	1533	0	5274	1545				3456	0	1585
Grp Volume(v), veh/h	0	1867	57	0	1295	153				308	0	84
Grp Sat Flow(s),veh/h/ln	0	1702	1533	0	1702	1545				1728	0	1585
Q Serve(g_s), s	0.0	10.5	0.7	0.0	6.2	1.2				4.7	0.0	2.7
Cycle Q Clear(g_c), s	0.0	10.5	0.7	0.0	6.2	1.2				4.7	0.0	2.7
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3408	1023	0	3408	1232				439	0	201
V/C Ratio(X)	0.00	0.55	0.06	0.00	0.38	0.12				0.70	0.00	0.42
Avail Cap(c_a), veh/h	0	3408	1023	0	3408	1232				534	0	245
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	0.00	0.93	0.93				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	4.8	3.2	0.0	4.1	1.3				23.0	0.0	22.1
Incr Delay (d2), s/veh	0.0	0.6	0.1	0.0	0.3	0.2				3.3	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.3	0.2	0.0	1.4	0.4				2.0	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	5.4	3.3	0.0	4.4	1.5				26.3	0.0	23.6
LnGrp LOS	A	A	A	A	A	A				C	A	C
Approach Vol, veh/h		1924			1448						392	
Approach Delay, s/veh		5.4			4.1						25.7	
Approach LOS		A			A						C	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		42.5		12.5		42.5						
Change Period (Y+Rc), s		5.8		5.5		5.8						
Max Green Setting (Gmax), s		35.2		8.5		35.2						
Max Q Clear Time (g_c+I1), s		12.5		6.7		8.2						
Green Ext Time (p_c), s		20.1		0.3		18.8						

Intersection Summary	
HCM 6th Ctrl Delay	7.0
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1905	161	0	1348	559	27	0	141	0	0	0
Future Volume (veh/h)	0	1905	161	0	1348	559	27	0	141	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870	1870	0	1870			
Adj Flow Rate, veh/h	0	2005	169	0	1419	588	28	0	148			
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	2	2	0	2	2	2	0	2			
Cap, veh/h	0	3521	1191	0	3521	1058	150	0	236			
Arrive On Green	0.00	0.69	0.69	0.00	0.69	0.69	0.08	0.00	0.08			
Sat Flow, veh/h	0	5274	1534	0	5274	1534	1781	0	2790			
Grp Volume(v), veh/h	0	2005	169	0	1419	588	28	0	148			
Grp Sat Flow(s),veh/h/ln	0	1702	1534	0	1702	1534	1781	0	1395			
Q Serve(g_s), s	0.0	10.0	1.4	0.0	6.0	9.7	0.7	0.0	2.6			
Cycle Q Clear(g_c), s	0.0	10.0	1.4	0.0	6.0	9.7	0.7	0.0	2.6			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3521	1191	0	3521	1058	150	0	236			
V/C Ratio(X)	0.00	0.57	0.14	0.00	0.40	0.56	0.19	0.00	0.63			
Avail Cap(c_a), veh/h	0	3521	1191	0	3521	1058	196	0	307			
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	0.79	0.79	0.00	0.54	0.54	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	4.0	1.4	0.0	3.3	3.9	21.3	0.0	22.1			
Incr Delay (d2), s/veh	0.0	0.5	0.2	0.0	0.2	1.1	0.6	0.0	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			
%ile BackOfQ(50%),veh/ln	0.0	1.8	0.3	0.0	1.0	1.7	0.3	0.0	0.9			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	4.5	1.6	0.0	3.5	5.1	21.9	0.0	25.1			
LnGrp LOS	A	A	A	A	A	A	C	A	C			
Approach Vol, veh/h		2174			2007			176				
Approach Delay, s/veh		4.3			4.0			24.6				
Approach LOS		A			A			C				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		40.3				40.3		9.7				
Change Period (Y+Rc), s		5.8				5.8		5.5				
Max Green Setting (Gmax), s		33.2				33.2		5.5				
Max Q Clear Time (g_c+I1), s		12.0				11.7		4.6				
Green Ext Time (p_c), s		19.6				18.8		0.1				
Intersection Summary												
HCM 6th Ctrl Delay			5.0									
HCM 6th LOS			A									

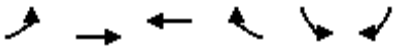
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	507	901	308	248	898	83	593	402	181	46	219	249
Future Volume (veh/h)	507	901	308	248	898	83	593	402	181	46	219	249
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.97	1.00		0.97	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	534	948	324	261	945	87	624	423	191	48	231	262
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	470	1923	991	317	1577	145	553	1201	667	103	738	533
Arrive On Green	0.14	0.38	0.38	0.09	0.33	0.33	0.16	0.34	0.34	0.03	0.21	0.21
Sat Flow, veh/h	3456	5106	2631	3456	4746	436	3456	3554	1542	3456	3554	1527
Grp Volume(v), veh/h	534	948	324	261	677	355	624	423	191	48	231	262
Grp Sat Flow(s),veh/h/ln	1728	1702	1315	1728	1702	1777	1728	1777	1542	1728	1777	1527
Q Serve(g_s), s	17.0	17.8	10.9	9.3	20.7	20.8	20.0	11.2	10.1	1.7	6.9	17.0
Cycle Q Clear(g_c), s	17.0	17.8	10.9	9.3	20.7	20.8	20.0	11.2	10.1	1.7	6.9	17.0
Prop In Lane	1.00		1.00	1.00		0.25	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	470	1923	991	317	1131	591	553	1201	667	103	738	533
V/C Ratio(X)	1.14	0.49	0.33	0.82	0.60	0.60	1.13	0.35	0.29	0.47	0.31	0.49
Avail Cap(c_a), veh/h	470	1923	991	415	1131	591	553	1450	774	138	1023	655
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)	0.83	0.83	0.83	0.76	0.76	0.76	1.00	1.00	1.00	0.93	0.93	0.93
Uniform Delay (d), s/veh	54.0	29.8	27.7	55.8	34.8	34.8	52.5	31.1	23.2	59.7	42.0	32.5
Incr Delay (d2), s/veh	81.3	0.8	0.7	6.0	1.8	3.4	78.8	0.2	0.3	3.7	0.3	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	12.7	7.4	3.6	4.3	8.9	9.6	14.7	4.9	3.7	0.8	3.1	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	135.3	30.6	28.4	61.7	36.6	38.3	131.3	31.3	23.5	63.3	42.2	33.3
LnGrp LOS	F	C	C	E	D	D	F	C	C	E	D	C
Approach Vol, veh/h		1806			1293			1238			541	
Approach Delay, s/veh		61.2			42.1			80.5			39.8	
Approach LOS		E			D			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.5	54.1	24.0	31.5	21.0	48.5	7.7	47.8
Change Period (Y+Rc), s	4.0	* 7	4.0	5.5	4.0	* 7	4.0	5.5
Max Green Setting (Gmax), s	15.0	* 34	20.0	36.0	17.0	* 32	5.0	51.0
Max Q Clear Time (g_c+I1), s	11.3	19.8	22.0	19.0	19.0	22.8	3.7	13.2
Green Ext Time (p_c), s	0.2	8.5	0.0	2.7	0.0	5.3	0.0	4.7

Intersection Summary	
HCM 6th Ctrl Delay	58.7
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	564	565	944	104	65	285
Future Volume (veh/h)	564	565	944	104	65	285
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.96	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	600	601	1004	111	69	303
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	724	3265	1676	185	256	456
Arrive On Green	0.21	0.64	0.36	0.36	0.14	0.14
Sat Flow, veh/h	3456	5274	4811	512	1781	3170
Grp Volume(v), veh/h	600	601	735	380	69	303
Grp Sat Flow(s),veh/h/ln	1728	1702	1702	1751	1781	1585
Q Serve(g_s), s	8.4	2.4	8.9	9.0	1.8	4.6
Cycle Q Clear(g_c), s	8.4	2.4	8.9	9.0	1.8	4.6
Prop In Lane	1.00			0.29	1.00	1.00
Lane Grp Cap(c), veh/h	724	3265	1229	632	256	456
V/C Ratio(X)	0.83	0.18	0.60	0.60	0.27	0.66
Avail Cap(c_a), veh/h	851	3620	1341	690	982	1748
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	19.2	3.7	13.2	13.2	19.4	20.6
Incr Delay (d2), s/veh	5.2	0.1	1.7	3.4	0.2	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	0.5	3.2	3.6	0.7	4.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	24.4	3.8	15.0	16.6	19.6	21.2
LnGrp LOS	C	A	B	B	B	C
Approach Vol, veh/h		1201	1115		372	
Approach Delay, s/veh		14.1	15.5		20.9	
Approach LOS		B	B		C	

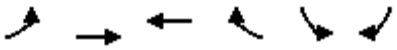
Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	38.5		12.3	14.1	24.3
Change Period (Y+Rc), s	* 6		5.0	3.5	* 6
Max Green Setting (Gmax), s	* 36		28.0	12.5	* 20
Max Q Clear Time (g_c+I1), s	4.4		6.6	10.4	11.0
Green Ext Time (p_c), s	10.5		0.7	0.2	7.2

Intersection Summary	
HCM 6th Ctrl Delay	15.6
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	152	477	1003	206	59	44
Future Volume (veh/h)	152	477	1003	206	59	44
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.96	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	163	513	1078	222	63	47
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	240	3426	1858	382	113	101
Arrive On Green	0.14	0.67	0.44	0.44	0.06	0.06
Sat Flow, veh/h	1781	5274	4379	866	1781	1585
Grp Volume(v), veh/h	163	513	871	429	63	47
Grp Sat Flow(s),veh/h/ln	1781	1702	1702	1673	1781	1585
Q Serve(g_s), s	3.7	1.6	8.1	8.1	1.4	1.2
Cycle Q Clear(g_c), s	3.7	1.6	8.1	8.1	1.4	1.2
Prop In Lane	1.00			0.52	1.00	1.00
Lane Grp Cap(c), veh/h	240	3426	1502	738	113	101
V/C Ratio(X)	0.68	0.15	0.58	0.58	0.56	0.47
Avail Cap(c_a), veh/h	338	3967	1677	824	1308	1164
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	17.4	2.5	8.9	8.9	19.2	19.1
Incr Delay (d2), s/veh	1.2	0.0	0.8	1.6	3.8	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.2	2.3	2.4	0.6	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.6	2.6	9.7	10.5	23.0	22.1
LnGrp LOS	B	A	A	B	C	C
Approach Vol, veh/h		676	1300		110	
Approach Delay, s/veh		6.5	9.9		22.6	
Approach LOS		A	A		C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		34.5		7.7	9.7	24.8
Change Period (Y+Rc), s		6.2		5.0	4.0	6.2
Max Green Setting (Gmax), s		32.8		31.0	8.0	20.8
Max Q Clear Time (g_c+I1), s		3.6		3.4	5.7	10.1
Green Ext Time (p_c), s		6.9		0.3	0.0	8.4

Intersection Summary	
HCM 6th Ctrl Delay	9.5
HCM 6th LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	193	157	186	190	506	66	425	609	83	28	409	277
Future Volume (veh/h)	193	157	186	190	506	66	425	609	83	28	409	277
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	222	180	214	218	582	76	489	700	95	32	470	318
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	220	796	370	165	1112	345	330	1292	576	71	1025	457
Arrive On Green	0.06	0.23	0.23	0.05	0.22	0.22	0.10	0.36	0.36	0.02	0.29	0.29
Sat Flow, veh/h	3456	3404	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	222	180	214	218	582	76	489	700	95	32	470	318
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	4.0	2.7	7.5	3.0	6.3	2.5	6.0	9.8	2.5	0.6	6.8	11.2
Cycle Q Clear(g_c), s	4.0	2.7	7.5	3.0	6.3	2.5	6.0	9.8	2.5	0.6	6.8	11.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	220	796	370	165	1112	345	330	1292	576	71	1025	457
V/C Ratio(X)	1.01	0.23	0.58	1.32	0.52	0.22	1.48	0.54	0.16	0.45	0.46	0.70
Avail Cap(c_a), veh/h	220	1572	732	165	2277	707	330	1924	858	165	1755	783
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	29.4	19.5	21.3	29.9	21.7	20.2	28.4	15.8	13.5	30.4	18.3	19.9
Incr Delay (d2), s/veh	62.8	0.2	1.9	180.1	0.5	0.4	232.0	0.4	0.2	1.7	0.4	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	1.0	2.8	5.3	2.4	0.9	13.0	3.7	0.9	0.2	2.6	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	92.2	19.7	23.2	210.0	22.2	20.6	260.4	16.3	13.7	32.1	18.7	22.2
LnGrp LOS	F	B	C	F	C	C	F	B	B	C	B	C
Approach Vol, veh/h		616			876			1284			820	
Approach Delay, s/veh		47.0			68.8			109.1			20.6	
Approach LOS		D			E			F			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	21.7	10.0	24.1	8.0	20.7	5.3	28.8
Change Period (Y+Rc), s	4.0	* 7	4.0	* 6	4.0	* 7	4.0	* 6
Max Green Setting (Gmax), s	3.0	* 29	6.0	* 31	4.0	* 28	3.0	* 34
Max Q Clear Time (g_c+I1), s	5.0	9.5	8.0	13.2	6.0	8.3	2.6	11.8
Green Ext Time (p_c), s	0.0	3.2	0.0	4.9	0.0	5.4	0.0	6.3

Intersection Summary	
HCM 6th Ctrl Delay	68.4
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	130	54	211	114	52	124	467	253	98	298	107
Future Volume (veh/h)	71	130	54	211	114	52	124	467	253	98	298	107
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	76	138	57	224	121	55	132	497	269	104	317	114
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	115	209	268	586	203	92	217	621	335	133	751	264
Arrive On Green	0.18	0.18	0.18	0.17	0.17	0.17	0.06	0.28	0.28	0.07	0.29	0.29
Sat Flow, veh/h	653	1185	1520	3456	1199	545	3456	2203	1187	1781	2555	898
Grp Volume(v), veh/h	214	0	57	224	0	176	132	400	366	104	218	213
Grp Sat Flow(s),veh/h/ln	1838	0	1520	1728	0	1744	1728	1777	1613	1781	1777	1677
Q Serve(g_s), s	6.7	0.0	2.0	3.6	0.0	5.8	2.3	13.0	13.1	3.6	6.1	6.4
Cycle Q Clear(g_c), s	6.7	0.0	2.0	3.6	0.0	5.8	2.3	13.0	13.1	3.6	6.1	6.4
Prop In Lane	0.36		1.00	1.00		0.31	1.00		0.74	1.00		0.54
Lane Grp Cap(c), veh/h	323	0	268	586	0	296	217	501	455	133	522	493
V/C Ratio(X)	0.66	0.00	0.21	0.38	0.00	0.60	0.61	0.80	0.80	0.78	0.42	0.43
Avail Cap(c_a), veh/h	686	0	568	1279	0	646	406	543	493	181	522	493
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.9	0.0	21.9	22.9	0.0	23.8	28.4	20.7	20.7	28.2	17.7	17.7
Incr Delay (d2), s/veh	2.3	0.0	0.4	0.4	0.0	1.9	1.0	8.3	9.4	9.6	0.8	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	2.9	0.0	0.7	1.4	0.0	2.4	0.9	6.1	5.7	1.8	2.4	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.2	0.0	22.3	23.3	0.0	25.7	29.4	29.0	30.1	37.9	18.4	18.6
LnGrp LOS	C	A	C	C	A	C	C	C	C	D	B	B
Approach Vol, veh/h		271			400			898			535	
Approach Delay, s/veh		25.4			24.4			29.5			22.3	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	15.9	7.4	23.3	15.5	8.1	22.5
Change Period (Y+Rc), s	5.0	3.5	5.0	5.0	3.5	5.0
Max Green Setting (Gmax), s	23.2	7.3	18.0	23.0	6.3	19.0
Max Q Clear Time (g_c+I1), s	8.7	4.3	8.4	7.8	5.6	15.1
Green Ext Time (p_c), s	1.2	0.0	2.4	1.6	0.0	2.2

Intersection Summary	
HCM 6th Ctrl Delay	26.2
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	150	36	67	104	75	51	233	255	156	269	131
Future Volume (veh/h)	80	150	36	67	104	75	51	233	255	156	269	131
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.95	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	92	172	41	77	120	86	59	268	293	179	309	151
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	117	328	331	97	307	450	73	524	445	226	882	420
Arrive On Green	0.07	0.18	0.18	0.05	0.16	0.16	0.04	0.29	0.29	0.13	0.38	0.38
Sat Flow, veh/h	1781	1870	1520	1781	1870	1517	1781	1777	1507	1781	2314	1101
Grp Volume(v), veh/h	92	172	41	77	120	86	59	268	293	179	235	225
Grp Sat Flow(s),veh/h/ln	1781	1870	1520	1781	1870	1517	1781	1777	1507	1781	1777	1638
Q Serve(g_s), s	2.5	4.1	1.1	2.1	2.8	2.1	1.6	6.1	8.3	4.8	4.6	4.8
Cycle Q Clear(g_c), s	2.5	4.1	1.1	2.1	2.8	2.1	1.6	6.1	8.3	4.8	4.6	4.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.67
Lane Grp Cap(c), veh/h	117	328	331	97	307	450	73	524	445	226	677	624
V/C Ratio(X)	0.79	0.52	0.12	0.80	0.39	0.19	0.81	0.51	0.66	0.79	0.35	0.36
Avail Cap(c_a), veh/h	201	882	781	164	843	885	248	765	649	347	863	796
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	22.5	18.3	15.4	22.8	18.2	13.0	23.2	14.3	15.1	20.7	10.8	10.8
Incr Delay (d2), s/veh	4.4	0.7	0.1	5.5	0.4	0.1	7.9	0.9	2.0	3.2	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	1.1	1.6	0.3	0.9	1.1	0.6	0.8	2.2	2.7	2.0	1.6	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.9	19.0	15.5	28.3	18.6	13.1	31.1	15.2	17.1	23.9	11.1	11.3
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		305			283			620			639	
Approach Delay, s/veh		20.9			19.6			17.6			14.8	
Approach LOS		C			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.1	13.6	5.5	23.6	6.7	13.0	9.7	19.4
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0
Max Green Setting (Gmax), s	4.5	23.0	6.8	23.7	5.5	22.0	9.5	21.0
Max Q Clear Time (g_c+I1), s	4.1	6.1	3.6	6.8	4.5	4.8	6.8	10.3
Green Ext Time (p_c), s	0.0	0.7	0.0	3.1	0.0	0.6	0.0	3.1

Intersection Summary	
HCM 6th Ctrl Delay	17.5
HCM 6th LOS	B

Intersection	
Intersection Delay, s/veh	10.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	45	56	21	51	210	97	3	0	12	34	0	29
Future Vol, veh/h	45	56	21	51	210	97	3	0	12	34	0	29
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	63	79	30	72	296	137	4	0	17	48	0	41
Number of Lanes	1	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	8.9	11.7	8.3	9.1
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	20%	100%	0%	20%	0%	54%
Vol Thru, %	0%	0%	73%	80%	0%	0%
Vol Right, %	80%	0%	27%	0%	100%	46%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	15	45	77	261	97	63
LT Vol	3	45	0	51	0	34
Through Vol	0	0	56	210	0	0
RT Vol	12	0	21	0	97	29
Lane Flow Rate	21	63	108	368	137	89
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.03	0.102	0.153	0.519	0.162	0.13
Departure Headway (Hd)	5.111	5.775	5.08	5.079	4.278	5.263
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	696	619	704	709	836	679
Service Time	3.176	3.525	2.829	2.818	2.016	3.316
HCM Lane V/C Ratio	0.03	0.102	0.153	0.519	0.164	0.131
HCM Control Delay	8.3	9.2	8.8	13.2	7.8	9.1
HCM Lane LOS	A	A	A	B	A	A
HCM 95th-tile Q	0.1	0.3	0.5	3	0.6	0.4

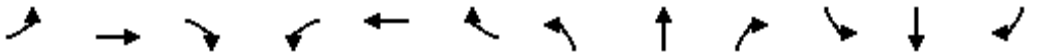
Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	183	126	128	35	116	45	8	0	1	15	0	42
Future Vol, veh/h	183	126	128	35	116	45	8	0	1	15	0	42
Conflicting Peds, #/hr	0	0	10	0	0	10	0	0	10	0	0	10
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	206	142	144	39	130	51	9	0	1	17	0	47

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	191	0	0	296	0	0	903	905	234	881	952	176
Stage 1	-	-	-	-	-	-	636	636	-	244	244	-
Stage 2	-	-	-	-	-	-	267	269	-	637	708	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1383	-	-	1265	-	-	258	276	805	267	259	867
Stage 1	-	-	-	-	-	-	466	472	-	760	704	-
Stage 2	-	-	-	-	-	-	738	687	-	465	438	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1370	-	-	1253	-	-	206	222	790	225	208	851
Mov Cap-2 Maneuver	-	-	-	-	-	-	206	222	-	225	208	-
Stage 1	-	-	-	-	-	-	392	397	-	640	672	-
Stage 2	-	-	-	-	-	-	666	656	-	391	369	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.4	1.4	21.8	13.4
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	224	1370	-	-	1253	-	-	491
HCM Lane V/C Ratio	0.045	0.15	-	-	0.031	-	-	0.13
HCM Control Delay (s)	21.8	8.1	-	-	8	0	-	13.4
HCM Lane LOS	C	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0.5	-	-	0.1	-	-	0.4



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰↰		↱
Traffic Volume (veh/h)	0	2053	27	0	1991	113	0	0	0	559	0	113
Future Volume (veh/h)	0	2053	27	0	1991	113	0	0	0	559	0	113
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870				1870	0	1870
Adj Flow Rate, veh/h	0	2116	28	0	2053	116				576	0	116
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	2	2	0	2	2				2	0	2
Cap, veh/h	0	3106	931	0	3106	1254				703	0	322
Arrive On Green	0.00	0.61	0.61	0.00	0.61	0.61				0.20	0.00	0.20
Sat Flow, veh/h	0	5274	1531	0	5274	1531				3456	0	1585
Grp Volume(v), veh/h	0	2116	28	0	2053	116				576	0	116
Grp Sat Flow(s),veh/h/ln	0	1702	1531	0	1702	1531				1728	0	1585
Q Serve(g_s), s	0.0	16.6	0.4	0.0	15.8	0.9				9.6	0.0	3.8
Cycle Q Clear(g_c), s	0.0	16.6	0.4	0.0	15.8	0.9				9.6	0.0	3.8
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3106	931	0	3106	1254				703	0	322
V/C Ratio(X)	0.00	0.68	0.03	0.00	0.66	0.09				0.82	0.00	0.36
Avail Cap(c_a), veh/h	0	3106	931	0	3106	1254				778	0	357
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	0.00	0.79	0.79				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	7.9	4.7	0.0	7.7	1.2				22.8	0.0	20.5
Incr Delay (d2), s/veh	0.0	1.2	0.1	0.0	0.9	0.1				6.5	0.0	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
%ile BackOfQ(50%),veh/ln	0.0	4.8	0.1	0.0	4.4	0.5				4.2	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	9.1	4.8	0.0	8.6	1.3				29.3	0.0	21.3
LnGrp LOS	A	A	A	A	A	A				C	A	C
Approach Vol, veh/h		2144			2169						692	
Approach Delay, s/veh		9.0			8.2						28.0	
Approach LOS		A			A						C	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		42.3		17.7		42.3						
Change Period (Y+Rc), s		5.8		5.5		5.8						
Max Green Setting (Gmax), s		35.2		13.5		35.2						
Max Q Clear Time (g_c+I1), s		18.6		11.6		17.8						
Green Ext Time (p_c), s		15.6		0.6		16.4						

Intersection Summary	
HCM 6th Ctrl Delay	11.3
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2501	112	0	2070	393	34	0	181	0	0	0
Future Volume (veh/h)	0	2501	112	0	2070	393	34	0	181	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870	1870	0	1870			
Adj Flow Rate, veh/h	0	2661	119	0	2202	418	36	0	193			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	0	2	2	0	2	2	2	0	2			
Cap, veh/h	0	3431	1192	0	3431	1030	182	0	285			
Arrive On Green	0.00	0.67	0.67	0.00	0.67	0.67	0.10	0.00	0.10			
Sat Flow, veh/h	0	5274	1533	0	5274	1533	1781	0	2790			
Grp Volume(v), veh/h	0	2661	119	0	2202	418	36	0	193			
Grp Sat Flow(s),veh/h/ln	0	1702	1533	0	1702	1533	1781	0	1395			
Q Serve(g_s), s	0.0	17.8	1.0	0.0	12.4	6.1	0.9	0.0	3.3			
Cycle Q Clear(g_c), s	0.0	17.8	1.0	0.0	12.4	6.1	0.9	0.0	3.3			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3431	1192	0	3431	1030	182	0	285			
V/C Ratio(X)	0.00	0.78	0.10	0.00	0.64	0.41	0.20	0.00	0.68			
Avail Cap(c_a), veh/h	0	3431	1192	0	3431	1030	182	0	285			
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	0.63	0.63	0.00	0.33	0.33	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	5.6	1.4	0.0	4.7	3.7	20.6	0.0	21.7			
Incr Delay (d2), s/veh	0.0	1.1	0.1	0.0	0.3	0.4	0.6	0.0	6.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	3.4	0.2	0.0	2.2	1.1	0.4	0.0	1.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	6.7	1.5	0.0	5.0	4.1	21.1	0.0	28.1			
LnGrp LOS	A	A	A	A	A	A	C	A	C			
Approach Vol, veh/h		2780			2620			229				
Approach Delay, s/veh		6.5			4.9			27.0				
Approach LOS		A			A			C				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		39.4				39.4		10.6				
Change Period (Y+Rc), s		5.8				5.8		5.5				
Max Green Setting (Gmax), s		33.6				33.6		5.1				
Max Q Clear Time (g_c+I1), s		19.8				14.4		5.3				
Green Ext Time (p_c), s		13.6				18.6		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			6.6									
HCM 6th LOS			A									

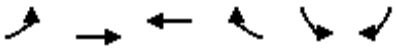
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	508	937	751	390	939	77	499	491	245	155	712	569
Future Volume (veh/h)	508	937	751	390	939	77	499	491	245	155	712	569
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	524	966	774	402	968	79	514	506	253	160	734	587
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	421	1487	773	361	1314	107	391	1286	724	222	1112	675
Arrive On Green	0.12	0.29	0.29	0.10	0.27	0.27	0.11	0.36	0.36	0.06	0.31	0.31
Sat Flow, veh/h	3456	5106	2652	3456	4799	391	3456	3554	1544	3456	3554	1540
Grp Volume(v), veh/h	524	966	774	402	686	361	514	506	253	160	734	587
Grp Sat Flow(s),veh/h/ln	1728	1702	1326	1728	1702	1785	1728	1777	1544	1728	1777	1540
Q Serve(g_s), s	14.0	19.0	33.5	12.0	21.1	21.2	13.0	12.2	12.0	5.2	20.6	36.0
Cycle Q Clear(g_c), s	14.0	19.0	33.5	12.0	21.1	21.2	13.0	12.2	12.0	5.2	20.6	36.0
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	421	1487	773	361	932	489	391	1286	724	222	1112	675
V/C Ratio(X)	1.25	0.65	1.00	1.11	0.74	0.74	1.32	0.39	0.35	0.72	0.66	0.87
Avail Cap(c_a), veh/h	421	1487	773	361	932	489	391	1286	724	300	1112	675
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)	0.65	0.65	0.65	0.82	0.82	0.82	1.00	1.00	1.00	0.23	0.23	0.23
Uniform Delay (d), s/veh	50.5	35.6	40.8	51.5	38.0	38.0	51.0	27.3	19.6	52.8	34.2	29.7
Incr Delay (d2), s/veh	123.2	1.4	26.5	78.0	4.3	8.0	159.2	0.2	0.3	1.5	0.4	3.1
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	18.2	8.0	13.6	9.1	9.3	10.3	14.2	5.2	4.3	2.3	8.9	15.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	173.7	37.1	67.3	129.5	42.2	46.0	210.2	27.5	19.9	54.3	34.6	32.8
LnGrp LOS	F	D	F	F	D	D	F	C	B	D	C	C
Approach Vol, veh/h		2264			1449			1273			1481	
Approach Delay, s/veh		79.0			67.4			99.8			36.0	
Approach LOS		E			E			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	40.5	17.0	41.5	18.0	38.5	11.4	47.1
Change Period (Y+Rc), s	4.0	* 7	4.0	5.5	4.0	* 7	4.0	5.5
Max Green Setting (Gmax), s	12.0	* 34	13.0	36.0	14.0	* 32	10.0	39.0
Max Q Clear Time (g_c+I1), s	14.0	35.5	15.0	38.0	16.0	23.2	7.2	14.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	5.2	0.1	5.5

Intersection Summary	
HCM 6th Ctrl Delay	70.6
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	453	884	706	88	119	579
Future Volume (veh/h)	453	884	706	88	119	579
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.95	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	487	951	759	95	128	623
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	607	2800	1409	175	444	791
Arrive On Green	0.18	0.55	0.31	0.31	0.25	0.25
Sat Flow, veh/h	3456	5274	4740	567	1781	3170
Grp Volume(v), veh/h	487	951	563	291	128	623
Grp Sat Flow(s),veh/h/ln	1728	1702	1702	1735	1781	1585
Q Serve(g_s), s	7.4	5.6	7.5	7.6	3.2	10.0
Cycle Q Clear(g_c), s	7.4	5.6	7.5	7.6	3.2	10.0
Prop In Lane	1.00			0.33	1.00	1.00
Lane Grp Cap(c), veh/h	607	2800	1049	535	444	791
V/C Ratio(X)	0.80	0.34	0.54	0.54	0.29	0.79
Avail Cap(c_a), veh/h	794	3380	1252	638	917	1632
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	21.5	6.8	15.6	15.6	16.5	19.1
Incr Delay (d2), s/veh	3.3	0.3	1.6	3.1	0.1	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	1.6	2.8	3.1	1.2	8.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	24.8	7.1	17.2	18.7	16.6	19.7
LnGrp LOS	C	A	B	B	B	B
Approach Vol, veh/h		1438	854		751	
Approach Delay, s/veh		13.1	17.7		19.2	
Approach LOS		B	B		B	

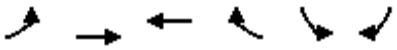
Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	35.8		18.6	13.1	22.8
Change Period (Y+Rc), s	* 6		5.0	3.5	* 6
Max Green Setting (Gmax), s	* 36		28.0	12.5	* 20
Max Q Clear Time (g_c+I1), s	7.6		12.0	9.4	9.6
Green Ext Time (p_c), s	16.0		1.6	0.2	6.9

Intersection Summary	
HCM 6th Ctrl Delay	15.9
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	167	836	589	165	219	206
Future Volume (veh/h)	167	836	589	165	219	206
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.95	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	190	950	669	188	249	234
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	257	2856	1306	360	369	328
Arrive On Green	0.14	0.56	0.33	0.33	0.21	0.21
Sat Flow, veh/h	1781	5274	4103	1083	1781	1585
Grp Volume(v), veh/h	190	950	577	280	249	234
Grp Sat Flow(s),veh/h/ln	1781	1702	1702	1614	1781	1585
Q Serve(g_s), s	4.9	4.8	6.5	6.7	6.2	6.6
Cycle Q Clear(g_c), s	4.9	4.8	6.5	6.7	6.2	6.6
Prop In Lane	1.00			0.67	1.00	1.00
Lane Grp Cap(c), veh/h	257	2856	1130	536	369	328
V/C Ratio(X)	0.74	0.33	0.51	0.52	0.68	0.71
Avail Cap(c_a), veh/h	297	3491	1476	700	1151	1024
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	19.7	5.7	12.9	13.0	17.5	17.7
Incr Delay (d2), s/veh	6.4	0.1	0.8	1.7	2.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	1.2	2.2	2.3	2.4	5.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.0	5.9	13.7	14.6	19.5	20.3
LnGrp LOS	C	A	B	B	B	C
Approach Vol, veh/h		1140	857		483	
Approach Delay, s/veh		9.2	14.0		19.9	
Approach LOS		A	B		B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		33.0		14.9	10.9	22.1
Change Period (Y+Rc), s		6.2		5.0	4.0	6.2
Max Green Setting (Gmax), s		32.8		31.0	8.0	20.8
Max Q Clear Time (g_c+I1), s		6.8		8.6	6.9	8.7
Green Ext Time (p_c), s		12.7		1.4	0.0	6.9

Intersection Summary		
HCM 6th Ctrl Delay		12.9
HCM 6th LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	188	427	441	71	311	15	305	213	43	59	207	138
Future Volume (veh/h)	188	427	441	71	311	15	305	213	43	59	207	138
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	196	445	459	74	324	16	318	222	45	61	216	144
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	166	1281	597	133	1872	581	332	769	343	112	542	242
Arrive On Green	0.05	0.38	0.38	0.04	0.37	0.37	0.10	0.22	0.22	0.03	0.15	0.15
Sat Flow, veh/h	3456	3404	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	196	445	459	74	324	16	318	222	45	61	216	144
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	3.0	5.9	15.9	1.3	2.7	0.4	5.7	3.3	1.4	1.1	3.4	5.3
Cycle Q Clear(g_c), s	3.0	5.9	15.9	1.3	2.7	0.4	5.7	3.3	1.4	1.1	3.4	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	166	1281	597	133	1872	581	332	769	343	112	542	242
V/C Ratio(X)	1.18	0.35	0.77	0.56	0.17	0.03	0.96	0.29	0.13	0.55	0.40	0.60
Avail Cap(c_a), veh/h	166	1582	737	166	2373	737	332	1822	813	277	1765	787
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	29.7	14.0	17.1	29.5	13.4	12.6	28.1	20.4	19.7	29.7	23.9	24.6
Incr Delay (d2), s/veh	126.4	0.2	4.5	1.4	0.1	0.0	37.7	0.2	0.2	1.5	0.6	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	4.1	2.1	5.9	0.5	0.9	0.1	4.0	1.3	0.5	0.5	1.4	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	156.1	14.2	21.6	30.9	13.4	12.7	65.8	20.7	19.9	31.3	24.4	27.5
LnGrp LOS	F	B	C	C	B	B	E	C	B	C	C	C
Approach Vol, veh/h		1100			414			585			421	
Approach Delay, s/veh		42.5			16.5			45.1			26.5	
Approach LOS		D			B			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	30.5	10.0	15.5	7.0	29.9	6.0	19.5
Change Period (Y+Rc), s	4.0	* 7	4.0	* 6	4.0	* 7	4.0	* 6
Max Green Setting (Gmax), s	3.0	* 29	6.0	* 31	3.0	* 29	5.0	* 32
Max Q Clear Time (g_c+I1), s	3.3	17.9	7.7	7.3	5.0	4.7	3.1	5.3
Green Ext Time (p_c), s	0.0	5.6	0.0	2.2	0.0	2.9	0.0	1.9

Intersection Summary	
HCM 6th Ctrl Delay	36.2
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	214	92	429	177	97	189	588	209	117	772	176
Future Volume (veh/h)	170	214	92	429	177	97	189	588	209	117	772	176
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	179	225	97	452	186	102	199	619	220	123	813	185
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	205	258	401	724	238	131	194	643	228	100	719	164
Arrive On Green	0.25	0.25	0.25	0.21	0.21	0.21	0.06	0.25	0.25	0.06	0.25	0.25
Sat Flow, veh/h	811	1019	1585	3456	1136	623	3456	2570	913	1781	2875	654
Grp Volume(v), veh/h	404	0	97	452	0	288	199	428	411	123	502	496
Grp Sat Flow(s),veh/h/ln	1830	0	1585	1728	0	1758	1728	1777	1706	1781	1777	1753
Q Serve(g_s), s	16.9	0.0	3.9	9.5	0.0	12.4	4.5	19.0	19.1	4.5	20.0	20.0
Cycle Q Clear(g_c), s	16.9	0.0	3.9	9.5	0.0	12.4	4.5	19.0	19.1	4.5	20.0	20.0
Prop In Lane	0.44		1.00	1.00		0.35	1.00		0.53	1.00		0.37
Lane Grp Cap(c), veh/h	463	0	401	724	0	368	194	444	427	100	444	438
V/C Ratio(X)	0.87	0.00	0.24	0.62	0.00	0.78	1.02	0.96	0.96	1.23	1.13	1.13
Avail Cap(c_a), veh/h	549	0	476	994	0	506	194	444	427	100	444	438
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.7	0.0	23.8	28.7	0.0	29.9	37.7	29.6	29.6	37.7	30.0	30.0
Incr Delay (d2), s/veh	12.8	0.0	0.3	0.9	0.0	5.4	70.8	33.3	34.4	163.2	83.6	83.9
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	8.8	0.0	1.4	3.9	0.0	5.6	3.8	11.9	11.5	6.5	18.5	18.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.5	0.0	24.1	29.6	0.0	35.3	108.6	62.9	64.1	200.9	113.6	113.9
LnGrp LOS	D	A	C	C	A	D	F	E	E	F	F	F
Approach Vol, veh/h		501			740			1038			1121	
Approach Delay, s/veh		38.1			31.8			72.1			123.3	
Approach LOS		D			C			E			F	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	25.2	8.0	25.0	21.8	8.0	25.0
Change Period (Y+Rc), s	5.0	3.5	5.0	5.0	3.5	5.0
Max Green Setting (Gmax), s	24.0	4.5	20.0	23.0	4.5	20.0
Max Q Clear Time (g_c+I1), s	18.9	6.5	22.0	14.4	6.5	21.1
Green Ext Time (p_c), s	1.3	0.0	0.0	2.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	75.2
HCM 6th LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	185	177	66	214	252	204	56	324	162	134	327	172
Future Volume (veh/h)	185	177	66	214	252	204	56	324	162	134	327	172
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.95	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	210	201	75	243	286	232	64	368	184	152	372	195
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	256	377	379	290	414	508	81	562	275	191	696	358
Arrive On Green	0.14	0.20	0.20	0.16	0.22	0.22	0.05	0.25	0.25	0.11	0.31	0.31
Sat Flow, veh/h	1781	1870	1526	1781	1870	1529	1781	2265	1108	1781	2244	1155
Grp Volume(v), veh/h	210	201	75	243	286	232	64	287	265	152	293	274
Grp Sat Flow(s),veh/h/ln	1781	1870	1526	1781	1870	1529	1781	1777	1596	1781	1777	1622
Q Serve(g_s), s	7.0	5.8	2.4	8.0	8.5	7.3	2.2	8.8	9.1	5.1	8.3	8.5
Cycle Q Clear(g_c), s	7.0	5.8	2.4	8.0	8.5	7.3	2.2	8.8	9.1	5.1	8.3	8.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.69	1.00		0.71
Lane Grp Cap(c), veh/h	256	377	379	290	414	508	81	441	396	191	551	503
V/C Ratio(X)	0.82	0.53	0.20	0.84	0.69	0.46	0.79	0.65	0.67	0.79	0.53	0.54
Avail Cap(c_a), veh/h	308	665	615	367	727	765	208	615	552	232	638	583
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	25.2	21.7	18.1	24.6	21.7	16.1	28.7	20.5	20.6	26.4	17.3	17.4
Incr Delay (d2), s/veh	11.7	0.6	0.1	10.5	1.1	0.3	6.4	2.0	2.4	11.8	1.0	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	3.6	2.4	0.8	4.0	3.6	2.4	1.0	3.6	3.4	2.6	3.2	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.0	22.3	18.2	35.2	22.9	16.5	35.1	22.4	23.0	38.3	18.3	18.5
LnGrp LOS	D	C	B	D	C	B	D	C	C	D	B	B
Approach Vol, veh/h		486			761			616			719	
Approach Delay, s/veh		28.0			24.8			24.0			22.6	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.4	17.2	6.3	23.8	12.2	18.4	10.0	20.1
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0
Max Green Setting (Gmax), s	12.5	21.6	7.1	21.8	10.5	23.6	7.9	21.0
Max Q Clear Time (g_c+I1), s	10.0	7.8	4.2	10.5	9.0	10.5	7.1	11.1
Green Ext Time (p_c), s	0.0	0.8	0.0	3.2	0.0	1.5	0.0	2.9

Intersection Summary	
HCM 6th Ctrl Delay	24.6
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	13.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	73	225	6	14	137	180	11	2	50	149	0	63
Future Vol, veh/h	73	225	6	14	137	180	11	2	50	149	0	63
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	95	292	8	18	178	234	14	3	65	194	0	82
Number of Lanes	1	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	14.7	12	10.4	14.5
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	17%	100%	0%	9%	0%	70%
Vol Thru, %	3%	0%	97%	91%	0%	0%
Vol Right, %	79%	0%	3%	0%	100%	30%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	63	73	231	151	180	212
LT Vol	11	73	0	14	0	149
Through Vol	2	0	225	137	0	0
RT Vol	50	0	6	0	180	63
Lane Flow Rate	82	95	300	196	234	275
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.142	0.179	0.523	0.345	0.362	0.468
Departure Headway (Hd)	6.247	6.798	6.27	6.34	5.58	6.125
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	569	525	573	565	641	584
Service Time	4.346	4.569	4.041	4.113	3.352	4.199
HCM Lane V/C Ratio	0.144	0.181	0.524	0.347	0.365	0.471
HCM Control Delay	10.4	11.1	15.8	12.5	11.5	14.5
HCM Lane LOS	B	B	C	B	B	B
HCM 95th-tile Q	0.5	0.6	3	1.5	1.6	2.5

Intersection	
Int Delay, s/veh	108.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	262	204	20	1	177	81	71	0	57	61	0	309
Future Vol, veh/h	262	204	20	1	177	81	71	0	57	61	0	309
Conflicting Peds, #/hr	0	0	10	0	0	10	0	0	10	0	0	10
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	323	252	25	1	219	100	88	0	70	75	0	381

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	329	0	0	287	0	0	1393	1252	285	1237	1214	289
Stage 1	-	-	-	-	-	-	921	921	-	281	281	-
Stage 2	-	-	-	-	-	-	472	331	-	956	933	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1231	-	-	1275	-	-	119	172	754	153	182	750
Stage 1	-	-	-	-	-	-	324	349	-	726	678	-
Stage 2	-	-	-	-	-	-	573	645	-	310	345	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1219	-	-	1263	-	-	~ 45	124	740	108	131	736
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 45	124	-	108	131	-
Stage 1	-	-	-	-	-	-	236	254	-	529	671	-
Stage 2	-	-	-	-	-	-	273	638	-	204	251	-

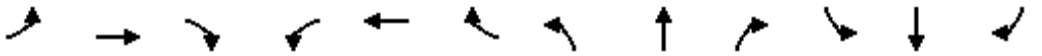
Approach	EB	WB	NB	SB
HCM Control Delay, s	4.9	0	$ 603.5	149.9
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	77	1219	-	-	1263	-	-	376
HCM Lane V/C Ratio	2.052	0.265	-	-	0.001	-	-	1.215
HCM Control Delay (s)	$ 603.5	9	-	-	7.9	0	-	149.9
HCM Lane LOS	F	A	-	-	A	A	-	F
HCM 95th %tile Q(veh)	14.3	1.1	-	-	0	-	-	19.1

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

APPENDIX E

NEAR-TERM WITH PROJECT PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰↰		↱
Traffic Volume (veh/h)	0	1821	54	0	1250	152	0	0	0	320	0	80
Future Volume (veh/h)	0	1821	54	0	1250	152	0	0	0	320	0	80
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870				1870	0	1870
Adj Flow Rate, veh/h	0	1917	57	0	1316	160				337	0	84
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	2	2	0	2	2				2	0	2
Cap, veh/h	0	3371	1012	0	3371	1233				464	0	213
Arrive On Green	0.00	0.66	0.66	0.00	0.66	0.66				0.13	0.00	0.13
Sat Flow, veh/h	0	5274	1533	0	5274	1544				3456	0	1585
Grp Volume(v), veh/h	0	1917	57	0	1316	160				337	0	84
Grp Sat Flow(s),veh/h/ln	0	1702	1533	0	1702	1544				1728	0	1585
Q Serve(g_s), s	0.0	11.2	0.7	0.0	6.5	1.3				5.1	0.0	2.7
Cycle Q Clear(g_c), s	0.0	11.2	0.7	0.0	6.5	1.3				5.1	0.0	2.7
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3371	1012	0	3371	1233				464	0	213
V/C Ratio(X)	0.00	0.57	0.06	0.00	0.39	0.13				0.73	0.00	0.39
Avail Cap(c_a), veh/h	0	3371	1012	0	3371	1233				534	0	245
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	0.00	0.93	0.93				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	5.1	3.3	0.0	4.3	1.3				22.8	0.0	21.8
Incr Delay (d2), s/veh	0.0	0.7	0.1	0.0	0.3	0.2				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	2.6	0.2	0.0	1.5	0.5				2.2	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	5.8	3.4	0.0	4.6	1.5				27.1	0.0	23.0
LnGrp LOS	A	A	A	A	A	A				C	A	C
Approach Vol, veh/h		1974			1476						421	
Approach Delay, s/veh		5.7			4.3						26.3	
Approach LOS		A			A						C	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		42.1		12.9		42.1						
Change Period (Y+Rc), s		5.8		5.5		5.8						
Max Green Setting (Gmax), s		35.2		8.5		35.2						
Max Q Clear Time (g_c+I1), s		13.2		7.1		8.5						
Green Ext Time (p_c), s		19.7		0.3		19.0						

Intersection Summary	
HCM 6th Ctrl Delay	7.4
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1979	161	0	1375	571	27	0	157	0	0	0
Future Volume (veh/h)	0	1979	161	0	1375	571	27	0	157	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870	1870	0	1870			
Adj Flow Rate, veh/h	0	2083	169	0	1447	601	28	0	165			
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	2	2	0	2	2	2	0	2			
Cap, veh/h	0	3486	1192	0	3486	1047	163	0	255			
Arrive On Green	0.00	0.68	0.68	0.00	0.68	0.68	0.09	0.00	0.09			
Sat Flow, veh/h	0	5274	1533	0	5274	1533	1781	0	2790			
Grp Volume(v), veh/h	0	2083	169	0	1447	601	28	0	165			
Grp Sat Flow(s),veh/h/ln	0	1702	1533	0	1702	1533	1781	0	1395			
Q Serve(g_s), s	0.0	10.9	1.4	0.0	6.3	10.2	0.7	0.0	2.9			
Cycle Q Clear(g_c), s	0.0	10.9	1.4	0.0	6.3	10.2	0.7	0.0	2.9			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3486	1192	0	3486	1047	163	0	255			
V/C Ratio(X)	0.00	0.60	0.14	0.00	0.42	0.57	0.17	0.00	0.65			
Avail Cap(c_a), veh/h	0	3486	1192	0	3486	1047	196	0	307			
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	0.77	0.77	0.00	0.49	0.49	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	4.3	1.4	0.0	3.5	4.1	21.0	0.0	21.9			
Incr Delay (d2), s/veh	0.0	0.6	0.2	0.0	0.2	1.1	0.5	0.0	3.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	2.0	0.3	0.0	1.1	1.8	0.3	0.0	1.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	4.8	1.6	0.0	3.7	5.3	21.5	0.0	25.6			
LnGrp LOS	A	A	A	A	A	A	C	A	C			
Approach Vol, veh/h		2252			2048			193				
Approach Delay, s/veh		4.6			4.2			25.0				
Approach LOS		A			A			C				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		39.9				39.9		10.1				
Change Period (Y+Rc), s		5.8				5.8		5.5				
Max Green Setting (Gmax), s		33.2				33.2		5.5				
Max Q Clear Time (g_c+I1), s		12.9				12.2		4.9				
Green Ext Time (p_c), s		19.1				18.5		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			5.3									
HCM 6th LOS			A									

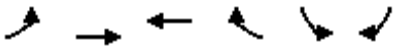
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	534	964	308	251	925	83	593	407	186	46	221	261
Future Volume (veh/h)	534	964	308	251	925	83	593	407	186	46	221	261
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.97	1.00		0.97	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	562	1015	324	264	974	87	624	428	196	48	233	275
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	470	1893	975	320	1557	139	553	1219	676	103	756	541
Arrive On Green	0.14	0.37	0.37	0.09	0.33	0.33	0.16	0.34	0.34	0.03	0.21	0.21
Sat Flow, veh/h	3456	5106	2629	3456	4760	424	3456	3554	1542	3456	3554	1528
Grp Volume(v), veh/h	562	1015	324	264	696	365	624	428	196	48	233	275
Grp Sat Flow(s),veh/h/ln	1728	1702	1315	1728	1702	1780	1728	1777	1542	1728	1777	1528
Q Serve(g_s), s	17.0	19.5	11.1	9.4	21.6	21.7	20.0	11.2	10.3	1.7	6.9	17.9
Cycle Q Clear(g_c), s	17.0	19.5	11.1	9.4	21.6	21.7	20.0	11.2	10.3	1.7	6.9	17.9
Prop In Lane	1.00		1.00	1.00		0.24	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	470	1893	975	320	1114	582	553	1219	676	103	756	541
V/C Ratio(X)	1.20	0.54	0.33	0.83	0.62	0.63	1.13	0.35	0.29	0.47	0.31	0.51
Avail Cap(c_a), veh/h	470	1893	975	415	1114	582	553	1450	776	138	1023	656
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)	0.81	0.81	0.81	0.75	0.75	0.75	1.00	1.00	1.00	0.93	0.93	0.93
Uniform Delay (d), s/veh	54.0	30.9	28.2	55.7	35.6	35.6	52.5	30.7	22.8	59.7	41.4	32.3
Incr Delay (d2), s/veh	104.1	0.9	0.7	6.1	2.0	3.8	78.8	0.2	0.3	3.7	0.3	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	14.2	8.2	3.6	4.4	9.3	10.0	14.7	4.9	3.8	0.8	3.1	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	158.1	31.8	29.0	61.9	37.6	39.4	131.3	30.9	23.1	63.3	41.7	33.2
LnGrp LOS	F	C	C	E	D	D	F	C	C	E	D	C
Approach Vol, veh/h		1901			1325			1248			556	
Approach Delay, s/veh		68.7			42.9			79.9			39.3	
Approach LOS		E			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.6	53.3	24.0	32.1	21.0	47.9	7.7	48.4
Change Period (Y+Rc), s	4.0	* 7	4.0	5.5	4.0	* 7	4.0	5.5
Max Green Setting (Gmax), s	15.6	* 34	20.0	36.0	17.0	* 32	5.0	51.0
Max Q Clear Time (g_c+I1), s	11.4	21.5	22.0	19.9	19.0	23.7	3.7	13.2
Green Ext Time (p_c), s	0.2	8.0	0.0	2.7	0.0	5.0	0.0	4.8

Intersection Summary	
HCM 6th Ctrl Delay	61.4
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	564	633	974	104	65	285
Future Volume (veh/h)	564	633	974	104	65	285
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.96	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	600	673	1036	111	69	303
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	723	3272	1691	181	256	455
Arrive On Green	0.21	0.64	0.36	0.36	0.14	0.14
Sat Flow, veh/h	3456	5274	4828	498	1781	3170
Grp Volume(v), veh/h	600	673	756	391	69	303
Grp Sat Flow(s),veh/h/ln	1728	1702	1702	1754	1781	1585
Q Serve(g_s), s	8.5	2.8	9.3	9.3	1.8	4.6
Cycle Q Clear(g_c), s	8.5	2.8	9.3	9.3	1.8	4.6
Prop In Lane	1.00			0.28	1.00	1.00
Lane Grp Cap(c), veh/h	723	3272	1235	636	256	455
V/C Ratio(X)	0.83	0.21	0.61	0.61	0.27	0.67
Avail Cap(c_a), veh/h	847	3603	1334	688	978	1740
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	19.3	3.8	13.3	13.3	19.5	20.7
Incr Delay (d2), s/veh	5.3	0.1	1.9	3.6	0.2	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.6	0.6	3.3	3.7	0.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	24.6	3.9	15.2	16.9	19.7	21.3
LnGrp LOS	C	A	B	B	B	C
Approach Vol, veh/h		1273	1147		372	
Approach Delay, s/veh		13.6	15.8		21.0	
Approach LOS		B	B		C	

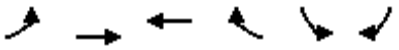
Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	38.7		12.3	14.2	24.5
Change Period (Y+Rc), s	* 6		5.0	3.5	* 6
Max Green Setting (Gmax), s	* 36		28.0	12.5	* 20
Max Q Clear Time (g_c+I1), s	4.8		6.6	10.5	11.3
Green Ext Time (p_c), s	11.8		0.7	0.2	7.1

Intersection Summary	
HCM 6th Ctrl Delay	15.5
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	220	477	1003	228	68	74
Future Volume (veh/h)	220	477	1003	228	68	74
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.96	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	237	513	1078	245	73	80
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	304	3428	1707	388	153	137
Arrive On Green	0.17	0.67	0.41	0.41	0.09	0.09
Sat Flow, veh/h	1781	5274	4291	936	1781	1585
Grp Volume(v), veh/h	237	513	890	433	73	80
Grp Sat Flow(s),veh/h/ln	1781	1702	1702	1655	1781	1585
Q Serve(g_s), s	5.9	1.7	9.6	9.6	1.8	2.2
Cycle Q Clear(g_c), s	5.9	1.7	9.6	9.6	1.8	2.2
Prop In Lane	1.00			0.57	1.00	1.00
Lane Grp Cap(c), veh/h	304	3428	1409	685	153	137
V/C Ratio(X)	0.78	0.15	0.63	0.63	0.48	0.59
Avail Cap(c_a), veh/h	309	3627	1533	746	1196	1064
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	18.3	2.8	10.7	10.7	20.1	20.3
Incr Delay (d2), s/veh	10.8	0.0	1.2	2.4	2.1	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.3	3.0	3.2	0.8	2.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	29.1	2.8	11.9	13.2	22.2	23.9
LnGrp LOS	C	A	B	B	C	C
Approach Vol, veh/h		750	1323		153	
Approach Delay, s/veh		11.1	12.3		23.1	
Approach LOS		B	B		C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		37.2		9.0	11.9	25.3
Change Period (Y+Rc), s		6.2		5.0	4.0	6.2
Max Green Setting (Gmax), s		32.8		31.0	8.0	20.8
Max Q Clear Time (g_c+I1), s		3.7		4.2	7.9	11.6
Green Ext Time (p_c), s		6.9		0.4	0.0	7.5

Intersection Summary		
HCM 6th Ctrl Delay		12.7
HCM 6th LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	197	158	190	190	510	66	434	609	83	28	409	286
Future Volume (veh/h)	197	158	190	190	510	66	434	609	83	28	409	286
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	226	182	218	218	586	76	499	700	95	32	470	329
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	218	795	370	163	1112	345	327	1307	583	70	1044	466
Arrive On Green	0.06	0.23	0.23	0.05	0.22	0.22	0.09	0.37	0.37	0.02	0.29	0.29
Sat Flow, veh/h	3456	3404	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	226	182	218	218	586	76	499	700	95	32	470	329
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	4.0	2.7	7.8	3.0	6.4	2.5	6.0	9.8	2.6	0.6	6.8	11.7
Cycle Q Clear(g_c), s	4.0	2.7	7.8	3.0	6.4	2.5	6.0	9.8	2.6	0.6	6.8	11.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	218	795	370	163	1112	345	327	1307	583	70	1044	466
V/C Ratio(X)	1.04	0.23	0.59	1.33	0.53	0.22	1.53	0.54	0.16	0.45	0.45	0.71
Avail Cap(c_a), veh/h	218	1556	724	163	2253	699	327	1904	849	163	1736	774
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	29.7	19.7	21.6	30.2	21.9	20.4	28.7	15.8	13.5	30.7	18.2	20.0
Incr Delay (d2), s/veh	71.1	0.2	2.0	186.0	0.5	0.4	252.2	0.4	0.2	1.7	0.4	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	1.0	2.9	5.4	2.5	0.9	13.8	3.7	0.9	0.2	2.6	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	100.8	19.9	23.6	216.2	22.4	20.8	280.9	16.2	13.6	32.4	18.6	22.4
LnGrp LOS	F	B	C	F	C	C	F	B	B	C	B	C
Approach Vol, veh/h		626			880			1294			831	
Approach Delay, s/veh		50.4			70.3			118.1			20.6	
Approach LOS		D			E			F			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	21.8	10.0	24.6	8.0	20.8	5.3	29.3
Change Period (Y+Rc), s	4.0	* 7	4.0	* 6	4.0	* 7	4.0	* 6
Max Green Setting (Gmax), s	3.0	* 29	6.0	* 31	4.0	* 28	3.0	* 34
Max Q Clear Time (g_c+I1), s	5.0	9.8	8.0	13.7	6.0	8.4	2.6	11.8
Green Ext Time (p_c), s	0.0	3.2	0.0	4.9	0.0	5.4	0.0	6.3

Intersection Summary	
HCM 6th Ctrl Delay	72.5
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	130	54	225	114	54	124	467	285	102	298	107
Future Volume (veh/h)	71	130	54	225	114	54	124	467	285	102	298	107
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	76	138	57	239	121	57	132	497	303	109	317	114
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	114	207	266	589	202	95	216	597	362	139	767	270
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.06	0.28	0.28	0.08	0.30	0.30
Sat Flow, veh/h	653	1185	1520	3456	1184	558	3456	2098	1274	1781	2555	898
Grp Volume(v), veh/h	214	0	57	239	0	178	132	421	379	109	218	213
Grp Sat Flow(s),veh/h/ln	1838	0	1520	1728	0	1741	1728	1777	1595	1781	1777	1677
Q Serve(g_s), s	6.9	0.0	2.0	3.9	0.0	6.0	2.4	14.1	14.1	3.8	6.2	6.4
Cycle Q Clear(g_c), s	6.9	0.0	2.0	3.9	0.0	6.0	2.4	14.1	14.1	3.8	6.2	6.4
Prop In Lane	0.36		1.00	1.00		0.32	1.00		0.80	1.00		0.54
Lane Grp Cap(c), veh/h	322	0	266	589	0	297	216	505	454	139	533	503
V/C Ratio(X)	0.67	0.00	0.21	0.41	0.00	0.60	0.61	0.83	0.84	0.78	0.41	0.42
Avail Cap(c_a), veh/h	673	0	557	1254	0	632	398	533	478	177	533	503
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.4	0.0	22.4	23.4	0.0	24.3	29.0	21.3	21.3	28.7	17.7	17.8
Incr Delay (d2), s/veh	2.4	0.0	0.4	0.5	0.0	1.9	1.0	10.9	12.4	12.1	0.7	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	3.0	0.0	0.7	1.5	0.0	2.5	1.0	6.9	6.4	2.0	2.5	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.8	0.0	22.8	23.9	0.0	26.2	30.0	32.2	33.7	40.7	18.4	18.6
LnGrp LOS	C	A	C	C	A	C	C	C	C	D	B	B
Approach Vol, veh/h		271			417			932			540	
Approach Delay, s/veh		25.9			24.9			32.5			23.0	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	16.1	7.5	24.0	15.8	8.5	23.0
Change Period (Y+Rc), s	5.0	3.5	5.0	5.0	3.5	5.0
Max Green Setting (Gmax), s	23.2	7.3	18.0	23.0	6.3	19.0
Max Q Clear Time (g_c+I1), s	8.9	4.4	8.4	8.0	5.8	16.1
Green Ext Time (p_c), s	1.2	0.0	2.4	1.7	0.0	1.7

Intersection Summary	
HCM 6th Ctrl Delay	27.8
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	186	36	67	120	78	51	233	255	164	269	131
Future Volume (veh/h)	80	186	36	67	120	78	51	233	255	164	269	131
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.95	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	92	214	41	77	138	90	59	268	293	189	309	151
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	117	361	359	97	340	487	73	513	435	237	880	419
Arrive On Green	0.07	0.19	0.19	0.05	0.18	0.18	0.04	0.29	0.29	0.13	0.38	0.38
Sat Flow, veh/h	1781	1870	1524	1781	1870	1522	1781	1777	1506	1781	2314	1101
Grp Volume(v), veh/h	92	214	41	77	138	90	59	268	293	189	235	225
Grp Sat Flow(s),veh/h/ln	1781	1870	1524	1781	1870	1522	1781	1777	1506	1781	1777	1638
Q Serve(g_s), s	2.6	5.4	1.1	2.2	3.3	2.2	1.7	6.5	8.8	5.3	4.9	5.1
Cycle Q Clear(g_c), s	2.6	5.4	1.1	2.2	3.3	2.2	1.7	6.5	8.8	5.3	4.9	5.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.67
Lane Grp Cap(c), veh/h	117	361	359	97	340	487	73	513	435	237	676	623
V/C Ratio(X)	0.79	0.59	0.11	0.79	0.41	0.18	0.81	0.52	0.67	0.80	0.35	0.36
Avail Cap(c_a), veh/h	191	839	748	156	802	863	236	727	617	330	821	757
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	23.6	18.9	15.5	24.0	18.5	12.8	24.4	15.3	16.1	21.6	11.3	11.4
Incr Delay (d2), s/veh	4.3	0.8	0.1	5.4	0.4	0.1	7.7	1.0	2.2	6.1	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	1.2	2.2	0.3	1.0	1.3	0.7	0.8	2.4	2.9	2.4	1.7	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.9	19.7	15.6	29.4	19.0	12.9	32.1	16.3	18.3	27.7	11.7	11.8
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		347			305			620			649	
Approach Delay, s/veh		21.4			19.8			18.8			16.4	
Approach LOS		C			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	14.9	5.6	24.5	6.9	14.3	10.3	19.8
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0
Max Green Setting (Gmax), s	4.5	23.0	6.8	23.7	5.5	22.0	9.5	21.0
Max Q Clear Time (g_c+I1), s	4.2	7.4	3.7	7.1	4.6	5.3	7.3	10.8
Green Ext Time (p_c), s	0.0	0.8	0.0	3.1	0.0	0.6	0.0	3.0

Intersection Summary	
HCM 6th Ctrl Delay	18.6
HCM 6th LOS	B

Intersection	
Intersection Delay, s/veh	11.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	89	56	21	51	210	187	3	0	12	73	0	48
Future Vol, veh/h	89	56	21	51	210	187	3	0	12	73	0	48
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	125	79	30	72	296	263	4	0	17	103	0	68
Number of Lanes	1	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	10.2	12.8	9	10.9
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	20%	100%	0%	20%	0%	60%
Vol Thru, %	0%	0%	73%	80%	0%	0%
Vol Right, %	80%	0%	27%	0%	100%	40%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	15	89	77	261	187	121
LT Vol	3	89	0	51	0	73
Through Vol	0	0	56	210	0	0
RT Vol	12	0	21	0	187	48
Lane Flow Rate	21	125	108	368	263	170
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.034	0.22	0.17	0.554	0.338	0.272
Departure Headway (Hd)	5.759	6.327	5.628	5.534	4.729	5.737
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	623	569	640	654	766	631
Service Time	3.779	4.043	3.344	3.234	2.429	3.737
HCM Lane V/C Ratio	0.034	0.22	0.169	0.563	0.343	0.269
HCM Control Delay	9	10.8	9.5	14.9	9.8	10.9
HCM Lane LOS	A	B	A	B	A	B
HCM 95th-tile Q	0.1	0.8	0.6	3.4	1.5	1.1

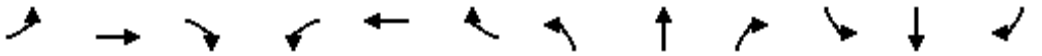
Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	183	170	128	35	135	45	8	0	1	15	0	42
Future Vol, veh/h	183	170	128	35	135	45	8	0	1	15	0	42
Conflicting Peds, #/hr	0	0	10	0	0	10	0	0	10	0	0	10
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	206	191	144	39	152	51	9	0	1	17	0	47

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	213	0	0	345	0	0	974	976	283	952	1023	198
Stage 1	-	-	-	-	-	-	685	685	-	266	266	-
Stage 2	-	-	-	-	-	-	289	291	-	686	757	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1357	-	-	1214	-	-	231	251	756	239	236	843
Stage 1	-	-	-	-	-	-	438	448	-	739	689	-
Stage 2	-	-	-	-	-	-	719	672	-	438	416	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1344	-	-	1202	-	-	183	201	742	201	189	827
Mov Cap-2 Maneuver	-	-	-	-	-	-	183	201	-	201	189	-
Stage 1	-	-	-	-	-	-	367	376	-	620	657	-
Stage 2	-	-	-	-	-	-	647	640	-	367	349	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.1	1.3	24	14.2
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	200	1344	-	-	1202	-	-	454
HCM Lane V/C Ratio	0.051	0.153	-	-	0.033	-	-	0.141
HCM Control Delay (s)	24	8.2	-	-	8.1	0	-	14.2
HCM Lane LOS	C	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0.5	-	-	0.1	-	-	0.5



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰↰		↱
Traffic Volume (veh/h)	0	2087	27	0	2041	130	0	0	0	578	0	113
Future Volume (veh/h)	0	2087	27	0	2041	130	0	0	0	578	0	113
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870				1870	0	1870
Adj Flow Rate, veh/h	0	2152	28	0	2104	134				596	0	116
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	2	2	0	2	2				2	0	2
Cap, veh/h	0	3084	924	0	3084	1254				718	0	329
Arrive On Green	0.00	0.60	0.60	0.00	0.60	0.60				0.21	0.00	0.21
Sat Flow, veh/h	0	5274	1531	0	5274	1531				3456	0	1585
Grp Volume(v), veh/h	0	2152	28	0	2104	134				596	0	116
Grp Sat Flow(s),veh/h/ln	0	1702	1531	0	1702	1531				1728	0	1585
Q Serve(g_s), s	0.0	17.3	0.4	0.0	16.7	1.1				9.9	0.0	3.8
Cycle Q Clear(g_c), s	0.0	17.3	0.4	0.0	16.7	1.1				9.9	0.0	3.8
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3084	924	0	3084	1254				718	0	329
V/C Ratio(X)	0.00	0.70	0.03	0.00	0.68	0.11				0.83	0.00	0.35
Avail Cap(c_a), veh/h	0	3084	924	0	3084	1254				778	0	357
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	0.00	0.70	0.70				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	8.1	4.8	0.0	8.0	1.2				22.8	0.0	20.3
Incr Delay (d2), s/veh	0.0	1.3	0.1	0.0	0.9	0.1				7.2	0.0	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
%ile BackOfQ(50%),veh/ln	0.0	5.0	0.1	0.0	4.7	0.6				4.4	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	9.5	4.9	0.0	8.9	1.3				29.9	0.0	21.0
LnGrp LOS	A	A	A	A	A	A				C	A	C
Approach Vol, veh/h		2180			2238						712	
Approach Delay, s/veh		9.4			8.4						28.5	
Approach LOS		A			A						C	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		42.0		18.0		42.0						
Change Period (Y+Rc), s		5.8		5.5		5.8						
Max Green Setting (Gmax), s		35.2		13.5		35.2						
Max Q Clear Time (g_c+I1), s		19.3		11.9		18.7						
Green Ext Time (p_c), s		15.1		0.6		15.7						

Intersection Summary												
HCM 6th Ctrl Delay			11.6									
HCM 6th LOS			B									

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2554	112	0	2138	422	34	0	193	0	0	0
Future Volume (veh/h)	0	2554	112	0	2138	422	34	0	193	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870	1870	0	1870			
Adj Flow Rate, veh/h	0	2717	119	0	2274	449	36	0	205			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	0	2	2	0	2	2	2	0	2			
Cap, veh/h	0	3431	1192	0	3431	1030	182	0	285			
Arrive On Green	0.00	0.67	0.67	0.00	0.67	0.67	0.10	0.00	0.10			
Sat Flow, veh/h	0	5274	1533	0	5274	1533	1781	0	2790			
Grp Volume(v), veh/h	0	2717	119	0	2274	449	36	0	205			
Grp Sat Flow(s),veh/h/ln	0	1702	1533	0	1702	1533	1781	0	1395			
Q Serve(g_s), s	0.0	18.7	1.0	0.0	13.2	6.8	0.9	0.0	3.6			
Cycle Q Clear(g_c), s	0.0	18.7	1.0	0.0	13.2	6.8	0.9	0.0	3.6			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3431	1192	0	3431	1030	182	0	285			
V/C Ratio(X)	0.00	0.79	0.10	0.00	0.66	0.44	0.20	0.00	0.72			
Avail Cap(c_a), veh/h	0	3431	1192	0	3431	1030	182	0	285			
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	0.61	0.61	0.00	0.26	0.26	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	5.7	1.4	0.0	4.8	3.8	20.6	0.0	21.8			
Incr Delay (d2), s/veh	0.0	1.2	0.1	0.0	0.3	0.4	0.6	0.0	8.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	3.6	0.2	0.0	2.4	1.1	0.4	0.0	1.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	7.0	1.5	0.0	5.1	4.2	21.1	0.0	30.5			
LnGrp LOS	A	A	A	A	A	A	C	A	C			
Approach Vol, veh/h		2836			2723			241				
Approach Delay, s/veh		6.7			5.0			29.1				
Approach LOS		A			A			C				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		39.4				39.4		10.6				
Change Period (Y+Rc), s		5.8				5.8		5.5				
Max Green Setting (Gmax), s		33.6				33.6		5.1				
Max Q Clear Time (g_c+I1), s		20.7				15.2		5.6				
Green Ext Time (p_c), s		12.8				18.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			6.8									
HCM 6th LOS			A									

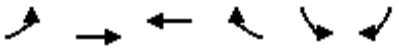
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	527	982	751	396	1007	77	499	495	249	155	718	598
Future Volume (veh/h)	527	982	751	396	1007	77	499	495	249	155	718	598
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	543	1012	774	408	1038	79	514	510	257	160	740	616
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	421	1487	773	361	1322	100	391	1286	724	222	1112	675
Arrive On Green	0.12	0.29	0.29	0.10	0.27	0.27	0.11	0.36	0.36	0.06	0.31	0.31
Sat Flow, veh/h	3456	5106	2652	3456	4828	367	3456	3554	1544	3456	3554	1540
Grp Volume(v), veh/h	543	1012	774	408	731	386	514	510	257	160	740	616
Grp Sat Flow(s),veh/h/ln	1728	1702	1326	1728	1702	1791	1728	1777	1544	1728	1777	1540
Q Serve(g_s), s	14.0	20.1	33.5	12.0	22.8	22.9	13.0	12.3	12.3	5.2	20.8	36.0
Cycle Q Clear(g_c), s	14.0	20.1	33.5	12.0	22.8	22.9	13.0	12.3	12.3	5.2	20.8	36.0
Prop In Lane	1.00		1.00	1.00		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	421	1487	773	361	932	490	391	1286	724	222	1112	675
V/C Ratio(X)	1.29	0.68	1.00	1.13	0.78	0.79	1.32	0.40	0.35	0.72	0.67	0.91
Avail Cap(c_a), veh/h	421	1487	773	361	932	490	391	1286	724	300	1112	675
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)	0.53	0.53	0.53	0.80	0.80	0.80	1.00	1.00	1.00	0.21	0.21	0.21
Uniform Delay (d), s/veh	50.5	36.0	40.8	51.5	38.6	38.6	51.0	27.3	19.6	52.8	34.3	30.6
Incr Delay (d2), s/veh	140.2	1.4	24.0	83.5	5.3	9.8	159.2	0.2	0.4	1.4	0.3	4.6
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	14.2	8.5	13.3	9.4	10.1	11.3	14.2	5.2	4.4	2.3	9.0	16.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	190.7	37.4	64.8	135.0	43.9	48.4	210.2	27.6	20.0	54.2	34.6	35.2
LnGrp LOS	F	D	F	F	D	D	F	C	C	D	C	D
Approach Vol, veh/h		2329			1525			1281			1516	
Approach Delay, s/veh		82.2			69.4			99.3			36.9	
Approach LOS		F			E			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	40.5	17.0	41.5	18.0	38.5	11.4	47.1
Change Period (Y+Rc), s	4.0	* 7	4.0	5.5	4.0	* 7	4.0	5.5
Max Green Setting (Gmax), s	12.0	* 34	13.0	36.0	14.0	* 32	10.0	39.0
Max Q Clear Time (g_c+I1), s	14.0	35.5	15.0	38.0	16.0	24.9	7.2	14.3
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	4.5	0.1	5.6

Intersection Summary	
HCM 6th Ctrl Delay	72.3
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	453	933	779	88	119	579
Future Volume (veh/h)	453	933	779	88	119	579
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.95	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	487	1003	838	95	128	623
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	605	2826	1460	164	442	787
Arrive On Green	0.17	0.55	0.32	0.32	0.25	0.25
Sat Flow, veh/h	3456	5274	4797	521	1781	3170
Grp Volume(v), veh/h	487	1003	615	318	128	623
Grp Sat Flow(s),veh/h/ln	1728	1702	1702	1746	1781	1585
Q Serve(g_s), s	7.5	6.1	8.4	8.5	3.2	10.2
Cycle Q Clear(g_c), s	7.5	6.1	8.4	8.5	3.2	10.2
Prop In Lane	1.00			0.30	1.00	1.00
Lane Grp Cap(c), veh/h	605	2826	1073	551	442	787
V/C Ratio(X)	0.81	0.35	0.57	0.58	0.29	0.79
Avail Cap(c_a), veh/h	778	3313	1227	629	899	1600
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	22.0	6.9	15.9	15.9	16.9	19.5
Incr Delay (d2), s/veh	3.7	0.3	1.8	3.5	0.1	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.1	1.7	3.1	3.5	1.2	8.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	25.7	7.2	17.6	19.4	17.0	20.2
LnGrp LOS	C	A	B	B	B	C
Approach Vol, veh/h		1490	933		751	
Approach Delay, s/veh		13.2	18.2		19.7	
Approach LOS		B	B		B	

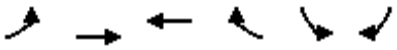
Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	36.7		18.8	13.2	23.5
Change Period (Y+Rc), s	* 6		5.0	3.5	* 6
Max Green Setting (Gmax), s	* 36		28.0	12.5	* 20
Max Q Clear Time (g_c+I1), s	8.1		12.2	9.5	10.5
Green Ext Time (p_c), s	16.7		1.6	0.2	6.8

Intersection Summary	
HCM 6th Ctrl Delay	16.2
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	216	836	589	180	242	279
Future Volume (veh/h)	216	836	589	180	242	279
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.95	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	245	950	669	205	275	317
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	266	2736	1199	360	454	404
Arrive On Green	0.15	0.54	0.31	0.31	0.26	0.26
Sat Flow, veh/h	1781	5274	4014	1154	1781	1585
Grp Volume(v), veh/h	245	950	591	283	275	317
Grp Sat Flow(s),veh/h/ln	1781	1702	1702	1595	1781	1585
Q Serve(g_s), s	7.3	5.7	7.7	8.0	7.3	10.0
Cycle Q Clear(g_c), s	7.3	5.7	7.7	8.0	7.3	10.0
Prop In Lane	1.00			0.72	1.00	1.00
Lane Grp Cap(c), veh/h	266	2736	1061	497	454	404
V/C Ratio(X)	0.92	0.35	0.56	0.57	0.61	0.78
Avail Cap(c_a), veh/h	266	3127	1322	619	1031	917
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	22.5	7.1	15.3	15.4	17.6	18.6
Incr Delay (d2), s/veh	34.3	0.2	1.0	2.2	1.2	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	1.6	2.8	2.8	2.8	8.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	56.7	7.3	16.3	17.6	18.8	21.6
LnGrp LOS	E	A	B	B	B	C
Approach Vol, veh/h		1195	874		592	
Approach Delay, s/veh		17.4	16.7		20.3	
Approach LOS		B	B		C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		34.9		18.7	12.0	22.9
Change Period (Y+Rc), s		6.2		5.0	4.0	6.2
Max Green Setting (Gmax), s		32.8		31.0	8.0	20.8
Max Q Clear Time (g_c+I1), s		7.7		12.0	9.3	10.0
Green Ext Time (p_c), s		12.5		1.7	0.0	6.5

Intersection Summary		
HCM 6th Ctrl Delay		17.8
HCM 6th LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	198	430	451	71	313	15	312	213	43	59	207	145
Future Volume (veh/h)	198	430	451	71	313	15	312	213	43	59	207	145
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	206	448	470	74	326	16	325	222	45	61	216	151
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	164	1291	601	132	1890	587	327	777	347	112	555	248
Arrive On Green	0.05	0.38	0.38	0.04	0.37	0.37	0.09	0.22	0.22	0.03	0.16	0.16
Sat Flow, veh/h	3456	3404	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	206	448	470	74	326	16	325	222	45	61	216	151
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	3.0	6.0	16.6	1.3	2.7	0.4	6.0	3.3	1.4	1.1	3.5	5.6
Cycle Q Clear(g_c), s	3.0	6.0	16.6	1.3	2.7	0.4	6.0	3.3	1.4	1.1	3.5	5.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	164	1291	601	132	1890	587	327	777	347	112	555	248
V/C Ratio(X)	1.26	0.35	0.78	0.56	0.17	0.03	0.99	0.29	0.13	0.55	0.39	0.61
Avail Cap(c_a), veh/h	164	1559	726	164	2338	726	327	1795	801	273	1739	776
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	14.1	17.3	29.9	13.4	12.7	28.6	20.6	19.9	30.2	24.0	24.9
Incr Delay (d2), s/veh	156.2	0.2	5.1	1.4	0.1	0.0	47.6	0.2	0.2	1.5	0.5	2.9
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	4.7	2.1	6.2	0.6	1.0	0.1	4.5	1.3	0.5	0.5	1.4	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	186.4	14.3	22.4	31.3	13.5	12.7	76.3	20.9	20.1	31.7	24.5	27.8
LnGrp LOS	F	B	C	C	B	B	E	C	C	C	C	C
Approach Vol, veh/h		1124			416			592			428	
Approach Delay, s/veh		49.2			16.6			51.2			26.7	
Approach LOS		D			B			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.4	31.0	10.0	15.9	7.0	30.4	6.0	19.8
Change Period (Y+Rc), s	4.0	* 7	4.0	* 6	4.0	* 7	4.0	* 6
Max Green Setting (Gmax), s	3.0	* 29	6.0	* 31	3.0	* 29	5.0	* 32
Max Q Clear Time (g_c+I1), s	3.3	18.6	8.0	7.6	5.0	4.7	3.1	5.3
Green Ext Time (p_c), s	0.0	5.4	0.0	2.3	0.0	2.9	0.0	1.9

Intersection Summary	
HCM 6th Ctrl Delay	40.6
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	214	92	464	177	101	189	588	232	120	772	176
Future Volume (veh/h)	170	214	92	464	177	101	189	588	232	120	772	176
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	179	225	97	488	186	106	199	619	244	126	813	185
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	205	257	400	735	238	135	193	619	244	100	715	163
Arrive On Green	0.25	0.25	0.25	0.21	0.21	0.21	0.06	0.25	0.25	0.06	0.25	0.25
Sat Flow, veh/h	811	1019	1585	3456	1118	637	3456	2490	981	1781	2875	654
Grp Volume(v), veh/h	404	0	97	488	0	292	199	442	421	126	502	496
Grp Sat Flow(s),veh/h/ln	1830	0	1585	1728	0	1756	1728	1777	1694	1781	1777	1753
Q Serve(g_s), s	17.0	0.0	3.9	10.4	0.0	12.6	4.5	20.0	20.0	4.5	20.0	20.0
Cycle Q Clear(g_c), s	17.0	0.0	3.9	10.4	0.0	12.6	4.5	20.0	20.0	4.5	20.0	20.0
Prop In Lane	0.44		1.00	1.00		0.36	1.00		0.58	1.00		0.37
Lane Grp Cap(c), veh/h	462	0	400	735	0	373	193	442	421	100	442	436
V/C Ratio(X)	0.87	0.00	0.24	0.66	0.00	0.78	1.03	1.00	1.00	1.26	1.14	1.14
Avail Cap(c_a), veh/h	546	0	473	989	0	502	193	442	421	100	442	436
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.8	0.0	23.9	29.0	0.0	29.9	37.9	30.2	30.2	37.9	30.2	30.2
Incr Delay (d2), s/veh	13.0	0.0	0.3	1.0	0.0	5.6	72.4	42.5	43.9	176.7	85.7	86.0
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	8.8	0.0	1.5	4.3	0.0	5.7	3.8	13.4	12.9	6.8	18.7	18.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.8	0.0	24.2	30.1	0.0	35.5	110.4	72.7	74.1	214.7	115.9	116.2
LnGrp LOS	D	A	C	C	A	D	F	E	F	F	F	F
Approach Vol, veh/h		501			780			1062			1124	
Approach Delay, s/veh		38.4			32.1			80.3			127.1	
Approach LOS		D			C			F			F	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	25.3	8.0	25.0	22.1	8.0	25.0
Change Period (Y+Rc), s	5.0	3.5	5.0	5.0	3.5	5.0
Max Green Setting (Gmax), s	24.0	4.5	20.0	23.0	4.5	20.0
Max Q Clear Time (g_c+I1), s	19.0	6.5	22.0	14.6	6.5	22.0
Green Ext Time (p_c), s	1.3	0.0	0.0	2.5	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	78.6
HCM 6th LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	185	203	66	214	291	213	56	324	162	140	327	172
Future Volume (veh/h)	185	203	66	214	291	213	56	324	162	140	327	172
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.94	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	210	231	75	243	331	242	64	368	184	159	372	195
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	254	409	406	289	445	541	81	549	268	198	692	356
Arrive On Green	0.14	0.22	0.22	0.16	0.24	0.24	0.05	0.24	0.24	0.11	0.31	0.31
Sat Flow, veh/h	1781	1870	1529	1781	1870	1532	1781	2264	1107	1781	2244	1155
Grp Volume(v), veh/h	210	231	75	243	331	242	64	287	265	159	293	274
Grp Sat Flow(s),veh/h/ln	1781	1870	1529	1781	1870	1532	1781	1777	1595	1781	1777	1622
Q Serve(g_s), s	7.3	7.0	2.4	8.5	10.5	7.8	2.3	9.3	9.7	5.6	8.7	9.0
Cycle Q Clear(g_c), s	7.3	7.0	2.4	8.5	10.5	7.8	2.3	9.3	9.7	5.6	8.7	9.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.69	1.00		0.71
Lane Grp Cap(c), veh/h	254	409	406	289	445	541	81	431	386	198	548	500
V/C Ratio(X)	0.83	0.57	0.18	0.84	0.74	0.45	0.79	0.67	0.69	0.80	0.54	0.55
Avail Cap(c_a), veh/h	293	632	589	348	690	742	198	584	524	220	606	553
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	26.6	22.3	18.2	26.0	22.6	16.1	30.2	21.9	22.0	27.7	18.3	18.4
Incr Delay (d2), s/veh	13.8	0.7	0.1	12.6	1.4	0.3	6.3	2.1	2.7	15.3	1.0	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	8.9	3.0	0.8	4.4	4.5	2.5	1.1	3.9	3.6	3.1	3.4	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.4	22.9	18.3	38.6	23.9	16.4	36.5	24.0	24.7	43.0	19.3	19.5
LnGrp LOS	D	C	B	D	C	B	D	C	C	D	B	B
Approach Vol, veh/h		516			816			616			726	
Approach Delay, s/veh		29.4			26.0			25.6			24.6	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.9	19.0	6.4	24.7	12.6	20.2	10.6	20.5
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0
Max Green Setting (Gmax), s	12.5	21.6	7.1	21.8	10.5	23.6	7.9	21.0
Max Q Clear Time (g_c+I1), s	10.5	9.0	4.3	11.0	9.3	12.5	7.6	11.7
Green Ext Time (p_c), s	0.0	0.9	0.0	3.1	0.0	1.6	0.0	2.7

Intersection Summary	
HCM 6th Ctrl Delay	26.2
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	24.3
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	105	225	6	14	137	244	11	2	50	245	0	111
Future Vol, veh/h	105	225	6	14	137	244	11	2	50	245	0	111
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	136	292	8	18	178	317	14	3	65	318	0	144
Number of Lanes	1	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	19.5	17.6	12.4	38.5
HCM LOS	C	C	B	E

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	17%	100%	0%	9%	0%	69%
Vol Thru, %	3%	0%	97%	91%	0%	0%
Vol Right, %	79%	0%	3%	0%	100%	31%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	63	105	231	151	244	356
LT Vol	11	105	0	14	0	245
Through Vol	2	0	225	137	0	0
RT Vol	50	0	6	0	244	111
Lane Flow Rate	82	136	300	196	317	462
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.174	0.303	0.623	0.408	0.592	0.861
Departure Headway (Hd)	7.662	8.009	7.475	7.498	6.729	6.706
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	465	447	483	478	536	541
Service Time	5.761	5.78	5.245	5.269	4.498	4.758
HCM Lane V/C Ratio	0.176	0.304	0.621	0.41	0.591	0.854
HCM Control Delay	12.4	14.3	21.9	15.4	18.9	38.5
HCM Lane LOS	B	B	C	C	C	E
HCM 95th-tile Q	0.6	1.3	4.2	2	3.8	9.3

Intersection	
Int Delay, s/veh	148.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	262	236	20	1	225	81	71	0	57	61	0	309
Future Vol, veh/h	262	236	20	1	225	81	71	0	57	61	0	309
Conflicting Peds, #/hr	0	0	10	0	0	10	0	0	10	0	0	10
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	323	291	25	1	278	100	88	0	70	75	0	381

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	388	0	0	326	0	0	1491	1350	324	1335	1312	348
Stage 1	-	-	-	-	-	-	960	960	-	340	340	-
Stage 2	-	-	-	-	-	-	531	390	-	995	972	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1170	-	-	1234	-	-	102	150	717	131	159	695
Stage 1	-	-	-	-	-	-	308	335	-	675	639	-
Stage 2	-	-	-	-	-	-	532	608	-	295	331	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1159	-	-	1222	-	-	~ 35	106	703	91	112	682
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 35	106	-	91	112	-
Stage 1	-	-	-	-	-	-	220	239	-	482	632	-
Stage 2	-	-	-	-	-	-	232	601	-	190	236	-

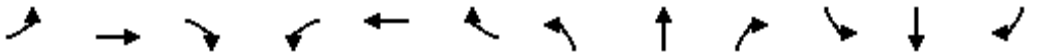
Approach	EB	WB	NB	SB
HCM Control Delay, s	4.7	0	$ 865.6	223.6
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	61	1159	-	-	1222	-	-	329
HCM Lane V/C Ratio	2.591	0.279	-	-	0.001	-	-	1.388
HCM Control Delay (s)	$ 865.6	9.3	-	-	7.9	0	-	223.6
HCM Lane LOS	F	A	-	-	A	A	-	F
HCM 95th %tile Q(veh)	15.9	1.1	-	-	0	-	-	23.3

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

APPENDIX F

LONG-TERM PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰↰		↱
Traffic Volume (veh/h)	0	1790	60	0	1240	150	0	0	0	300	0	90
Future Volume (veh/h)	0	1790	60	0	1240	150	0	0	0	300	0	90
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870				1870	0	1870
Adj Flow Rate, veh/h	0	1884	63	0	1305	158				316	0	95
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	2	2	0	2	2				2	0	2
Cap, veh/h	0	3397	1020	0	3397	1232				447	0	205
Arrive On Green	0.00	0.67	0.67	0.00	0.67	0.67				0.13	0.00	0.13
Sat Flow, veh/h	0	5274	1533	0	5274	1545				3456	0	1585
Grp Volume(v), veh/h	0	1884	63	0	1305	158				316	0	95
Grp Sat Flow(s),veh/h/ln	0	1702	1533	0	1702	1545				1728	0	1585
Q Serve(g_s), s	0.0	10.8	0.8	0.0	6.3	1.3				4.8	0.0	3.1
Cycle Q Clear(g_c), s	0.0	10.8	0.8	0.0	6.3	1.3				4.8	0.0	3.1
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3397	1020	0	3397	1232				447	0	205
V/C Ratio(X)	0.00	0.55	0.06	0.00	0.38	0.13				0.71	0.00	0.46
Avail Cap(c_a), veh/h	0	3397	1020	0	3397	1232				534	0	245
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	0.00	0.90	0.90				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	4.9	3.2	0.0	4.1	1.3				22.9	0.0	22.2
Incr Delay (d2), s/veh	0.0	0.7	0.1	0.0	0.3	0.2				3.6	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	0.0	2.4	0.2	0.0	1.4	0.5				2.0	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	5.5	3.3	0.0	4.4	1.5				26.5	0.0	23.9
LnGrp LOS	A	A	A	A	A	A				C	A	C
Approach Vol, veh/h		1947			1463						411	
Approach Delay, s/veh		5.5			4.1						25.9	
Approach LOS		A			A						C	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		42.4		12.6		42.4						
Change Period (Y+Rc), s		5.8		5.5		5.8						
Max Green Setting (Gmax), s		35.2		8.5		35.2						
Max Q Clear Time (g_c+I1), s		12.8		6.8		8.3						
Green Ext Time (p_c), s		20.0		0.3		18.9						

Intersection Summary	
HCM 6th Ctrl Delay	7.2
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1990	180	0	1410	640	30	0	160	0	0	0
Future Volume (veh/h)	0	1990	180	0	1410	640	30	0	160	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870	1870	0	1870			
Adj Flow Rate, veh/h	0	2095	189	0	1484	674	32	0	168			
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	2	2	0	2	2	2	0	2			
Cap, veh/h	0	3478	1192	0	3478	1044	165	0	259			
Arrive On Green	0.00	0.68	0.68	0.00	0.68	0.68	0.09	0.00	0.09			
Sat Flow, veh/h	0	5274	1533	0	5274	1533	1781	0	2790			
Grp Volume(v), veh/h	0	2095	189	0	1484	674	32	0	168			
Grp Sat Flow(s),veh/h/ln	0	1702	1533	0	1702	1533	1781	0	1395			
Q Serve(g_s), s	0.0	11.1	1.6	0.0	6.5	12.5	0.8	0.0	2.9			
Cycle Q Clear(g_c), s	0.0	11.1	1.6	0.0	6.5	12.5	0.8	0.0	2.9			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3478	1192	0	3478	1044	165	0	259			
V/C Ratio(X)	0.00	0.60	0.16	0.00	0.43	0.65	0.19	0.00	0.65			
Avail Cap(c_a), veh/h	0	3478	1192	0	3478	1044	196	0	307			
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	0.79	0.79	0.00	0.35	0.35	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	4.3	1.5	0.0	3.6	4.5	20.9	0.0	21.9			
Incr Delay (d2), s/veh	0.0	0.6	0.2	0.0	0.1	1.1	0.6	0.0	3.8			
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	2.0	0.4	0.0	1.1	2.2	0.3	0.0	1.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	4.9	1.7	0.0	3.7	5.6	21.6	0.0	25.7			
LnGrp LOS	A	A	A	A	A	A	C	A	C			
Approach Vol, veh/h		2284			2158			200				
Approach Delay, s/veh		4.7			4.3			25.1				
Approach LOS		A			A			C				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		39.9				39.9		10.1				
Change Period (Y+Rc), s		5.8				5.8		5.5				
Max Green Setting (Gmax), s		33.2				33.2		5.5				
Max Q Clear Time (g_c+I1), s		13.1				14.5		4.9				
Green Ext Time (p_c), s		19.0				17.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			5.4									
HCM 6th LOS			A									

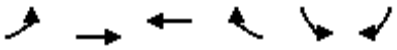
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	560	940	340	260	930	90	650	450	190	50	250	280
Future Volume (veh/h)	560	940	340	260	930	90	650	450	190	50	250	280
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.97	1.00		0.97	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	589	989	358	274	979	95	684	474	200	53	263	295
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	470	1834	943	329	1503	146	553	1245	692	108	787	554
Arrive On Green	0.14	0.36	0.36	0.10	0.32	0.32	0.16	0.35	0.35	0.03	0.22	0.22
Sat Flow, veh/h	3456	5106	2626	3456	4720	457	3456	3554	1543	3456	3554	1529
Grp Volume(v), veh/h	589	989	358	274	705	369	684	474	200	53	263	295
Grp Sat Flow(s),veh/h/ln	1728	1702	1313	1728	1702	1773	1728	1777	1543	1728	1777	1529
Q Serve(g_s), s	17.0	19.2	12.6	9.7	22.3	22.4	20.0	12.5	10.3	1.9	7.8	19.2
Cycle Q Clear(g_c), s	17.0	19.2	12.6	9.7	22.3	22.4	20.0	12.5	10.3	1.9	7.8	19.2
Prop In Lane	1.00		1.00	1.00		0.26	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	470	1834	943	329	1084	565	553	1245	692	108	787	554
V/C Ratio(X)	1.25	0.54	0.38	0.83	0.65	0.65	1.24	0.38	0.29	0.49	0.33	0.53
Avail Cap(c_a), veh/h	470	1834	943	415	1084	565	553	1450	781	138	1023	656
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)	0.76	0.76	0.76	0.70	0.70	0.70	1.00	1.00	1.00	0.92	0.92	0.92
Uniform Delay (d), s/veh	54.0	31.8	29.7	55.6	36.6	36.6	52.5	30.4	22.1	59.6	40.9	32.0
Incr Delay (d2), s/veh	126.9	0.9	0.9	6.5	2.1	4.1	121.6	0.2	0.3	3.8	0.3	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	15.7	8.1	4.1	4.5	9.6	10.3	18.0	5.4	3.8	0.9	3.5	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	180.9	32.7	30.6	62.1	38.7	40.7	174.1	30.7	22.3	63.4	41.2	32.9
LnGrp LOS	F	C	C	E	D	D	F	C	C	E	D	C
Approach Vol, veh/h		1936			1348			1358			611	
Approach Delay, s/veh		77.4			44.0			101.7			39.1	
Approach LOS		E			D			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.9	51.9	24.0	33.2	21.0	46.8	7.9	49.3
Change Period (Y+Rc), s	4.0	* 7	4.0	5.5	4.0	* 7	4.0	5.5
Max Green Setting (Gmax), s	15.0	* 34	20.0	36.0	17.0	* 32	5.0	51.0
Max Q Clear Time (g_c+I1), s	11.7	21.2	22.0	21.2	19.0	24.4	3.9	14.5
Green Ext Time (p_c), s	0.2	8.1	0.0	3.0	0.0	4.6	0.0	5.3

Intersection Summary	
HCM 6th Ctrl Delay	70.7
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	600	620	1040	120	70	300
Future Volume (veh/h)	600	620	1040	120	70	300
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.96	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	638	660	1106	128	74	319
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	752	3288	1662	192	263	468
Arrive On Green	0.22	0.64	0.36	0.36	0.15	0.15
Sat Flow, veh/h	3456	5274	4784	534	1781	3170
Grp Volume(v), veh/h	638	660	815	419	74	319
Grp Sat Flow(s),veh/h/ln	1728	1702	1702	1746	1781	1585
Q Serve(g_s), s	9.4	2.8	10.6	10.7	2.0	5.0
Cycle Q Clear(g_c), s	9.4	2.8	10.6	10.7	2.0	5.0
Prop In Lane	1.00			0.31	1.00	1.00
Lane Grp Cap(c), veh/h	752	3288	1226	629	263	468
V/C Ratio(X)	0.85	0.20	0.67	0.67	0.28	0.68
Avail Cap(c_a), veh/h	818	3480	1289	661	944	1681
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	19.8	3.8	14.2	14.2	20.0	21.3
Incr Delay (d2), s/veh	7.2	0.1	2.4	4.7	0.2	0.7
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	0.6	3.9	4.4	0.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.0	4.0	16.6	18.9	20.2	22.0
LnGrp LOS	C	A	B	B	C	C
Approach Vol, veh/h		1298	1234		393	
Approach Delay, s/veh		15.3	17.4		21.7	
Approach LOS		B	B		C	

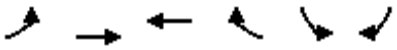
Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	40.0		12.8	15.0	25.0
Change Period (Y+Rc), s	* 6		5.0	3.5	* 6
Max Green Setting (Gmax), s	* 36		28.0	12.5	* 20
Max Q Clear Time (g_c+I1), s	4.8		7.0	11.4	12.7
Green Ext Time (p_c), s	11.6		0.8	0.1	6.3

Intersection Summary	
HCM 6th Ctrl Delay	17.0
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	210	520	1090	270	80	60
Future Volume (veh/h)	210	520	1090	270	80	60
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.96	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	226	559	1172	290	86	65
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	293	3448	1717	425	149	133
Arrive On Green	0.16	0.68	0.42	0.42	0.08	0.08
Sat Flow, veh/h	1781	5274	4213	1001	1781	1585
Grp Volume(v), veh/h	226	559	986	476	86	65
Grp Sat Flow(s),veh/h/ln	1781	1702	1702	1641	1781	1585
Q Serve(g_s), s	5.6	1.9	10.9	10.9	2.2	1.8
Cycle Q Clear(g_c), s	5.6	1.9	10.9	10.9	2.2	1.8
Prop In Lane	1.00			0.61	1.00	1.00
Lane Grp Cap(c), veh/h	293	3448	1446	697	149	133
V/C Ratio(X)	0.77	0.16	0.68	0.68	0.58	0.49
Avail Cap(c_a), veh/h	307	3604	1523	734	1188	1057
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	18.6	2.8	10.8	10.8	20.5	20.3
Incr Delay (d2), s/veh	9.7	0.0	1.6	3.4	3.2	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.3	3.5	3.7	0.9	1.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	28.3	2.8	12.5	14.2	23.7	22.9
LnGrp LOS	C	A	B	B	C	C
Approach Vol, veh/h		785	1462		151	
Approach Delay, s/veh		10.1	13.0		23.3	
Approach LOS		B	B		C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		37.6		8.9	11.6	25.9
Change Period (Y+Rc), s		6.2		5.0	4.0	6.2
Max Green Setting (Gmax), s		32.8		31.0	8.0	20.8
Max Q Clear Time (g_c+I1), s		3.9		4.2	7.6	12.9
Green Ext Time (p_c), s		7.5		0.4	0.0	6.8

Intersection Summary		
HCM 6th Ctrl Delay		12.7
HCM 6th LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	170	200	220	560	80	460	690	90	30	460	300
Future Volume (veh/h)	210	170	200	220	560	80	460	690	90	30	460	300
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	241	195	230	253	644	92	529	793	103	34	529	345
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	208	833	388	156	1172	364	312	1325	591	73	1079	481
Arrive On Green	0.06	0.24	0.24	0.05	0.23	0.23	0.09	0.37	0.37	0.02	0.30	0.30
Sat Flow, veh/h	3456	3404	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	241	195	230	253	644	92	529	793	103	34	529	345
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	4.0	3.0	8.5	3.0	7.4	3.2	6.0	12.0	2.9	0.6	8.1	12.9
Cycle Q Clear(g_c), s	4.0	3.0	8.5	3.0	7.4	3.2	6.0	12.0	2.9	0.6	8.1	12.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	208	833	388	156	1172	364	312	1325	591	73	1079	481
V/C Ratio(X)	1.16	0.23	0.59	1.62	0.55	0.25	1.69	0.60	0.17	0.47	0.49	0.72
Avail Cap(c_a), veh/h	208	1487	692	156	2153	668	312	1820	812	156	1659	740
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	31.2	20.1	22.2	31.7	22.5	20.9	30.2	16.8	14.0	32.1	18.9	20.6
Incr Delay (d2), s/veh	111.4	0.2	1.9	306.6	0.5	0.5	325.8	0.5	0.2	1.7	0.4	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	1.2	3.2	7.9	2.8	1.2	16.5	4.5	1.0	0.3	3.2	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	142.6	20.3	24.1	338.3	23.1	21.4	356.0	17.3	14.1	33.9	19.3	23.0
LnGrp LOS	F	C	C	F	C	C	F	B	B	C	B	C
Approach Vol, veh/h		666			989			1425			908	
Approach Delay, s/veh		65.9			103.6			142.8			21.3	
Approach LOS		E			F			F			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	23.2	10.0	26.2	8.0	22.2	5.4	30.8
Change Period (Y+Rc), s	4.0	* 7	4.0	* 6	4.0	* 7	4.0	* 6
Max Green Setting (Gmax), s	3.0	* 29	6.0	* 31	4.0	* 28	3.0	* 34
Max Q Clear Time (g_c+I1), s	5.0	10.5	8.0	14.9	6.0	9.4	2.6	14.0
Green Ext Time (p_c), s	0.0	3.4	0.0	5.3	0.0	5.9	0.0	7.0

Intersection Summary	
HCM 6th Ctrl Delay	92.6
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	140	60	220	120	60	130	500	270	100	320	110
Future Volume (veh/h)	80	140	60	220	120	60	130	500	270	100	320	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	85	149	64	234	128	64	138	532	287	106	340	117
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	123	216	281	608	204	102	222	619	333	136	757	255
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.06	0.28	0.28	0.08	0.29	0.29
Sat Flow, veh/h	667	1170	1522	3456	1158	579	3456	2204	1186	1781	2586	873
Grp Volume(v), veh/h	234	0	64	234	0	192	138	429	390	106	231	226
Grp Sat Flow(s),veh/h/ln	1837	0	1522	1728	0	1737	1728	1777	1613	1781	1777	1682
Q Serve(g_s), s	7.8	0.0	2.3	3.9	0.0	6.7	2.5	15.0	15.0	3.8	6.9	7.2
Cycle Q Clear(g_c), s	7.8	0.0	2.3	3.9	0.0	6.7	2.5	15.0	15.0	3.8	6.9	7.2
Prop In Lane	0.36		1.00	1.00		0.33	1.00		0.74	1.00		0.52
Lane Grp Cap(c), veh/h	339	0	281	608	0	306	222	499	453	136	520	492
V/C Ratio(X)	0.69	0.00	0.23	0.38	0.00	0.63	0.62	0.86	0.86	0.78	0.45	0.46
Avail Cap(c_a), veh/h	651	0	540	1215	0	611	386	516	468	172	520	492
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.9	0.0	22.7	23.8	0.0	25.0	29.8	22.3	22.3	29.7	18.8	18.9
Incr Delay (d2), s/veh	2.5	0.0	0.4	0.4	0.0	2.1	1.1	13.8	15.3	12.6	0.9	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	3.4	0.0	0.8	1.6	0.0	2.8	1.0	7.7	7.2	2.0	2.8	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.5	0.0	23.1	24.2	0.0	27.1	30.9	36.1	37.6	42.2	19.7	19.9
LnGrp LOS	C	A	C	C	A	C	C	D	D	D	B	B
Approach Vol, veh/h		298			426			957			563	
Approach Delay, s/veh		26.5			25.5			36.0			24.0	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	17.1	7.7	24.1	16.5	8.5	23.4
Change Period (Y+Rc), s	5.0	3.5	5.0	5.0	3.5	5.0
Max Green Setting (Gmax), s	23.2	7.3	18.0	23.0	6.3	19.0
Max Q Clear Time (g_c+I1), s	9.8	4.5	9.2	8.7	5.8	17.0
Green Ext Time (p_c), s	1.3	0.0	2.4	1.7	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	29.7
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	220	50	90	150	100	70	270	340	200	310	170
Future Volume (veh/h)	110	220	50	90	150	100	70	270	340	200	310	170
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.95	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	126	253	57	103	172	115	80	310	391	230	356	195
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	156	371	394	128	342	518	102	547	465	269	888	477
Arrive On Green	0.09	0.20	0.20	0.07	0.18	0.18	0.06	0.31	0.31	0.15	0.40	0.40
Sat Flow, veh/h	1781	1870	1525	1781	1870	1522	1781	1777	1509	1781	2211	1187
Grp Volume(v), veh/h	126	253	57	103	172	115	80	310	391	230	285	266
Grp Sat Flow(s),veh/h/ln	1781	1870	1525	1781	1870	1522	1781	1777	1509	1781	1777	1621
Q Serve(g_s), s	4.4	7.9	1.8	3.6	5.2	3.4	2.8	9.2	15.2	7.9	7.2	7.4
Cycle Q Clear(g_c), s	4.4	7.9	1.8	3.6	5.2	3.4	2.8	9.2	15.2	7.9	7.2	7.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.73
Lane Grp Cap(c), veh/h	156	371	394	128	342	518	102	547	465	269	714	651
V/C Ratio(X)	0.81	0.68	0.14	0.81	0.50	0.22	0.78	0.57	0.84	0.85	0.40	0.41
Avail Cap(c_a), veh/h	156	685	650	128	655	773	193	594	505	269	714	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	28.1	23.3	18.1	28.7	23.1	15.1	29.2	18.2	20.3	26.0	13.4	13.5
Incr Delay (d2), s/veh	24.4	1.2	0.1	28.6	0.6	0.1	4.8	1.3	11.8	21.5	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	2.8	3.4	0.6	2.5	2.2	1.1	1.3	3.6	6.4	4.8	2.6	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.6	24.5	18.1	57.3	23.7	15.2	34.1	19.5	32.1	47.4	13.8	14.0
LnGrp LOS	D	C	B	E	C	B	C	B	C	D	B	B
Approach Vol, veh/h		436			390			781			781	
Approach Delay, s/veh		31.8			30.1			27.3			23.8	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	17.5	7.1	30.2	9.0	16.5	13.0	24.3
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0
Max Green Setting (Gmax), s	4.5	23.0	6.8	23.7	5.5	22.0	9.5	21.0
Max Q Clear Time (g_c+I1), s	5.6	9.9	4.8	9.4	6.4	7.2	9.9	17.2
Green Ext Time (p_c), s	0.0	0.9	0.0	3.5	0.0	0.8	0.0	1.8

Intersection Summary	
HCM 6th Ctrl Delay	27.4
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	16.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	50	80	30	70	300	110	10	0	20	40	0	30
Future Vol, veh/h	50	80	30	70	300	110	10	0	20	40	0	30
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	70	113	42	99	423	155	14	0	28	56	0	42
Number of Lanes	1	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	9.8	19.6	9.3	10
HCM LOS	A	C	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	33%	100%	0%	19%	0%	57%
Vol Thru, %	0%	0%	73%	81%	0%	0%
Vol Right, %	67%	0%	27%	0%	100%	43%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	50	110	370	110	70
LT Vol	10	50	0	70	0	40
Through Vol	0	0	80	300	0	0
RT Vol	20	0	30	0	110	30
Lane Flow Rate	42	70	155	521	155	99
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.069	0.121	0.232	0.76	0.192	0.162
Departure Headway (Hd)	5.85	6.19	5.499	5.251	4.451	5.899
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	615	582	657	683	796	611
Service Time	3.857	3.897	3.199	3.035	2.235	3.902
HCM Lane V/C Ratio	0.068	0.12	0.236	0.763	0.195	0.162
HCM Control Delay	9.3	9.7	9.9	22.9	8.3	10
HCM Lane LOS	A	A	A	C	A	A
HCM 95th-tile Q	0.2	0.4	0.9	7	0.7	0.6

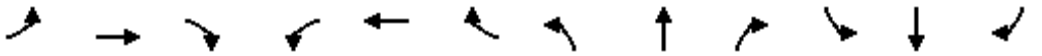
Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	230	180	150	40	170	60	10	0	10	20	0	50
Future Vol, veh/h	230	180	150	40	170	60	10	0	10	20	0	50
Conflicting Peds, #/hr	0	0	10	0	0	10	0	0	10	0	0	10
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	258	202	169	45	191	67	11	0	11	22	0	56

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	268	0	0	381	0	0	1166	1171	307	1143	1222	245
Stage 1	-	-	-	-	-	-	813	813	-	325	325	-
Stage 2	-	-	-	-	-	-	353	358	-	818	897	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1296	-	-	1177	-	-	171	193	733	177	180	794
Stage 1	-	-	-	-	-	-	372	392	-	687	649	-
Stage 2	-	-	-	-	-	-	664	628	-	370	358	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1284	-	-	1166	-	-	127	144	719	140	135	779
Mov Cap-2 Maneuver	-	-	-	-	-	-	127	144	-	140	135	-
Stage 1	-	-	-	-	-	-	294	310	-	543	613	-
Stage 2	-	-	-	-	-	-	583	593	-	288	283	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.5	1.2	23.6	18.9
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	216	1284	-	-	1166	-	-	338
HCM Lane V/C Ratio	0.104	0.201	-	-	0.039	-	-	0.233
HCM Control Delay (s)	23.6	8.5	-	-	8.2	0	-	18.9
HCM Lane LOS	C	A	-	-	A	A	-	C
HCM 95th %tile Q(veh)	0.3	0.8	-	-	0.1	-	-	0.9



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰↰		↱
Traffic Volume (veh/h)	0	2080	30	0	2010	120	0	0	0	580	0	120
Future Volume (veh/h)	0	2080	30	0	2010	120	0	0	0	580	0	120
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870				1870	0	1870
Adj Flow Rate, veh/h	0	2144	31	0	2072	124				598	0	124
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	2	2	0	2	2				2	0	2
Cap, veh/h	0	3081	924	0	3081	1254				720	0	330
Arrive On Green	0.00	0.60	0.60	0.00	0.60	0.60				0.21	0.00	0.21
Sat Flow, veh/h	0	5274	1531	0	5274	1531				3456	0	1585
Grp Volume(v), veh/h	0	2144	31	0	2072	124				598	0	124
Grp Sat Flow(s),veh/h/ln	0	1702	1531	0	1702	1531				1728	0	1585
Q Serve(g_s), s	0.0	17.2	0.5	0.0	16.3	1.0				9.9	0.0	4.0
Cycle Q Clear(g_c), s	0.0	17.2	0.5	0.0	16.3	1.0				9.9	0.0	4.0
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3081	924	0	3081	1254				720	0	330
V/C Ratio(X)	0.00	0.70	0.03	0.00	0.67	0.10				0.83	0.00	0.38
Avail Cap(c_a), veh/h	0	3081	924	0	3081	1254				778	0	357
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	0.00	0.70	0.70				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	8.1	4.8	0.0	7.9	1.2				22.7	0.0	20.4
Incr Delay (d2), s/veh	0.0	1.3	0.1	0.0	0.8	0.1				7.3	0.0	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
%ile BackOfQ(50%),veh/ln	0.0	4.9	0.1	0.0	4.6	0.5				4.5	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	9.5	4.9	0.0	8.8	1.3				30.0	0.0	21.2
LnGrp LOS	A	A	A	A	A	A				C	A	C
Approach Vol, veh/h		2175			2196						722	
Approach Delay, s/veh		9.4			8.4						28.5	
Approach LOS		A			A						C	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		42.0		18.0		42.0						
Change Period (Y+Rc), s		5.8		5.5		5.8						
Max Green Setting (Gmax), s		35.2		13.5		35.2						
Max Q Clear Time (g_c+I1), s		19.2		11.9		18.3						
Green Ext Time (p_c), s		15.2		0.6		16.0						

Intersection Summary												
HCM 6th Ctrl Delay			11.6									
HCM 6th LOS			B									

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2610	120	0	2160	450	40	0	200	0	0	0
Future Volume (veh/h)	0	2610	120	0	2160	450	40	0	200	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870	1870	0	1870			
Adj Flow Rate, veh/h	0	2777	128	0	2298	479	43	0	213			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	0	2	2	0	2	2	2	0	2			
Cap, veh/h	0	3431	1192	0	3431	1030	182	0	285			
Arrive On Green	0.00	0.67	0.67	0.00	0.67	0.67	0.10	0.00	0.10			
Sat Flow, veh/h	0	5274	1533	0	5274	1533	1781	0	2790			
Grp Volume(v), veh/h	0	2777	128	0	2298	479	43	0	213			
Grp Sat Flow(s),veh/h/ln	0	1702	1533	0	1702	1533	1781	0	1395			
Q Serve(g_s), s	0.0	19.6	1.0	0.0	13.4	7.5	1.1	0.0	3.7			
Cycle Q Clear(g_c), s	0.0	19.6	1.0	0.0	13.4	7.5	1.1	0.0	3.7			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3431	1192	0	3431	1030	182	0	285			
V/C Ratio(X)	0.00	0.81	0.11	0.00	0.67	0.46	0.24	0.00	0.75			
Avail Cap(c_a), veh/h	0	3431	1192	0	3431	1030	182	0	285			
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	0.61	0.61	0.00	0.17	0.17	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	5.9	1.4	0.0	4.9	3.9	20.7	0.0	21.8			
Incr Delay (d2), s/veh	0.0	1.3	0.1	0.0	0.2	0.3	0.7	0.0	10.6			
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	0.0	3.8	0.3	0.0	2.4	1.2	0.5	0.0	1.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	7.2	1.5	0.0	5.1	4.2	21.4	0.0	32.4			
LnGrp LOS	A	A	A	A	A	A	C	A	C			
Approach Vol, veh/h		2905			2777			256				
Approach Delay, s/veh		7.0			4.9			30.6				
Approach LOS		A			A			C				
Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		39.4				39.4		10.6				
Change Period (Y+Rc), s		5.8				5.8		5.5				
Max Green Setting (Gmax), s		33.6				33.6		5.1				
Max Q Clear Time (g_c+I1), s		21.6				15.4		5.7				
Green Ext Time (p_c), s		12.0				17.8		0.0				
Intersection Summary												
HCM 6th Ctrl Delay			7.0									
HCM 6th LOS			A									

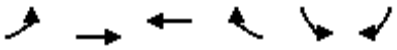
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	570	970	820	420	980	80	550	550	260	170	800	630
Future Volume (veh/h)	570	970	820	420	980	80	550	550	260	170	800	630
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	588	1000	845	433	1010	82	567	567	268	175	825	649
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	421	1487	773	361	1315	107	391	1271	718	236	1112	675
Arrive On Green	0.12	0.29	0.29	0.10	0.27	0.27	0.11	0.36	0.36	0.07	0.31	0.31
Sat Flow, veh/h	3456	5106	2652	3456	4801	389	3456	3554	1543	3456	3554	1540
Grp Volume(v), veh/h	588	1000	845	433	716	376	567	567	268	175	825	649
Grp Sat Flow(s),veh/h/ln	1728	1702	1326	1728	1702	1786	1728	1777	1543	1728	1777	1540
Q Serve(g_s), s	14.0	19.8	33.5	12.0	22.2	22.3	13.0	14.0	13.0	5.7	23.9	36.0
Cycle Q Clear(g_c), s	14.0	19.8	33.5	12.0	22.2	22.3	13.0	14.0	13.0	5.7	23.9	36.0
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	421	1487	773	361	932	489	391	1271	718	236	1112	675
V/C Ratio(X)	1.40	0.67	1.09	1.20	0.77	0.77	1.45	0.45	0.37	0.74	0.74	0.96
Avail Cap(c_a), veh/h	421	1487	773	361	932	489	391	1271	718	300	1112	675
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)	0.50	0.50	0.50	0.79	0.79	0.79	1.00	1.00	1.00	0.10	0.10	0.10
Uniform Delay (d), s/veh	50.5	35.9	40.8	51.5	38.4	38.4	51.0	28.2	20.1	52.6	35.3	31.7
Incr Delay (d2), s/veh	186.2	1.2	53.0	109.8	4.8	8.9	217.0	0.3	0.4	0.8	0.3	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.9	8.4	16.4	10.7	9.8	10.9	17.4	6.0	4.7	2.5	10.3	17.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	236.7	37.1	93.8	161.3	43.2	47.4	268.0	28.5	20.5	53.4	35.6	36.6
LnGrp LOS	F	D	F	F	D	D	F	C	C	D	D	D
Approach Vol, veh/h		2433			1525			1402			1649	
Approach Delay, s/veh		105.0			77.7			123.8			37.9	
Approach LOS		F			E			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	40.5	17.0	41.5	18.0	38.5	11.9	46.6
Change Period (Y+Rc), s	4.0	* 7	4.0	5.5	4.0	* 7	4.0	5.5
Max Green Setting (Gmax), s	12.0	* 34	13.0	36.0	14.0	* 32	10.0	39.0
Max Q Clear Time (g_c+I1), s	14.0	35.5	15.0	38.0	16.0	24.3	7.7	16.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	4.7	0.1	6.1

Intersection Summary	
HCM 6th Ctrl Delay	87.1
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	480	970	770	100	130	620
Future Volume (veh/h)	480	970	770	100	130	620
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.95	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	516	1043	828	108	140	667
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	627	2802	1394	181	465	827
Arrive On Green	0.18	0.55	0.31	0.31	0.26	0.26
Sat Flow, veh/h	3456	5274	4713	589	1781	3170
Grp Volume(v), veh/h	516	1043	619	317	140	667
Grp Sat Flow(s),veh/h/ln	1728	1702	1702	1730	1781	1585
Q Serve(g_s), s	8.3	6.7	8.9	9.0	3.6	11.4
Cycle Q Clear(g_c), s	8.3	6.7	8.9	9.0	3.6	11.4
Prop In Lane	1.00			0.34	1.00	1.00
Lane Grp Cap(c), veh/h	627	2802	1044	530	465	827
V/C Ratio(X)	0.82	0.37	0.59	0.60	0.30	0.81
Avail Cap(c_a), veh/h	748	3184	1179	599	864	1537
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	22.7	7.4	17.0	17.0	17.1	20.0
Incr Delay (d2), s/veh	5.4	0.3	2.0	4.0	0.1	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.6	2.0	3.4	3.8	1.4	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	28.1	7.7	18.9	20.9	17.3	20.7
LnGrp LOS	C	A	B	C	B	C
Approach Vol, veh/h		1559	936		807	
Approach Delay, s/veh		14.5	19.6		20.1	
Approach LOS		B	B		C	

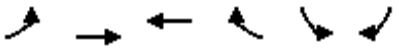
Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	37.7		20.1	14.0	23.7
Change Period (Y+Rc), s	* 6		5.0	3.5	* 6
Max Green Setting (Gmax), s	* 36		28.0	12.5	* 20
Max Q Clear Time (g_c+I1), s	8.7		13.4	10.3	11.0
Green Ext Time (p_c), s	17.1		1.7	0.2	6.5

Intersection Summary	
HCM 6th Ctrl Delay	17.3
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	230	910	640	220	290	280
Future Volume (veh/h)	230	910	640	220	290	280
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.95	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	261	1034	727	250	330	318
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	258	2760	1201	406	457	407
Arrive On Green	0.15	0.54	0.32	0.32	0.26	0.26
Sat Flow, veh/h	1781	5274	3886	1258	1781	1585
Grp Volume(v), veh/h	261	1034	665	312	330	318
Grp Sat Flow(s),veh/h/ln	1781	1702	1702	1572	1781	1585
Q Serve(g_s), s	8.0	6.4	9.1	9.3	9.3	10.3
Cycle Q Clear(g_c), s	8.0	6.4	9.1	9.3	9.3	10.3
Prop In Lane	1.00			0.80	1.00	1.00
Lane Grp Cap(c), veh/h	258	2760	1099	508	457	407
V/C Ratio(X)	1.01	0.37	0.60	0.62	0.72	0.78
Avail Cap(c_a), veh/h	258	3036	1283	593	1001	891
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	23.6	7.3	15.7	15.8	18.7	19.1
Incr Delay (d2), s/veh	58.7	0.2	1.2	2.7	2.0	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	1.8	3.3	3.3	3.7	8.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	82.3	7.5	16.9	18.5	20.7	22.1
LnGrp LOS	F	A	B	B	C	C
Approach Vol, veh/h		1295	977		648	
Approach Delay, s/veh		22.6	17.4		21.4	
Approach LOS		C	B		C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		36.0		19.2	12.0	24.0
Change Period (Y+Rc), s		6.2		5.0	4.0	6.2
Max Green Setting (Gmax), s		32.8		31.0	8.0	20.8
Max Q Clear Time (g_c+I1), s		8.4		12.3	10.0	11.3
Green Ext Time (p_c), s		13.4		1.9	0.0	6.4

Intersection Summary		
HCM 6th Ctrl Delay		20.6
HCM 6th LOS		C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	470	480	80	340	20	330	240	50	70	230	150
Future Volume (veh/h)	200	470	480	80	340	20	330	240	50	70	230	150
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	208	490	500	83	354	21	344	250	52	73	240	156
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	158	1320	615	146	1963	609	315	757	338	130	568	253
Arrive On Green	0.05	0.39	0.39	0.04	0.38	0.38	0.09	0.21	0.21	0.04	0.16	0.16
Sat Flow, veh/h	3456	3404	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	208	490	500	83	354	21	344	250	52	73	240	156
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	3.0	6.8	18.6	1.6	3.0	0.5	6.0	3.9	1.8	1.4	4.0	6.0
Cycle Q Clear(g_c), s	3.0	6.8	18.6	1.6	3.0	0.5	6.0	3.9	1.8	1.4	4.0	6.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	158	1320	615	146	1963	609	315	757	338	130	568	253
V/C Ratio(X)	1.32	0.37	0.81	0.57	0.18	0.03	1.09	0.33	0.15	0.56	0.42	0.62
Avail Cap(c_a), veh/h	158	1500	698	158	2250	698	315	1728	771	263	1674	747
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	31.4	14.4	18.0	30.9	13.4	12.6	29.9	21.9	21.1	31.1	24.9	25.8
Incr Delay (d2), s/veh	181.6	0.2	7.0	2.1	0.1	0.0	77.5	0.3	0.3	1.4	0.6	2.9
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	5.2	2.4	7.3	0.7	1.1	0.2	5.8	1.6	0.6	0.6	1.7	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	213.0	14.6	25.0	33.0	13.5	12.7	107.4	22.2	21.3	32.5	25.5	28.7
LnGrp LOS	F	B	C	C	B	B	F	C	C	C	C	C
Approach Vol, veh/h		1198			458			646			469	
Approach Delay, s/veh		53.4			17.0			67.5			27.7	
Approach LOS		D			B			E			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	32.5	10.0	16.5	7.0	32.3	6.5	20.0
Change Period (Y+Rc), s	4.0	* 7	4.0	* 6	4.0	* 7	4.0	* 6
Max Green Setting (Gmax), s	3.0	* 29	6.0	* 31	3.0	* 29	5.0	* 32
Max Q Clear Time (g_c+I1), s	13.6	20.6	8.0	8.0	5.0	5.0	3.4	5.9
Green Ext Time (p_c), s	0.0	5.0	0.0	2.5	0.0	3.2	0.0	2.1

Intersection Summary	
HCM 6th Ctrl Delay	46.3
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	220	100	450	180	100	200	630	220	120	820	180
Future Volume (veh/h)	180	220	100	450	180	100	200	630	220	120	820	180
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	189	232	105	474	189	105	211	663	232	126	863	189
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	213	262	412	733	240	133	191	634	222	98	712	156
Arrive On Green	0.26	0.26	0.26	0.21	0.21	0.21	0.06	0.25	0.25	0.06	0.25	0.25
Sat Flow, veh/h	821	1008	1585	3456	1130	628	3456	2582	903	1781	2898	635
Grp Volume(v), veh/h	421	0	105	474	0	294	211	456	439	126	529	523
Grp Sat Flow(s),veh/h/ln	1829	0	1585	1728	0	1757	1728	1777	1708	1781	1777	1756
Q Serve(g_s), s	18.0	0.0	4.3	10.2	0.0	12.9	4.5	20.0	20.0	4.5	20.0	20.0
Cycle Q Clear(g_c), s	18.0	0.0	4.3	10.2	0.0	12.9	4.5	20.0	20.0	4.5	20.0	20.0
Prop In Lane	0.45		1.00	1.00		0.36	1.00		0.53	1.00		0.36
Lane Grp Cap(c), veh/h	475	0	412	733	0	373	191	436	420	98	436	431
V/C Ratio(X)	0.89	0.00	0.26	0.65	0.00	0.79	1.10	1.05	1.05	1.28	1.21	1.21
Avail Cap(c_a), veh/h	539	0	467	976	0	496	191	436	420	98	436	431
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.0	0.0	23.9	29.3	0.0	30.3	38.5	30.7	30.7	38.5	30.7	30.7
Incr Delay (d2), s/veh	15.0	0.0	0.3	1.0	0.0	6.1	95.9	55.4	56.4	183.3	114.9	115.3
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	9.6	0.0	1.6	4.2	0.0	5.9	4.4	14.9	14.5	6.9	22.1	21.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.9	0.0	24.2	30.3	0.0	36.5	134.4	86.1	87.1	221.8	145.6	146.0
LnGrp LOS	D	A	C	C	A	D	F	F	F	F	F	F
Approach Vol, veh/h		526			768			1106			1178	
Approach Delay, s/veh		40.0			32.6			95.7			154.0	
Approach LOS		D			C			F			F	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	26.1	8.0	25.0	22.3	8.0	25.0
Change Period (Y+Rc), s	5.0	3.5	5.0	5.0	3.5	5.0
Max Green Setting (Gmax), s	24.0	4.5	20.0	23.0	4.5	20.0
Max Q Clear Time (g_c+I1), s	20.0	6.5	22.0	14.9	6.5	22.0
Green Ext Time (p_c), s	1.1	0.0	0.0	2.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	93.2
HCM 6th LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	240	250	90	290	360	270	80	370	220	180	380	230
Future Volume (veh/h)	240	250	90	290	360	270	80	370	220	180	380	230
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.95	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	273	284	102	330	409	307	91	420	250	205	432	261
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	256	437	462	305	489	572	117	535	314	193	627	375
Arrive On Green	0.14	0.23	0.23	0.17	0.26	0.26	0.07	0.25	0.25	0.11	0.30	0.30
Sat Flow, veh/h	1781	1870	1531	1781	1870	1535	1781	2106	1237	1781	2112	1263
Grp Volume(v), veh/h	273	284	102	330	409	307	91	354	316	205	363	330
Grp Sat Flow(s),veh/h/ln	1781	1870	1531	1781	1870	1535	1781	1777	1565	1781	1777	1598
Q Serve(g_s), s	10.5	10.0	3.7	12.5	15.1	11.5	3.7	13.5	13.8	7.9	13.2	13.4
Cycle Q Clear(g_c), s	10.5	10.0	3.7	12.5	15.1	11.5	3.7	13.5	13.8	7.9	13.2	13.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.79	1.00		0.79
Lane Grp Cap(c), veh/h	256	437	462	305	489	572	117	452	398	193	527	474
V/C Ratio(X)	1.07	0.65	0.22	1.08	0.84	0.54	0.78	0.78	0.80	1.06	0.69	0.70
Avail Cap(c_a), veh/h	256	553	557	305	604	667	173	511	450	193	530	477
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.3	25.3	19.2	30.3	25.5	18.2	33.6	25.4	25.5	32.6	22.7	22.8
Incr Delay (d2), s/veh	74.8	1.1	0.1	75.3	7.4	0.4	6.5	7.3	9.0	82.8	3.9	4.6
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	9.7	4.4	1.3	11.5	7.3	3.9	1.8	6.3	5.8	7.7	5.8	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	106.1	26.3	19.3	105.6	32.9	18.6	40.1	32.6	34.5	115.4	26.6	27.4
LnGrp LOS	F	C	B	F	C	B	D	C	C	F	C	C
Approach Vol, veh/h		659			1046			761			898	
Approach Delay, s/veh		58.3			51.6			34.3			47.1	
Approach LOS		E			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	22.1	8.3	26.7	14.0	24.1	11.4	23.6
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0
Max Green Setting (Gmax), s	12.5	21.6	7.1	21.8	10.5	23.6	7.9	21.0
Max Q Clear Time (g_c+I1), s	14.5	12.0	5.7	15.4	12.5	17.1	9.9	15.8
Green Ext Time (p_c), s	0.0	1.0	0.0	2.7	0.0	1.5	0.0	2.2

Intersection Summary	
HCM 6th Ctrl Delay	47.8
HCM 6th LOS	D

Intersection	
Intersection Delay, s/veh	17.7
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	80	320	10	20	200	210	20	10	70	180	0	70
Future Vol, veh/h	80	320	10	20	200	210	20	10	70	180	0	70
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	92	368	11	23	230	241	23	11	80	207	0	80
Number of Lanes	1	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	22.3	14.6	12.2	17.6
HCM LOS	C	B	B	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	20%	100%	0%	9%	0%	72%
Vol Thru, %	10%	0%	97%	91%	0%	0%
Vol Right, %	70%	0%	3%	0%	100%	28%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	100	80	330	220	210	250
LT Vol	20	80	0	20	0	180
Through Vol	10	0	320	200	0	0
RT Vol	70	0	10	0	210	70
Lane Flow Rate	115	92	379	253	241	287
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.225	0.187	0.716	0.485	0.412	0.542
Departure Headway (Hd)	7.045	7.325	6.792	6.904	6.14	6.79
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	508	489	531	521	584	532
Service Time	5.111	5.074	4.54	4.654	3.89	4.839
HCM Lane V/C Ratio	0.226	0.188	0.714	0.486	0.413	0.539
HCM Control Delay	12.2	11.8	24.9	16	13.2	17.6
HCM Lane LOS	B	B	C	C	B	C
HCM 95th-tile Q	0.9	0.7	5.8	2.6	2	3.2

Intersection	
Int Delay, s/veh	578.1

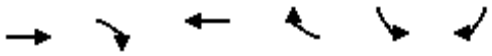
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	320	290	30	10	250	100	80	0	70	80	0	380
Future Vol, veh/h	320	290	30	10	250	100	80	0	70	80	0	380
Conflicting Peds, #/hr	0	0	10	0	0	10	0	0	10	0	0	10
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	395	358	37	12	309	123	99	0	86	99	0	469

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	442	0	0	405	0	0	1816	1643	397	1625	1600	391
Stage 1	-	-	-	-	-	-	1177	1177	-	405	405	-
Stage 2	-	-	-	-	-	-	639	466	-	1220	1195	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1118	-	-	1154	-	-	~ 60	100	652	~ 82	106	658
Stage 1	-	-	-	-	-	-	233	265	-	622	598	-
Stage 2	-	-	-	-	-	-	464	562	-	220	260	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1107	-	-	1143	-	-	~ 12	62	640	~ 50	66	646
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 12	62	-	~ 50	66	-
Stage 1	-	-	-	-	-	-	148	169	-	396	584	-
Stage 2	-	-	-	-	-	-	124	549	-	121	166	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	5	0.2	$ 3682.9	$ 815.4
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	22	1107	-	-	1143	-	-	210
HCM Lane V/C Ratio	8.418	0.357	-	-	0.011	-	-	2.704
HCM Control Delay (s)	$ 3682.9	10	-	-	8.2	0	-	$ 815.4
HCM Lane LOS	F	B	-	-	A	A	-	F
HCM 95th %tile Q(veh)	23.4	1.6	-	-	0	-	-	49.1

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



Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1884	63	1305	158	316	95
v/c Ratio	0.58	0.06	0.40	0.13	0.59	0.31
Control Delay	6.7	1.4	5.3	0.8	26.5	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.7	1.4	5.3	0.8	26.5	11.7
Queue Length 50th (ft)	110	0	64	0	49	7
Queue Length 95th (ft)	138	9	82	0	84	40
Internal Link Dist (ft)	435		706			
Turn Bay Length (ft)		300		340		500
Base Capacity (vph)	3271	999	3271	1246	549	313
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.06	0.40	0.13	0.58	0.30

Intersection Summary

Lane Group	EBT	EBR	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	2095	189	1484	674	32	168
v/c Ratio	0.62	0.16	0.44	0.55	0.16	0.47
Control Delay	5.8	1.0	4.5	2.2	22.4	18.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.8	1.0	4.5	2.2	22.4	18.7
Queue Length 50th (ft)	97	0	57	0	9	17
Queue Length 95th (ft)	131	0	78	23	28	42
Internal Link Dist (ft)	706		1382			
Turn Bay Length (ft)		350		320		305
Base Capacity (vph)	3376	1200	3376	1233	194	360
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.16	0.44	0.55	0.16	0.47

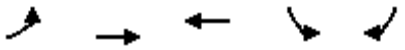
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	589	989	358	274	1074	684	474	200	53	263	295
v/c Ratio	0.77	0.50	0.29	0.74	0.79	1.21	0.42	0.28	0.37	0.42	0.42
Control Delay	54.1	32.7	4.2	66.9	47.3	155.2	34.2	12.5	66.1	45.6	16.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.1	32.7	4.2	66.9	47.3	155.2	34.2	12.5	66.1	45.6	16.3
Queue Length 50th (ft)	224	199	0	111	276	~354	177	68	22	107	104
Queue Length 95th (ft)	#424	319	40	158	358	#476	178	87	44	123	162
Internal Link Dist (ft)		1382			1328		282			900	
Turn Bay Length (ft)	260		260	215		285		290	200		350
Base Capacity (vph)	769	1959	1215	411	1374	564	1443	735	143	1019	710
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.50	0.29	0.67	0.78	1.21	0.33	0.27	0.37	0.26	0.42

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	638	660	1234	234	159
v/c Ratio	0.83	0.20	0.69	0.37	0.45
Control Delay	34.5	5.7	19.7	8.8	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	34.5	5.7	19.7	8.8	7.9
Queue Length 50th (ft)	95	20	108	11	0
Queue Length 95th (ft)	#278	86	#285	32	38
Internal Link Dist (ft)		1328	1713	1031	
Turn Bay Length (ft)	220			260	
Base Capacity (vph)	772	3293	1811	1657	786
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.83	0.20	0.68	0.14	0.20

Intersection Summary

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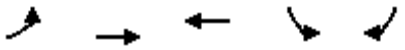

Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	226	559	1462	86	65
v/c Ratio	0.88	0.16	0.68	0.25	0.19
Control Delay	62.5	6.4	18.0	19.4	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	62.5	6.4	18.0	19.4	6.1
Queue Length 50th (ft)	68	20	122	24	0
Queue Length 95th (ft)	#259	80	#353	51	21
Internal Link Dist (ft)		1713	1725	666	
Turn Bay Length (ft)	300				
Base Capacity (vph)	256	3400	2139	995	897
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.88	0.16	0.68	0.09	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
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Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	241	425	253	644	92	529	793	103	34	529	345
v/c Ratio	1.20	0.30	1.69	0.49	0.18	1.76	0.56	0.14	0.23	0.52	0.61
Control Delay	163.4	10.9	361.4	24.0	2.6	379.4	19.2	1.9	41.4	23.0	16.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	163.4	10.9	361.4	24.0	2.6	379.4	19.2	1.9	41.4	23.0	16.9
Queue Length 50th (ft)	~63	24	~80	82	0	~172	122	0	7	96	65
Queue Length 95th (ft)	#169	52	#189	133	14	#341	235	13	24	159	156
Internal Link Dist (ft)		1725		314			293			369	
Turn Bay Length (ft)	315		300		240	300		240	290		
Base Capacity (vph)	201	2104	150	2084	727	301	1761	860	150	1606	801
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.20	0.20	1.69	0.31	0.13	1.76	0.45	0.12	0.23	0.33	0.43

Intersection Summary

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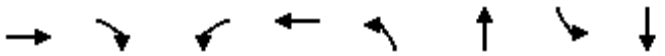

Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	234	64	234	192	138	819	106	457
v/c Ratio	0.63	0.16	0.38	0.57	0.47	0.85	0.68	0.44
Control Delay	35.3	1.0	28.0	30.4	39.5	34.5	59.4	23.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.3	1.0	28.0	30.4	39.5	34.5	59.4	23.4
Queue Length 50th (ft)	93	0	46	66	29	153	45	76
Queue Length 95th (ft)	185	2	86	140	69	#364	#155	165
Internal Link Dist (ft)	127			1414		900		219
Turn Bay Length (ft)			120		230		220	
Base Capacity (vph)	598	587	1113	586	353	960	157	1034
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.11	0.21	0.33	0.39	0.85	0.68	0.44

Intersection Summary

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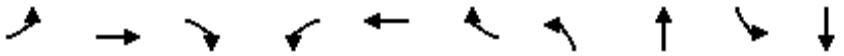
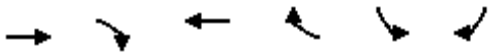


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	126	253	57	103	172	115	80	701	230	551
v/c Ratio	0.49	0.62	0.10	0.74	0.46	0.18	0.47	0.68	0.77	0.46
Control Delay	40.2	27.9	2.3	63.6	25.0	3.2	37.2	12.5	47.6	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.2	27.9	2.3	63.6	25.0	3.2	37.2	12.5	47.6	13.8
Queue Length 50th (ft)	42	77	0	35	51	0	26	46	74	57
Queue Length 95th (ft)	#152	152	11	#133	108	22	74	103	#231	113
Internal Link Dist (ft)		1414			1120			1031		363
Turn Bay Length (ft)	200			140		140	130		100	
Base Capacity (vph)	258	757	621	140	724	640	212	1415	297	1473
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.33	0.09	0.74	0.24	0.18	0.38	0.50	0.77	0.37

Intersection Summary

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



Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	2144	31	2072	124	598	124
v/c Ratio	0.71	0.03	0.69	0.10	0.79	0.32
Control Delay	10.4	1.5	10.0	0.7	31.5	15.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.4	1.5	10.0	0.7	31.5	15.0
Queue Length 50th (ft)	177	0	167	0	105	22
Queue Length 95th (ft)	228	6	215	0	#173	60
Internal Link Dist (ft)	435		706			
Turn Bay Length (ft)		300		340		500
Base Capacity (vph)	3010	914	3010	1270	772	395
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.03	0.69	0.10	0.77	0.31

Intersection Summary

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

Lane Group	EBT	EBR	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	2777	128	2298	479	43	213
v/c Ratio	0.81	0.11	0.67	0.41	0.24	0.66
Control Delay	8.5	0.9	6.2	1.5	24.2	27.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.5	0.9	6.2	1.5	24.2	27.9
Queue Length 50th (ft)	162	0	111	0	12	25
Queue Length 95th (ft)	222	0	149	19	35	#67
Internal Link Dist (ft)	706		1382			
Turn Bay Length (ft)		350		320		305
Base Capacity (vph)	3417	1200	3417	1176	180	321
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.11	0.67	0.41	0.24	0.66

Intersection Summary

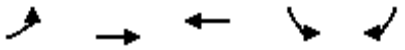
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	588	1000	845	433	1092	567	567	268	175	825	649
v/c Ratio	1.13	0.69	0.84	0.94	0.81	1.37	0.50	0.35	0.60	0.82	0.88
Control Delay	125.9	39.6	30.0	80.2	44.7	218.9	33.3	13.8	60.0	46.0	38.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	125.9	39.6	30.0	80.2	44.7	218.9	33.3	13.8	60.0	46.0	38.1
Queue Length 50th (ft)	~274	238	198	~170	272	~296	178	81	65	296	356
Queue Length 95th (ft)	#414	289	292	#305	327	#407	225	140	102	361	#628
Internal Link Dist (ft)		1382			1328		282			900	
Turn Bay Length (ft)	260		260	215		285		290	200		350
Base Capacity (vph)	519	1481	1028	460	1382	415	1200	764	298	1107	738
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.13	0.68	0.82	0.94	0.79	1.37	0.47	0.35	0.59	0.75	0.88

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

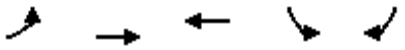
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	516	1043	936	474	333
v/c Ratio	0.70	0.33	0.56	0.57	0.64
Control Delay	28.9	6.7	17.3	9.1	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	28.9	6.7	17.3	9.1	8.6
Queue Length 50th (ft)	74	40	79	20	0
Queue Length 95th (ft)	#209	142	182	51	53
Internal Link Dist (ft)		1328	1713	1031	
Turn Bay Length (ft)	220			260	
Base Capacity (vph)	810	3458	1900	1810	899
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.64	0.30	0.49	0.26	0.37

Intersection Summary

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



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	261	1034	977	330	318
v/c Ratio	1.07	0.39	0.62	0.64	0.47
Control Delay	110.2	10.3	18.2	24.4	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	110.2	10.3	18.2	24.4	4.6
Queue Length 50th (ft)	~107	69	88	104	0
Queue Length 95th (ft)	#294	149	168	170	41
Internal Link Dist (ft)		1713	1725	666	
Turn Bay Length (ft)	300				
Base Capacity (vph)	244	2880	1817	947	974
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.07	0.36	0.54	0.35	0.33

Intersection Summary

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Queue shown is maximum after two cycles.

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

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	208	990	83	354	21	344	250	52	73	240	156
v/c Ratio	1.23	0.56	0.49	0.23	0.04	1.01	0.27	0.10	0.29	0.33	0.35
Control Delay	177.8	14.0	46.3	17.4	0.1	88.0	21.5	0.4	35.9	23.3	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	177.8	14.0	46.3	17.4	0.1	88.0	21.5	0.4	35.9	23.3	6.5
Queue Length 50th (ft)	~49	69	15	32	0	~66	42	0	13	41	0
Queue Length 95th (ft)	#162	159	#63	76	0	#227	79	0	43	77	40
Internal Link Dist (ft)		1725		314			293			369	
Turn Bay Length (ft)	315		300		240	300		240	290		
Base Capacity (vph)	169	2405	169	2432	826	339	1868	904	283	1809	885
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.23	0.41	0.49	0.15	0.03	1.01	0.13	0.06	0.26	0.13	0.18

Intersection Summary

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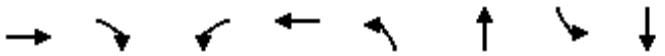
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	421	105	474	294	211	895	126	1052
v/c Ratio	0.88	0.21	0.62	0.71	1.15	1.05	1.33	1.24
Control Delay	51.3	4.5	33.6	37.5	150.3	77.1	240.1	150.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.3	4.5	33.6	37.5	150.3	77.1	240.1	150.3
Queue Length 50th (ft)	216	0	120	133	~72	~282	~92	~387
Queue Length 95th (ft)	#392	28	169	219	#147	#424	#209	#538
Internal Link Dist (ft)	139			1414		900		219
Turn Bay Length (ft)			120		230		220	
Base Capacity (vph)	523	545	945	506	184	852	95	845
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.19	0.50	0.58	1.15	1.05	1.33	1.24

Intersection Summary

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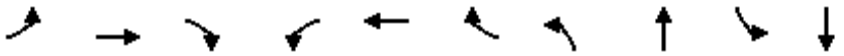
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	273	284	102	330	409	307	91	670	205	693
v/c Ratio	1.05	0.64	0.17	1.07	0.83	0.45	0.60	0.75	1.05	0.65
Control Delay	106.9	32.5	4.1	105.7	40.8	11.6	52.0	25.7	117.2	21.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	106.9	32.5	4.1	105.7	40.8	11.6	52.0	25.7	117.2	21.8
Queue Length 50th (ft)	~149	117	0	~182	176	58	42	117	~112	119
Queue Length 95th (ft)	#300	194	25	#346	#282	116	#99	176	#245	178
Internal Link Dist (ft)		1414			1120			1031		363
Turn Bay Length (ft)	200			140		140	130		100	
Base Capacity (vph)	259	561	620	308	613	677	175	1064	195	1122
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.05	0.51	0.16	1.07	0.67	0.45	0.52	0.63	1.05	0.62

Intersection Summary

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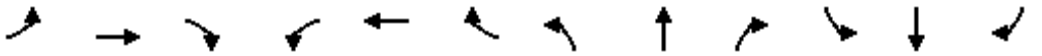
Queue shown is maximum after two cycles.

APPENDIX G

LONG-TERM WITH PROJECT PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰↰		↱
Traffic Volume (veh/h)	0	1837	60	0	1260	157	0	0	0	327	0	90
Future Volume (veh/h)	0	1837	60	0	1260	157	0	0	0	327	0	90
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870				1870	0	1870
Adj Flow Rate, veh/h	0	1934	63	0	1326	165				344	0	95
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	2	2	0	2	2				2	0	2
Cap, veh/h	0	3361	1009	0	3361	1233				471	0	216
Arrive On Green	0.00	0.66	0.66	0.00	0.66	0.66				0.14	0.00	0.14
Sat Flow, veh/h	0	5274	1533	0	5274	1544				3456	0	1585
Grp Volume(v), veh/h	0	1934	63	0	1326	165				344	0	95
Grp Sat Flow(s),veh/h/ln	0	1702	1533	0	1702	1544				1728	0	1585
Q Serve(g_s), s	0.0	11.5	0.8	0.0	6.6	1.4				5.3	0.0	3.0
Cycle Q Clear(g_c), s	0.0	11.5	0.8	0.0	6.6	1.4				5.3	0.0	3.0
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3361	1009	0	3361	1233				471	0	216
V/C Ratio(X)	0.00	0.58	0.06	0.00	0.39	0.13				0.73	0.00	0.44
Avail Cap(c_a), veh/h	0	3361	1009	0	3361	1233				534	0	245
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	0.00	0.90	0.90				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	5.2	3.3	0.0	4.3	1.3				22.8	0.0	21.8
Incr Delay (d2), s/veh	0.0	0.7	0.1	0.0	0.3	0.2				4.5	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.6	0.2	0.0	1.5	0.5				2.3	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	5.9	3.5	0.0	4.7	1.5				27.3	0.0	23.3
LnGrp LOS	A	A	A	A	A	A				C	A	C
Approach Vol, veh/h		1997			1491						439	
Approach Delay, s/veh		5.8			4.3						26.5	
Approach LOS		A			A						C	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		42.0		13.0		42.0						
Change Period (Y+Rc), s		5.8		5.5		5.8						
Max Green Setting (Gmax), s		35.2		8.5		35.2						
Max Q Clear Time (g_c+I1), s		13.5		7.3		8.6						
Green Ext Time (p_c), s		19.6		0.3		19.1						

Intersection Summary	
HCM 6th Ctrl Delay	7.6
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2064	180	0	1437	652	30	0	176	0	0	0
Future Volume (veh/h)	0	2064	180	0	1437	652	30	0	176	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870	1870	0	1870			
Adj Flow Rate, veh/h	0	2173	189	0	1513	686	32	0	185			
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	2	2	0	2	2	2	0	2			
Cap, veh/h	0	3445	1192	0	3445	1034	177	0	277			
Arrive On Green	0.00	0.67	0.67	0.00	0.67	0.67	0.10	0.00	0.10			
Sat Flow, veh/h	0	5274	1533	0	5274	1533	1781	0	2790			
Grp Volume(v), veh/h	0	2173	189	0	1513	686	32	0	185			
Grp Sat Flow(s),veh/h/ln	0	1702	1533	0	1702	1533	1781	0	1395			
Q Serve(g_s), s	0.0	12.1	1.6	0.0	6.9	13.2	0.8	0.0	3.2			
Cycle Q Clear(g_c), s	0.0	12.1	1.6	0.0	6.9	13.2	0.8	0.0	3.2			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3445	1192	0	3445	1034	177	0	277			
V/C Ratio(X)	0.00	0.63	0.16	0.00	0.44	0.66	0.18	0.00	0.67			
Avail Cap(c_a), veh/h	0	3445	1192	0	3445	1034	196	0	307			
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	0.77	0.77	0.00	0.31	0.31	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	4.6	1.5	0.0	3.8	4.8	20.6	0.0	21.7			
Incr Delay (d2), s/veh	0.0	0.7	0.2	0.0	0.1	1.1	0.5	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	2.3	0.4	0.0	1.2	2.3	0.3	0.0	1.1			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	5.3	1.7	0.0	3.9	5.8	21.2	0.0	26.7			
LnGrp LOS	A	A	A	A	A	A	C	A	C			
Approach Vol, veh/h		2362			2199			217				
Approach Delay, s/veh		5.0			4.5			25.9				
Approach LOS		A			A			C				

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		39.5				39.5		10.5				
Change Period (Y+Rc), s		5.8				5.8		5.5				
Max Green Setting (Gmax), s		33.2				33.2		5.5				
Max Q Clear Time (g_c+I1), s		14.1				15.2		5.2				
Green Ext Time (p_c), s		18.3				16.6		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			5.7									
HCM 6th LOS			A									

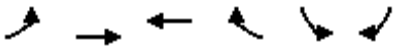
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	587	1003	340	263	957	90	650	455	195	50	252	292
Future Volume (veh/h)	587	1003	340	263	957	90	650	455	195	50	252	292
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	618	1056	358	277	1007	95	684	479	205	53	265	307
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	470	1806	928	332	1486	140	553	1261	700	108	803	561
Arrive On Green	0.14	0.35	0.35	0.10	0.31	0.31	0.16	0.35	0.35	0.03	0.23	0.23
Sat Flow, veh/h	3456	5106	2624	3456	4733	446	3456	3554	1543	3456	3554	1530
Grp Volume(v), veh/h	618	1056	358	277	724	378	684	479	205	53	265	307
Grp Sat Flow(s),veh/h/ln	1728	1702	1312	1728	1702	1775	1728	1777	1543	1728	1777	1530
Q Serve(g_s), s	17.0	21.1	12.8	9.8	23.1	23.2	20.0	12.6	10.5	1.9	7.8	20.0
Cycle Q Clear(g_c), s	17.0	21.1	12.8	9.8	23.1	23.2	20.0	12.6	10.5	1.9	7.8	20.0
Prop In Lane	1.00		1.00	1.00		0.25	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	470	1806	928	332	1069	557	553	1261	700	108	803	561
V/C Ratio(X)	1.31	0.58	0.39	0.83	0.68	0.68	1.24	0.38	0.29	0.49	0.33	0.55
Avail Cap(c_a), veh/h	470	1806	928	415	1069	557	553	1450	782	138	1023	656
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)	0.73	0.73	0.73	0.69	0.69	0.69	1.00	1.00	1.00	0.92	0.92	0.92
Uniform Delay (d), s/veh	54.0	32.9	30.2	55.5	37.4	37.4	52.5	30.1	21.7	59.6	40.5	31.8
Incr Delay (d2), s/veh	152.6	1.0	0.9	6.7	2.4	4.6	121.6	0.2	0.3	3.8	0.3	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	17.3	8.8	4.2	4.6	10.0	10.8	18.0	5.4	3.9	0.9	3.5	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	206.6	33.9	31.1	62.2	39.8	42.0	174.1	30.3	22.0	63.4	40.7	32.7
LnGrp LOS	F	C	C	E	D	D	F	C	C	E	D	C
Approach Vol, veh/h		2032			1379			1368			625	
Approach Delay, s/veh		85.9			44.9			100.9			38.7	
Approach LOS		F			D			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	51.2	24.0	33.8	21.0	46.2	7.9	49.9
Change Period (Y+Rc), s	4.0	* 7	4.0	5.5	4.0	* 7	4.0	5.5
Max Green Setting (Gmax), s	15.0	* 34	20.0	36.0	17.0	* 32	5.0	51.0
Max Q Clear Time (g_c+I1), s	11.8	23.1	22.0	22.0	19.0	25.2	3.9	14.6
Green Ext Time (p_c), s	0.2	7.4	0.0	2.9	0.0	4.2	0.0	5.4

Intersection Summary	
HCM 6th Ctrl Delay	73.8
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	600	688	1070	120	70	300
Future Volume (veh/h)	600	688	1070	120	70	300
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.96	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	638	732	1138	128	74	319
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	751	3293	1674	188	263	468
Arrive On Green	0.22	0.64	0.36	0.36	0.15	0.15
Sat Flow, veh/h	3456	5274	4800	521	1781	3170
Grp Volume(v), veh/h	638	732	836	430	74	319
Grp Sat Flow(s),veh/h/ln	1728	1702	1702	1749	1781	1585
Q Serve(g_s), s	9.4	3.1	11.0	11.0	2.0	5.1
Cycle Q Clear(g_c), s	9.4	3.1	11.0	11.0	2.0	5.1
Prop In Lane	1.00			0.30	1.00	1.00
Lane Grp Cap(c), veh/h	751	3293	1230	632	263	468
V/C Ratio(X)	0.85	0.22	0.68	0.68	0.28	0.68
Avail Cap(c_a), veh/h	815	3469	1285	660	941	1675
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	19.9	3.9	14.3	14.3	20.1	21.4
Incr Delay (d2), s/veh	7.3	0.1	2.6	5.0	0.2	0.7
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	0.7	4.1	4.6	0.8	4.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.2	4.0	16.9	19.3	20.3	22.1
LnGrp LOS	C	A	B	B	C	C
Approach Vol, veh/h		1370	1266		393	
Approach Delay, s/veh		14.8	17.7		21.7	
Approach LOS		B	B		C	

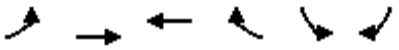
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		40.2		12.8	15.0	25.1
Change Period (Y+Rc), s		* 6		5.0	3.5	* 6
Max Green Setting (Gmax), s		* 36		28.0	12.5	* 20
Max Q Clear Time (g_c+I1), s		5.1		7.1	11.4	13.0
Green Ext Time (p_c), s		12.9		0.8	0.1	6.0

Intersection Summary		
HCM 6th Ctrl Delay		16.9
HCM 6th LOS		B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	278	520	1090	292	89	90
Future Volume (veh/h)	278	520	1090	292	89	90
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.96	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	299	559	1172	314	96	97
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	297	3394	1646	441	182	162
Arrive On Green	0.17	0.66	0.41	0.41	0.10	0.10
Sat Flow, veh/h	1781	5274	4135	1063	1781	1585
Grp Volume(v), veh/h	299	559	1006	480	96	97
Grp Sat Flow(s),veh/h/ln	1781	1702	1702	1626	1781	1585
Q Serve(g_s), s	8.0	2.0	11.8	11.8	2.5	2.8
Cycle Q Clear(g_c), s	8.0	2.0	11.8	11.8	2.5	2.8
Prop In Lane	1.00			0.65	1.00	1.00
Lane Grp Cap(c), veh/h	297	3394	1413	675	182	162
V/C Ratio(X)	1.01	0.16	0.71	0.71	0.53	0.60
Avail Cap(c_a), veh/h	297	3486	1474	704	1149	1023
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	20.0	3.0	11.7	11.7	20.5	20.6
Incr Delay (d2), s/veh	54.3	0.0	2.0	4.2	2.1	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	0.4	3.9	4.2	1.0	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	74.3	3.1	13.7	15.9	22.6	23.8
LnGrp LOS	F	A	B	B	C	C
Approach Vol, veh/h		858	1486		193	
Approach Delay, s/veh		27.9	14.4		23.2	
Approach LOS		C	B		C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		38.1		9.9	12.0	26.1
Change Period (Y+Rc), s		6.2		5.0	4.0	6.2
Max Green Setting (Gmax), s		32.8		31.0	8.0	20.8
Max Q Clear Time (g_c+I1), s		4.0		4.8	10.0	13.8
Green Ext Time (p_c), s		7.5		0.5	0.0	6.1

Intersection Summary		
HCM 6th Ctrl Delay		19.6
HCM 6th LOS		B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	214	171	204	220	564	80	469	690	90	30	460	309
Future Volume (veh/h)	214	171	204	220	564	80	469	690	90	30	460	309
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	246	197	234	253	648	92	539	793	103	34	529	355
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	206	832	388	155	1172	364	309	1338	597	73	1094	488
Arrive On Green	0.06	0.24	0.24	0.04	0.23	0.23	0.09	0.38	0.38	0.02	0.31	0.31
Sat Flow, veh/h	3456	3404	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	246	197	234	253	648	92	539	793	103	34	529	355
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	4.0	3.1	8.8	3.0	7.5	3.2	6.0	12.0	2.9	0.7	8.1	13.4
Cycle Q Clear(g_c), s	4.0	3.1	8.8	3.0	7.5	3.2	6.0	12.0	2.9	0.7	8.1	13.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	206	832	388	155	1172	364	309	1338	597	73	1094	488
V/C Ratio(X)	1.19	0.24	0.60	1.64	0.55	0.25	1.74	0.59	0.17	0.47	0.48	0.73
Avail Cap(c_a), veh/h	206	1473	686	155	2133	662	309	1803	804	155	1644	733
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	31.5	20.3	22.4	32.0	22.8	21.1	30.5	16.8	13.9	32.4	18.9	20.7
Incr Delay (d2), s/veh	124.5	0.2	2.0	313.4	0.5	0.5	347.3	0.5	0.2	1.7	0.4	2.5
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	5.2	1.2	3.3	7.9	2.9	1.2	17.3	4.5	1.0	0.3	3.2	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	156.0	20.5	24.5	345.5	23.3	21.6	377.8	17.3	14.1	34.2	19.3	23.2
LnGrp LOS	F	C	C	F	C	C	F	B	B	C	B	C
Approach Vol, veh/h		677			993			1435			918	
Approach Delay, s/veh		71.1			105.2			152.5			21.3	
Approach LOS		E			F			F			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	23.4	10.0	26.6	8.0	22.4	5.4	31.2
Change Period (Y+Rc), s	4.0	* 7	4.0	* 6	4.0	* 7	4.0	* 6
Max Green Setting (Gmax), s	3.0	* 29	6.0	* 31	4.0	* 28	3.0	* 34
Max Q Clear Time (g_c+I1), s	5.0	10.8	8.0	15.4	6.0	9.5	2.7	14.0
Green Ext Time (p_c), s	0.0	3.4	0.0	5.3	0.0	5.9	0.0	7.0

Intersection Summary	
HCM 6th Ctrl Delay	97.2
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	140	60	234	120	62	130	500	302	104	320	110
Future Volume (veh/h)	80	140	60	234	120	62	130	500	302	104	320	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	85	149	64	249	128	66	138	532	321	111	340	117
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	122	215	279	611	202	104	221	594	358	142	770	260
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.06	0.28	0.28	0.08	0.30	0.30
Sat Flow, veh/h	667	1170	1522	3456	1144	590	3456	2105	1268	1781	2586	873
Grp Volume(v), veh/h	234	0	64	249	0	194	138	449	404	111	231	226
Grp Sat Flow(s),veh/h/ln	1837	0	1522	1728	0	1734	1728	1777	1596	1781	1777	1682
Q Serve(g_s), s	7.9	0.0	2.4	4.3	0.0	6.9	2.6	16.1	16.2	4.1	7.0	7.2
Cycle Q Clear(g_c), s	7.9	0.0	2.4	4.3	0.0	6.9	2.6	16.1	16.2	4.1	7.0	7.2
Prop In Lane	0.36		1.00	1.00		0.34	1.00		0.79	1.00		0.52
Lane Grp Cap(c), veh/h	337	0	279	611	0	307	221	501	450	142	529	501
V/C Ratio(X)	0.69	0.00	0.23	0.41	0.00	0.63	0.62	0.90	0.90	0.78	0.44	0.45
Avail Cap(c_a), veh/h	641	0	531	1195	0	600	379	507	456	169	529	501
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.4	0.0	23.2	24.3	0.0	25.4	30.4	22.9	23.0	30.1	18.9	19.0
Incr Delay (d2), s/veh	2.6	0.0	0.4	0.4	0.0	2.2	1.1	18.5	20.4	14.8	0.8	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	3.5	0.0	0.8	1.7	0.0	2.9	1.1	8.8	8.2	2.3	2.8	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.0	0.0	23.6	24.7	0.0	27.5	31.4	41.5	43.4	44.9	19.7	19.9
LnGrp LOS	C	A	C	C	A	C	C	D	D	D	B	B
Approach Vol, veh/h		298			443			991			568	
Approach Delay, s/veh		27.0			26.0			40.9			24.7	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	17.2	7.8	24.8	16.8	8.8	23.8
Change Period (Y+Rc), s	5.0	3.5	5.0	5.0	3.5	5.0
Max Green Setting (Gmax), s	23.2	7.3	18.0	23.0	6.3	19.0
Max Q Clear Time (g_c+I1), s	9.9	4.6	9.2	8.9	6.1	18.2
Green Ext Time (p_c), s	1.3	0.0	2.4	1.8	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	32.2
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	256	50	90	166	103	70	270	340	208	310	170
Future Volume (veh/h)	110	256	50	90	166	103	70	270	340	208	310	170
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.95	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	126	294	57	103	191	118	80	310	391	239	356	195
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	152	403	421	124	374	539	102	540	458	262	870	467
Arrive On Green	0.09	0.22	0.22	0.07	0.20	0.20	0.06	0.30	0.30	0.15	0.39	0.39
Sat Flow, veh/h	1781	1870	1528	1781	1870	1526	1781	1777	1509	1781	2211	1187
Grp Volume(v), veh/h	126	294	57	103	191	118	80	310	391	239	285	266
Grp Sat Flow(s),veh/h/ln	1781	1870	1528	1781	1870	1526	1781	1777	1509	1781	1777	1621
Q Serve(g_s), s	4.5	9.4	1.8	3.7	5.9	3.5	2.9	9.5	15.7	8.5	7.5	7.7
Cycle Q Clear(g_c), s	4.5	9.4	1.8	3.7	5.9	3.5	2.9	9.5	15.7	8.5	7.5	7.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.73
Lane Grp Cap(c), veh/h	152	403	421	124	374	539	102	540	458	262	699	638
V/C Ratio(X)	0.83	0.73	0.14	0.83	0.51	0.22	0.78	0.57	0.85	0.91	0.41	0.42
Avail Cap(c_a), veh/h	152	667	636	124	638	754	188	579	491	262	699	638
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	23.5	17.7	29.6	23.0	14.9	30.0	18.9	21.1	27.1	14.1	14.2
Incr Delay (d2), s/veh	28.7	1.4	0.1	33.4	0.6	0.1	4.8	1.4	13.3	32.4	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	3.0	4.0	0.6	2.7	2.5	1.1	1.3	3.8	6.8	5.8	2.8	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.8	24.9	17.8	63.1	23.6	15.0	34.8	20.3	34.4	59.5	14.6	14.7
LnGrp LOS	E	C	B	E	C	B	C	C	C	E	B	B
Approach Vol, veh/h		477			412			781			790	
Approach Delay, s/veh		32.7			31.0			28.9			28.2	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	18.9	7.2	30.4	9.0	17.9	13.0	24.6
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0
Max Green Setting (Gmax), s	4.5	23.0	6.8	23.7	5.5	22.0	9.5	21.0
Max Q Clear Time (g_c+I1), s	5.7	11.4	4.9	9.7	6.5	7.9	10.5	17.7
Green Ext Time (p_c), s	0.0	1.0	0.0	3.5	0.0	0.9	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	29.8
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	19.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	94	80	30	70	300	200	10	0	20	79	0	49
Future Vol, veh/h	94	80	30	70	300	200	10	0	20	79	0	49
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	132	113	42	99	423	282	14	0	28	111	0	69
Number of Lanes	1	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	11.3	23.9	10	12.1
HCM LOS	B	C	A	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	33%	100%	0%	19%	0%	62%
Vol Thru, %	0%	0%	73%	81%	0%	0%
Vol Right, %	67%	0%	27%	0%	100%	38%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	94	110	370	200	128
LT Vol	10	94	0	70	0	79
Through Vol	0	0	80	300	0	0
RT Vol	20	0	30	0	200	49
Lane Flow Rate	42	132	155	521	282	180
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.075	0.248	0.261	0.835	0.388	0.313
Departure Headway (Hd)	6.43	6.756	6.054	5.769	4.965	6.244
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	555	531	592	631	724	575
Service Time	4.49	4.504	3.801	3.502	2.698	4.287
HCM Lane V/C Ratio	0.076	0.249	0.262	0.826	0.39	0.313
HCM Control Delay	10	11.7	10.9	31	10.8	12.1
HCM Lane LOS	A	B	B	D	B	B
HCM 95th-tile Q	0.2	1	1	8.9	1.8	1.3

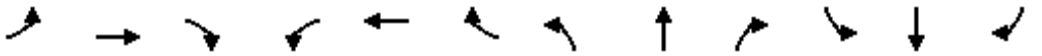
Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	230	224	150	40	189	60	10	0	10	20	0	50
Future Vol, veh/h	230	224	150	40	189	60	10	0	10	20	0	50
Conflicting Peds, #/hr	0	0	10	0	0	10	0	0	10	0	0	10
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	258	252	169	45	212	67	11	0	11	22	0	56

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	289	0	0	431	0	0	1237	1242	357	1214	1293	266
Stage 1	-	-	-	-	-	-	863	863	-	346	346	-
Stage 2	-	-	-	-	-	-	374	379	-	868	947	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1273	-	-	1129	-	-	153	175	687	158	163	773
Stage 1	-	-	-	-	-	-	349	372	-	670	635	-
Stage 2	-	-	-	-	-	-	647	615	-	347	340	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1261	-	-	1118	-	-	113	130	674	124	121	758
Mov Cap-2 Maneuver	-	-	-	-	-	-	113	130	-	124	121	-
Stage 1	-	-	-	-	-	-	275	293	-	528	598	-
Stage 2	-	-	-	-	-	-	565	579	-	269	268	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.3	1.2	26	20.7
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	194	1261	-	-	1118	-	-	308
HCM Lane V/C Ratio	0.116	0.205	-	-	0.04	-	-	0.255
HCM Control Delay (s)	26	8.6	-	-	8.4	0	-	20.7
HCM Lane LOS	D	A	-	-	A	A	-	C
HCM 95th %tile Q(veh)	0.4	0.8	-	-	0.1	-	-	1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱		↑↑↑	↱				↰↰		↱
Traffic Volume (veh/h)	0	2114	30	0	2060	137	0	0	0	599	0	120
Future Volume (veh/h)	0	2114	30	0	2060	137	0	0	0	599	0	120
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870				1870	0	1870
Adj Flow Rate, veh/h	0	2179	31	0	2124	141				618	0	124
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	2	2	0	2	2				2	0	2
Cap, veh/h	0	3060	917	0	3060	1254				734	0	337
Arrive On Green	0.00	0.60	0.60	0.00	0.60	0.60				0.21	0.00	0.21
Sat Flow, veh/h	0	5274	1531	0	5274	1531				3456	0	1585
Grp Volume(v), veh/h	0	2179	31	0	2124	141				618	0	124
Grp Sat Flow(s),veh/h/ln	0	1702	1531	0	1702	1531				1728	0	1585
Q Serve(g_s), s	0.0	17.9	0.5	0.0	17.1	1.1				10.3	0.0	4.0
Cycle Q Clear(g_c), s	0.0	17.9	0.5	0.0	17.1	1.1				10.3	0.0	4.0
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3060	917	0	3060	1254				734	0	337
V/C Ratio(X)	0.00	0.71	0.03	0.00	0.69	0.11				0.84	0.00	0.37
Avail Cap(c_a), veh/h	0	3060	917	0	3060	1254				778	0	357
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	0.00	0.67	0.67				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	8.4	4.9	0.0	8.2	1.2				22.7	0.0	20.2
Incr Delay (d2), s/veh	0.0	1.4	0.1	0.0	0.9	0.1				8.0	0.0	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
%ile BackOfQ(50%),veh/ln	0.0	5.2	0.1	0.0	4.9	0.6				4.7	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	9.8	5.0	0.0	9.1	1.3				30.7	0.0	20.9
LnGrp LOS	A	A	A	A	A	A				C	A	C
Approach Vol, veh/h		2210			2265						742	
Approach Delay, s/veh		9.8			8.6						29.1	
Approach LOS		A			A						C	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		41.8		18.2		41.8						
Change Period (Y+Rc), s		5.8		5.5		5.8						
Max Green Setting (Gmax), s		35.2		13.5		35.2						
Max Q Clear Time (g_c+I1), s		19.9		12.3		19.1						
Green Ext Time (p_c), s		14.6		0.5		15.3						

Intersection Summary	
HCM 6th Ctrl Delay	12.0
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2663	120	0	2228	479	40	0	212	0	0	0
Future Volume (veh/h)	0	2663	120	0	2228	479	40	0	212	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870	1870	0	1870			
Adj Flow Rate, veh/h	0	2833	128	0	2370	510	43	0	226			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	0	2	2	0	2	2	2	0	2			
Cap, veh/h	0	3431	1192	0	3431	1030	182	0	285			
Arrive On Green	0.00	0.67	0.67	0.00	0.67	0.67	0.10	0.00	0.10			
Sat Flow, veh/h	0	5274	1533	0	5274	1533	1781	0	2790			
Grp Volume(v), veh/h	0	2833	128	0	2370	510	43	0	226			
Grp Sat Flow(s),veh/h/ln	0	1702	1533	0	1702	1533	1781	0	1395			
Q Serve(g_s), s	0.0	20.4	1.0	0.0	14.2	8.2	1.1	0.0	4.0			
Cycle Q Clear(g_c), s	0.0	20.4	1.0	0.0	14.2	8.2	1.1	0.0	4.0			
Prop In Lane	0.00		1.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	0	3431	1192	0	3431	1030	182	0	285			
V/C Ratio(X)	0.00	0.83	0.11	0.00	0.69	0.50	0.24	0.00	0.79			
Avail Cap(c_a), veh/h	0	3431	1192	0	3431	1030	182	0	285			
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	0.59	0.59	0.00	0.09	0.09	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	6.0	1.4	0.0	5.0	4.0	20.7	0.0	21.9			
Incr Delay (d2), s/veh	0.0	1.4	0.1	0.0	0.1	0.2	0.7	0.0	14.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.0	4.0	0.3	0.0	2.5	1.3	0.5	0.0	1.7			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	7.5	1.5	0.0	5.1	4.2	21.4	0.0	36.4			
LnGrp LOS	A	A	A	A	A	A	C	A	D			
Approach Vol, veh/h		2961			2880			269				
Approach Delay, s/veh		7.2			5.0			34.0				
Approach LOS		A			A			C				

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		39.4				39.4		10.6				
Change Period (Y+Rc), s		5.8				5.8		5.5				
Max Green Setting (Gmax), s		33.6				33.6		5.1				
Max Q Clear Time (g_c+I1), s		22.4				16.2		6.0				
Green Ext Time (p_c), s		11.1				17.1		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			7.3									
HCM 6th LOS			A									

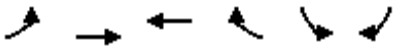
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	589	1015	820	426	1048	80	550	554	264	170	806	659
Future Volume (veh/h)	589	1015	820	426	1048	80	550	554	264	170	806	659
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	607	1046	845	439	1080	82	567	571	272	175	831	679
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	421	1487	773	361	1323	100	391	1271	718	236	1112	675
Arrive On Green	0.12	0.29	0.29	0.10	0.27	0.27	0.11	0.36	0.36	0.07	0.31	0.31
Sat Flow, veh/h	3456	5106	2652	3456	4829	366	3456	3554	1543	3456	3554	1540
Grp Volume(v), veh/h	607	1046	845	439	761	401	567	571	272	175	831	679
Grp Sat Flow(s),veh/h/ln	1728	1702	1326	1728	1702	1791	1728	1777	1543	1728	1777	1540
Q Serve(g_s), s	14.0	21.0	33.5	12.0	24.0	24.1	13.0	14.1	13.2	5.7	24.1	36.0
Cycle Q Clear(g_c), s	14.0	21.0	33.5	12.0	24.0	24.1	13.0	14.1	13.2	5.7	24.1	36.0
Prop In Lane	1.00		1.00	1.00		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	421	1487	773	361	932	491	391	1271	718	236	1112	675
V/C Ratio(X)	1.44	0.70	1.09	1.22	0.82	0.82	1.45	0.45	0.38	0.74	0.75	1.01
Avail Cap(c_a), veh/h	421	1487	773	361	932	491	391	1271	718	300	1112	675
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)	0.47	0.47	0.47	0.77	0.77	0.77	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	50.5	36.3	40.8	51.5	39.0	39.1	51.0	28.3	20.2	52.6	35.4	32.6
Incr Delay (d2), s/veh	205.6	1.3	52.5	116.0	6.1	11.1	217.0	0.3	0.4	0.7	0.3	11.8
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	18.0	8.8	16.4	11.0	10.7	12.0	17.4	6.0	4.8	2.5	10.4	20.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	256.1	37.7	93.2	167.5	45.2	50.2	268.0	28.6	20.6	53.3	35.7	44.5
LnGrp LOS	F	D	F	F	D	D	F	C	C	D	D	F
Approach Vol, veh/h		2498			1601			1410			1685	
Approach Delay, s/veh		109.5			80.0			123.3			41.1	
Approach LOS		F			E			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	40.5	17.0	41.5	18.0	38.5	11.9	46.6
Change Period (Y+Rc), s	4.0	* 7	4.0	5.5	4.0	* 7	4.0	5.5
Max Green Setting (Gmax), s	12.0	* 34	13.0	36.0	14.0	* 32	10.0	39.0
Max Q Clear Time (g_c+I1), s	14.0	35.5	15.0	38.0	16.0	26.1	7.7	16.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	3.9	0.1	6.1

Intersection Summary	
HCM 6th Ctrl Delay	89.6
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	480	1019	843	100	130	620
Future Volume (veh/h)	480	1019	843	100	130	620
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.95	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	516	1096	906	108	140	667
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	625	2821	1435	170	463	824
Arrive On Green	0.18	0.55	0.31	0.31	0.26	0.26
Sat Flow, veh/h	3456	5274	4767	546	1781	3170
Grp Volume(v), veh/h	516	1096	670	344	140	667
Grp Sat Flow(s),veh/h/ln	1728	1702	1702	1740	1781	1585
Q Serve(g_s), s	8.4	7.2	9.9	10.0	3.7	11.6
Cycle Q Clear(g_c), s	8.4	7.2	9.9	10.0	3.7	11.6
Prop In Lane	1.00			0.31	1.00	1.00
Lane Grp Cap(c), veh/h	625	2821	1062	543	463	824
V/C Ratio(X)	0.83	0.39	0.63	0.63	0.30	0.81
Avail Cap(c_a), veh/h	737	3135	1161	593	851	1514
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	23.1	7.5	17.3	17.3	17.4	20.3
Incr Delay (d2), s/veh	5.7	0.3	2.3	4.6	0.1	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	2.1	3.8	4.3	1.4	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	28.9	7.8	19.6	21.9	17.6	21.1
LnGrp LOS	C	A	B	C	B	C
Approach Vol, veh/h		1612	1014		807	
Approach Delay, s/veh		14.5	20.4		20.5	
Approach LOS		B	C		C	

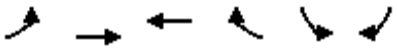
Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	38.4		20.2	14.1	24.3
Change Period (Y+Rc), s	* 6		5.0	3.5	* 6
Max Green Setting (Gmax), s	* 36		28.0	12.5	* 20
Max Q Clear Time (g_c+I1), s	9.2		13.6	10.4	12.0
Green Ext Time (p_c), s	17.6		1.7	0.2	6.2

Intersection Summary	
HCM 6th Ctrl Delay	17.7
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	279	910	640	235	313	353
Future Volume (veh/h)	279	910	640	235	313	353
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.95	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	317	1034	727	267	356	401
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	238	2595	1121	405	543	483
Arrive On Green	0.13	0.51	0.31	0.31	0.30	0.30
Sat Flow, veh/h	1781	5274	3811	1317	1781	1585
Grp Volume(v), veh/h	317	1034	679	315	356	401
Grp Sat Flow(s),veh/h/ln	1781	1702	1702	1555	1781	1585
Q Serve(g_s), s	8.0	7.5	10.3	10.5	10.4	14.1
Cycle Q Clear(g_c), s	8.0	7.5	10.3	10.5	10.4	14.1
Prop In Lane	1.00			0.85	1.00	1.00
Lane Grp Cap(c), veh/h	238	2595	1047	479	543	483
V/C Ratio(X)	1.33	0.40	0.65	0.66	0.66	0.83
Avail Cap(c_a), veh/h	238	2799	1183	541	923	821
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	25.9	9.1	17.9	18.0	18.1	19.4
Incr Delay (d2), s/veh	174.8	0.2	1.7	3.9	1.2	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.7	2.3	3.9	3.9	4.1	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	200.7	9.3	19.6	21.9	19.3	22.8
LnGrp LOS	F	A	B	C	B	C
Approach Vol, veh/h		1351	994		757	
Approach Delay, s/veh		54.2	20.3		21.2	
Approach LOS		D	C		C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		36.6		23.2	12.0	24.6
Change Period (Y+Rc), s		6.2		5.0	4.0	6.2
Max Green Setting (Gmax), s		32.8		31.0	8.0	20.8
Max Q Clear Time (g_c+I1), s		9.5		16.1	10.0	12.5
Green Ext Time (p_c), s		13.0		2.1	0.0	5.7

Intersection Summary		
HCM 6th Ctrl Delay		35.3
HCM 6th LOS		D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	473	490	80	342	20	337	240	50	70	230	157
Future Volume (veh/h)	210	473	490	80	342	20	337	240	50	70	230	157
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	219	493	510	83	356	21	351	250	52	73	240	164
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	155	1325	617	145	1973	613	311	768	343	130	583	260
Arrive On Green	0.04	0.39	0.39	0.04	0.39	0.39	0.09	0.22	0.22	0.04	0.16	0.16
Sat Flow, veh/h	3456	3404	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	219	493	510	83	356	21	351	250	52	73	240	164
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	3.0	6.9	19.3	1.6	3.1	0.5	6.0	4.0	1.8	1.4	4.0	6.4
Cycle Q Clear(g_c), s	3.0	6.9	19.3	1.6	3.1	0.5	6.0	4.0	1.8	1.4	4.0	6.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	155	1325	617	145	1973	613	311	768	343	130	583	260
V/C Ratio(X)	1.41	0.37	0.83	0.57	0.18	0.03	1.13	0.33	0.15	0.56	0.41	0.63
Avail Cap(c_a), veh/h	155	1479	689	155	2219	689	311	1704	760	259	1651	736
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	31.9	14.5	18.3	31.4	13.5	12.7	30.4	22.0	21.2	31.6	25.0	26.0
Incr Delay (d2), s/veh	218.0	0.2	7.9	2.3	0.1	0.0	90.8	0.3	0.2	1.4	0.6	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	5.9	2.5	7.7	0.7	1.1	0.2	6.3	1.6	0.6	0.6	1.7	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	249.9	14.8	26.3	33.7	13.6	12.8	121.1	22.3	21.4	33.0	25.6	29.0
LnGrp LOS	F	B	C	C	B	B	F	C	C	C	C	C
Approach Vol, veh/h		1222			460			653			477	
Approach Delay, s/veh		61.7			17.2			75.4			27.9	
Approach LOS		E			B			E			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	33.0	10.0	16.9	7.0	32.8	6.5	20.4
Change Period (Y+Rc), s	4.0	* 7	4.0	* 6	4.0	* 7	4.0	* 6
Max Green Setting (Gmax), s	3.0	* 29	6.0	* 31	3.0	* 29	5.0	* 32
Max Q Clear Time (g_c+I1), s	3.6	21.3	8.0	8.4	5.0	5.1	3.4	6.0
Green Ext Time (p_c), s	0.0	4.7	0.0	2.5	0.0	3.2	0.0	2.1

Intersection Summary	
HCM 6th Ctrl Delay	51.9
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	220	100	485	180	104	200	630	243	123	820	180
Future Volume (veh/h)	180	220	100	485	180	104	200	630	243	123	820	180
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	189	232	105	511	189	109	211	663	256	129	863	189
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	213	261	411	743	239	138	190	613	236	98	709	155
Arrive On Green	0.26	0.26	0.26	0.22	0.22	0.22	0.06	0.24	0.24	0.06	0.24	0.24
Sat Flow, veh/h	821	1008	1585	3456	1113	642	3456	2506	967	1781	2898	635
Grp Volume(v), veh/h	421	0	105	511	0	298	211	470	449	129	529	523
Grp Sat Flow(s),veh/h/ln	1829	0	1585	1728	0	1755	1728	1777	1696	1781	1777	1756
Q Serve(g_s), s	18.1	0.0	4.3	11.1	0.0	13.1	4.5	20.0	20.0	4.5	20.0	20.0
Cycle Q Clear(g_c), s	18.1	0.0	4.3	11.1	0.0	13.1	4.5	20.0	20.0	4.5	20.0	20.0
Prop In Lane	0.45		1.00	1.00		0.37	1.00		0.57	1.00		0.36
Lane Grp Cap(c), veh/h	474	0	411	743	0	377	190	434	415	98	434	429
V/C Ratio(X)	0.89	0.00	0.26	0.69	0.00	0.79	1.11	1.08	1.08	1.32	1.22	1.22
Avail Cap(c_a), veh/h	537	0	465	971	0	493	190	434	415	98	434	429
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.1	0.0	24.0	29.6	0.0	30.4	38.7	30.9	30.9	38.7	30.9	30.9
Incr Delay (d2), s/veh	15.2	0.0	0.3	1.4	0.0	6.4	97.9	67.1	68.2	197.6	117.4	117.8
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	9.6	0.0	1.6	4.6	0.0	6.0	4.5	16.3	15.7	7.3	22.4	22.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.4	0.0	24.4	30.9	0.0	36.7	136.5	98.0	99.1	236.2	148.3	148.7
LnGrp LOS	D	A	C	C	A	D	F	F	F	F	F	F
Approach Vol, veh/h		526			809			1130			1181	
Approach Delay, s/veh		40.4			33.1			105.6			158.1	
Approach LOS		D			C			F			F	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	26.2	8.0	25.0	22.6	8.0	25.0
Change Period (Y+Rc), s	5.0	3.5	5.0	5.0	3.5	5.0
Max Green Setting (Gmax), s	24.0	4.5	20.0	23.0	4.5	20.0
Max Q Clear Time (g_c+I1), s	20.1	6.5	22.0	15.1	6.5	22.0
Green Ext Time (p_c), s	1.1	0.0	0.0	2.5	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	97.1
HCM 6th LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	240	276	90	290	399	279	80	370	220	186	380	230
Future Volume (veh/h)	240	276	90	290	399	279	80	370	220	186	380	230
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.95	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	273	314	102	330	453	317	91	420	250	211	432	261
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	250	466	486	297	516	591	117	528	310	188	615	368
Arrive On Green	0.14	0.25	0.25	0.17	0.28	0.28	0.07	0.25	0.25	0.11	0.29	0.29
Sat Flow, veh/h	1781	1870	1533	1781	1870	1537	1781	2105	1236	1781	2112	1263
Grp Volume(v), veh/h	273	314	102	330	453	317	91	354	316	211	363	330
Grp Sat Flow(s),veh/h/ln	1781	1870	1533	1781	1870	1537	1781	1777	1565	1781	1777	1598
Q Serve(g_s), s	10.5	11.3	3.7	12.5	17.3	12.0	3.8	13.9	14.2	7.9	13.6	13.8
Cycle Q Clear(g_c), s	10.5	11.3	3.7	12.5	17.3	12.0	3.8	13.9	14.2	7.9	13.6	13.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.79	1.00		0.79
Lane Grp Cap(c), veh/h	250	466	486	297	516	591	117	446	393	188	517	465
V/C Ratio(X)	1.09	0.67	0.21	1.11	0.88	0.54	0.78	0.79	0.81	1.12	0.70	0.71
Avail Cap(c_a), veh/h	250	540	546	297	590	652	169	498	439	188	517	465
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	32.2	25.3	18.8	31.2	25.9	18.0	34.4	26.2	26.3	33.5	23.6	23.7
Incr Delay (d2), s/veh	83.9	2.0	0.1	84.8	12.1	0.4	7.7	8.1	10.0	102.3	4.4	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	10.2	5.1	1.3	12.2	9.0	4.1	1.8	6.6	6.1	8.6	6.0	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	116.1	27.4	18.9	116.0	38.0	18.4	42.1	34.3	36.3	135.8	28.1	28.9
LnGrp LOS	F	C	B	F	D	B	D	C	D	F	C	C
Approach Vol, veh/h		689			1100			761			904	
Approach Delay, s/veh		61.3			55.8			36.1			53.5	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	23.7	8.4	26.8	14.0	25.7	11.4	23.8
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0
Max Green Setting (Gmax), s	12.5	21.6	7.1	21.8	10.5	23.6	7.9	21.0
Max Q Clear Time (g_c+I1), s	14.5	13.3	5.8	15.8	12.5	19.3	9.9	16.2
Green Ext Time (p_c), s	0.0	1.0	0.0	2.5	0.0	1.3	0.0	2.1

Intersection Summary	
HCM 6th Ctrl Delay	51.9
HCM 6th LOS	D

Intersection	
Intersection Delay, s/veh	33.5
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	112	320	10	20	200	274	20	10	70	276	0	118
Future Vol, veh/h	112	320	10	20	200	274	20	10	70	276	0	118
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	129	368	11	23	230	315	23	11	80	317	0	136
Number of Lanes	1	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	34.2	21.7	14.7	52.2
HCM LOS	D	C	B	F

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	20%	100%	0%	9%	0%	70%
Vol Thru, %	10%	0%	97%	91%	0%	0%
Vol Right, %	70%	0%	3%	0%	100%	30%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	100	112	330	220	274	394
LT Vol	20	112	0	20	0	276
Through Vol	10	0	320	200	0	0
RT Vol	70	0	10	0	274	118
Lane Flow Rate	115	129	379	253	315	453
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.271	0.305	0.841	0.568	0.64	0.929
Departure Headway (Hd)	8.492	8.519	7.978	8.089	7.316	7.384
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	422	422	455	445	491	494
Service Time	6.569	6.277	5.736	5.85	5.076	5.384
HCM Lane V/C Ratio	0.273	0.306	0.833	0.569	0.642	0.917
HCM Control Delay	14.7	15	40.7	21	22.3	52.2
HCM Lane LOS	B	B	E	C	C	F
HCM 95th-tile Q	1.1	1.3	8.2	3.4	4.4	11

Intersection	
Int Delay, s/veh	864.3

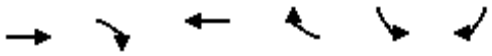
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	320	322	30	10	298	100	80	0	70	80	0	380
Future Vol, veh/h	320	322	30	10	298	100	80	0	70	80	0	380
Conflicting Peds, #/hr	0	0	10	0	0	10	0	0	10	0	0	10
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	395	398	37	12	368	123	99	0	86	99	0	469

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	501	0	0	445	0	0	1915	1742	437	1724	1699	450
Stage 1	-	-	-	-	-	-	1217	1217	-	464	464	-
Stage 2	-	-	-	-	-	-	698	525	-	1260	1235	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1063	-	-	1115	-	-	~ 51	87	620	~ 70	92	609
Stage 1	-	-	-	-	-	-	221	253	-	578	564	-
Stage 2	-	-	-	-	-	-	431	529	-	209	249	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1053	-	-	1104	-	-	~ 7	52	608	~ 41	55	597
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 7	52	-	~ 41	55	-
Stage 1	-	-	-	-	-	-	137	157	-	358	550	-
Stage 2	-	-	-	-	-	-	~ 90	516	-	111	154	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	5	0.2	$ 6526.5	$ 1039.6
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	13	1053	-	-	1104	-	-	178
HCM Lane V/C Ratio	14.245	0.375	-	-	0.011	-	-	3.19
HCM Control Delay (s)	$ 6526.5	10.5	-	-	8.3	0		$ 1039.6
HCM Lane LOS	F	B	-	-	A	A	-	F
HCM 95th %tile Q(veh)	24.4	1.8	-	-	0	-	-	52.8

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



Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	1934	63	1326	165	344	95
v/c Ratio	0.60	0.06	0.41	0.13	0.64	0.31
Control Delay	6.8	1.4	5.4	0.9	27.9	12.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.8	1.4	5.4	0.9	27.9	12.2
Queue Length 50th (ft)	109	0	63	0	55	7
Queue Length 95th (ft)	143	9	84	0	#91	41
Internal Link Dist (ft)	435		706			
Turn Bay Length (ft)		300		340		500
Base Capacity (vph)	3263	997	3263	1244	545	309
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.06	0.41	0.13	0.63	0.31

Intersection Summary

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

Lane Group	EBT	EBR	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	2173	189	1513	686	32	185
v/c Ratio	0.64	0.16	0.45	0.55	0.16	0.51
Control Delay	6.0	1.0	4.5	2.3	22.4	20.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.0	1.0	4.5	2.3	22.4	20.0
Queue Length 50th (ft)	104	0	59	0	9	19
Queue Length 95th (ft)	139	0	80	24	28	46
Internal Link Dist (ft)	706		1382			
Turn Bay Length (ft)		350		320		305
Base Capacity (vph)	3376	1200	3376	1237	194	360
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.16	0.45	0.55	0.16	0.51

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	618	1056	358	277	1102	684	479	205	53	265	307
v/c Ratio	0.78	0.54	0.29	0.75	0.83	1.22	0.43	0.29	0.37	0.42	0.43
Control Delay	54.0	33.4	4.2	67.1	49.5	158.9	34.3	12.8	66.1	45.7	16.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.0	33.4	4.2	67.1	49.5	158.9	34.3	12.8	66.1	45.7	16.5
Queue Length 50th (ft)	233	217	0	112	291	~354	180	71	22	108	109
Queue Length 95th (ft)	#450	345	40	160	369	#476	181	89	44	124	172
Internal Link Dist (ft)		1382			1328		282			900	
Turn Bay Length (ft)	260		260	215		285		290	200		350
Base Capacity (vph)	791	1960	1215	411	1339	560	1443	734	143	1019	720
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.54	0.29	0.67	0.82	1.22	0.33	0.28	0.37	0.26	0.43

Intersection Summary

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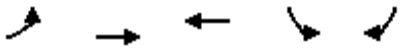

Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	638	732	1266	234	159
v/c Ratio	0.83	0.22	0.70	0.37	0.45
Control Delay	34.8	5.8	20.0	8.8	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	34.8	5.8	20.0	8.8	7.9
Queue Length 50th (ft)	95	23	112	11	0
Queue Length 95th (ft)	#278	96	#298	32	38
Internal Link Dist (ft)		1328	1713	1031	
Turn Bay Length (ft)	220			260	
Base Capacity (vph)	769	3282	1806	1652	783
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.83	0.22	0.70	0.14	0.20

Intersection Summary

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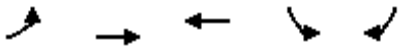

Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	299	559	1486	96	97
v/c Ratio	1.11	0.16	0.73	0.27	0.25
Control Delay	116.3	6.5	18.9	19.5	5.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	116.3	6.5	18.9	19.5	5.8
Queue Length 50th (ft)	~108	20	126	27	0
Queue Length 95th (ft)	#347	80	#360	55	26
Internal Link Dist (ft)		1713	1725	666	
Turn Bay Length (ft)	300				
Base Capacity (vph)	270	3389	2040	1050	955
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.11	0.16	0.73	0.09	0.10

Intersection Summary

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Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	246	431	253	648	92	539	793	103	34	529	355
v/c Ratio	1.23	0.30	1.69	0.50	0.18	1.79	0.56	0.14	0.23	0.52	0.63
Control Delay	172.7	11.0	361.4	24.0	2.6	394.2	19.3	1.9	41.4	23.0	17.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	172.7	11.0	361.4	24.0	2.6	394.2	19.3	1.9	41.4	23.0	17.7
Queue Length 50th (ft)	~65	25	~80	83	0	~176	122	0	7	96	69
Queue Length 95th (ft)	#172	53	#189	134	14	#347	235	13	24	159	163
Internal Link Dist (ft)		1725		314			293			369	
Turn Bay Length (ft)	315		300		240	300		240	290		
Base Capacity (vph)	200	2102	150	2082	726	301	1759	860	150	1604	800
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.23	0.21	1.69	0.31	0.13	1.79	0.45	0.12	0.23	0.33	0.44

Intersection Summary

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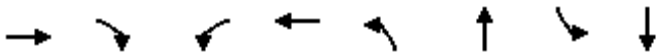

Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	234	64	249	194	138	853	111	457
v/c Ratio	0.63	0.16	0.40	0.57	0.47	0.88	0.71	0.44
Control Delay	35.4	1.0	28.3	30.4	39.5	35.5	61.9	23.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.4	1.0	28.3	30.4	39.5	35.5	61.9	23.4
Queue Length 50th (ft)	93	0	50	66	29	157	47	77
Queue Length 95th (ft)	185	2	91	141	69	#375	#164	165
Internal Link Dist (ft)	127			1414		900		219
Turn Bay Length (ft)			120		230		220	
Base Capacity (vph)	597	586	1111	584	352	974	157	1033
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.11	0.22	0.33	0.39	0.88	0.71	0.44

Intersection Summary

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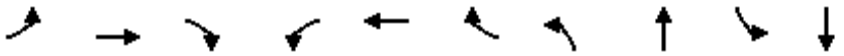

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	126	294	57	103	191	118	80	701	239	551
v/c Ratio	0.76	0.67	0.10	0.76	0.47	0.17	0.48	0.69	0.83	0.46
Control Delay	61.9	29.7	2.3	67.9	25.0	3.1	38.5	14.1	54.6	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.9	29.7	2.3	67.9	25.0	3.1	38.5	14.1	54.6	14.2
Queue Length 50th (ft)	44	94	0	36	59	0	27	54	83	60
Queue Length 95th (ft)	#152	177	11	#133	119	22	74	112	#242	113
Internal Link Dist (ft)		1414			1120			1031		363
Turn Bay Length (ft)	200			140		140	130		100	
Base Capacity (vph)	166	735	634	136	703	701	206	1363	288	1434
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.40	0.09	0.76	0.27	0.17	0.39	0.51	0.83	0.38

Intersection Summary

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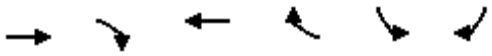

Lane Group	EBT	EBR	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	2179	31	2124	141	618	124
v/c Ratio	0.73	0.03	0.71	0.11	0.82	0.32
Control Delay	10.6	1.5	10.3	0.8	32.9	15.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.6	1.5	10.3	0.8	32.9	15.0
Queue Length 50th (ft)	182	0	174	0	109	22
Queue Length 95th (ft)	235	6	224	0	#182	60
Internal Link Dist (ft)	435		706			
Turn Bay Length (ft)		300		340		500
Base Capacity (vph)	3005	912	3005	1269	772	395
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.03	0.71	0.11	0.80	0.31

Intersection Summary

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Lane Group	EBT	EBR	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	2833	128	2370	510	43	226
v/c Ratio	0.83	0.11	0.69	0.43	0.24	0.70
Control Delay	8.9	0.9	6.4	1.6	24.2	30.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.9	0.9	6.4	1.6	24.2	30.6
Queue Length 50th (ft)	169	0	118	0	12	27
Queue Length 95th (ft)	232	0	158	20	35	#74
Internal Link Dist (ft)	706		1382			
Turn Bay Length (ft)		350		320		305
Base Capacity (vph)	3417	1200	3417	1186	180	321
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.11	0.69	0.43	0.24	0.70

Intersection Summary

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Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	607	1046	845	439	1162	567	571	272	175	831	679
v/c Ratio	1.18	0.72	0.83	0.96	0.86	1.40	0.51	0.36	0.60	0.83	0.92
Control Delay	141.6	40.1	29.7	84.4	47.0	231.4	33.4	14.0	60.0	46.0	43.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	141.6	40.1	29.7	84.4	47.0	231.4	33.4	14.0	60.0	46.0	43.6
Queue Length 50th (ft)	~291	253	198	~181	295	~296	179	83	65	297	387
Queue Length 95th (ft)	#430	305	293	#309	353	#407	227	143	102	364	#522
Internal Link Dist (ft)		1382			1328		282			900	
Turn Bay Length (ft)	260		260	215		285		290	200		350
Base Capacity (vph)	516	1481	1027	456	1381	406	1200	760	298	1107	738
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.18	0.71	0.82	0.96	0.84	1.40	0.48	0.36	0.59	0.75	0.92

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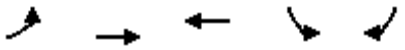

Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	516	1096	1014	474	333
v/c Ratio	0.71	0.35	0.59	0.58	0.64
Control Delay	29.3	6.8	17.7	9.2	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	29.3	6.8	17.7	9.2	8.7
Queue Length 50th (ft)	77	43	87	21	0
Queue Length 95th (ft)	#209	150	200	51	53
Internal Link Dist (ft)		1328	1713	1031	
Turn Bay Length (ft)	220			260	
Base Capacity (vph)	800	3416	1878	1791	892
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.65	0.32	0.54	0.26	0.37

Intersection Summary

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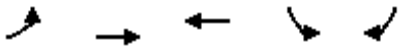


Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	317	1034	994	356	401
v/c Ratio	1.33	0.40	0.63	0.67	0.58
Control Delay	202.2	10.7	18.7	25.0	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	202.2	10.7	18.7	25.0	7.7
Queue Length 50th (ft)	~162	76	95	116	21
Queue Length 95th (ft)	#359	149	171	185	74
Internal Link Dist (ft)		1713	1725	666	
Turn Bay Length (ft)	300				
Base Capacity (vph)	239	2818	1781	927	963
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.33	0.37	0.56	0.38	0.42

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

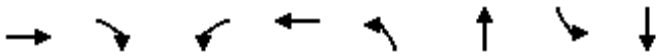
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	219	1003	83	356	21	351	250	52	73	240	164
v/c Ratio	1.30	0.57	0.49	0.23	0.04	1.04	0.27	0.10	0.29	0.33	0.36
Control Delay	201.5	14.0	46.4	17.4	0.1	93.6	21.5	0.4	35.9	23.3	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	201.5	14.0	46.4	17.4	0.1	93.6	21.5	0.4	35.9	23.3	6.5
Queue Length 50th (ft)	~54	71	15	33	0	~70	42	0	13	41	0
Queue Length 95th (ft)	#171	161	#63	77	0	#231	79	0	43	77	41
Internal Link Dist (ft)		1725		314			293			369	
Turn Bay Length (ft)	315		300		240	300		240	290		
Base Capacity (vph)	169	2405	169	2429	826	339	1865	903	282	1807	888
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.30	0.42	0.49	0.15	0.03	1.04	0.13	0.06	0.26	0.13	0.18

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

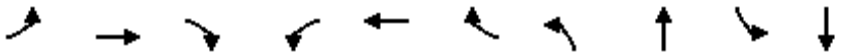


Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	421	105	511	298	211	919	129	1052
v/c Ratio	0.88	0.21	0.65	0.70	1.16	1.09	1.37	1.26
Control Delay	52.2	4.5	34.1	36.7	154.9	88.3	257.6	156.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.2	4.5	34.1	36.7	154.9	88.3	257.6	156.2
Queue Length 50th (ft)	221	0	131	135	~74	~301	~98	~397
Queue Length 95th (ft)	#392	28	181	222	#147	#437	#212	#538
Internal Link Dist (ft)	139			1414		900		219
Turn Bay Length (ft)			120		230		220	
Base Capacity (vph)	517	540	935	501	182	847	94	836
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.19	0.55	0.59	1.16	1.09	1.37	1.26

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	273	314	102	330	453	317	91	670	211	693
v/c Ratio	1.08	0.67	0.17	1.10	0.87	0.46	0.62	0.75	1.11	0.66
Control Delay	115.6	33.0	4.1	115.0	44.7	11.8	53.8	26.4	135.2	22.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	115.6	33.0	4.1	115.0	44.7	11.8	53.8	26.4	135.2	22.4
Queue Length 50th (ft)	~159	133	0	~195	202	62	44	123	~126	125
Queue Length 95th (ft)	#300	215	25	#346	#349	121	#99	176	#252	178
Internal Link Dist (ft)		1414			1120			1031		363
Turn Bay Length (ft)	200			140		140	130		100	
Base Capacity (vph)	253	547	637	301	598	692	171	1042	190	1101
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.08	0.57	0.16	1.10	0.76	0.46	0.53	0.64	1.11	0.63

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

APPENDIX H

SITE SPECIFIC TRIP GENERATION STUDY

Site Specific Trip Gen Calcs:

	Dwy A	Dwy B
	213 ADT	120 ADT
Am:	23 (14 in / 9 out)	13 (9 in / 4 out)
PM:	10 (4 in / 6 out)	6 (0 in / 6 out)

Total: 333 ADT
68 Beds =
4.9 ADT / Bed

Am: 36 (23 in, 13 out)
11% (64 : 36)

PM: 16 (4 in, 12 out)
5% (0.25 : 0.75)

Prepared by NDS/ATD

VOLUME

Riverside Center for Behavioral Medicine N Dwy @ Brockton Ave

Day: Wednesday
Date: 4/24/2019

City: Riverside
Project #: CA19_6050_001

DAILY TOTALS	IN	OUT			Total
	110	103			213

AM Period	IN		OUT		TOTAL	
0:00	0		0		0	
0:15	0		0		0	
0:30	0		0		0	
0:45	0		0		0	
1:00	0		0		0	
1:15	0		0		0	
1:30	0		0		0	
1:45	0		0		0	
2:00	0		0		0	
2:15	0		0		0	
2:30	0		0		0	
2:45	0		0		0	
3:00	0		0		0	
3:15	0		0		0	
3:30	0		0		0	
3:45	0		0		0	
4:00	0		0		0	
4:15	0		0		0	
4:30	0		0		0	
4:45	0		0		0	
5:00	0		1		1	
5:15	0		0		0	
5:30	2		0		2	
5:45	0	2	0	1	0	3
6:00	4		0		4	
6:15	0		0		0	
6:30	2		0		2	
6:45	4	10	0		4	10
7:00	2		1		3	
7:15	4		0		4	
7:30	2		7		9	
7:45	6	14	1	9	7	23
8:00	5		0		5	
8:15	6		1		7	
8:30	1		2		3	
8:45	1	13	0	3	1	16
9:00	1		0		1	
9:15	3		0		3	
9:30	0		1		1	
9:45	1	5	1	2	2	7
10:00	3		3		6	
10:15	1		0		1	
10:30	1		2		3	
10:45	0	5	2	7	2	12
11:00	1		0		1	
11:15	2		3		5	
11:30	1		1		2	
11:45	1	5	1	5	2	10
TOTALS	54		27		81	
SPLIT %	66.7%		33.3%		38.0%	

PM Period	IN		OUT		TOTAL	
12:00	3		1		4	
12:15	3		4		7	
12:30	0		6		6	
12:45	0	6	0	11	0	17
13:00	0		6		6	
13:15	2		2		4	
13:30	4		3		7	
13:45	1	7	3	14	4	21
14:00	3		0		3	
14:15	5		2		7	
14:30	1		2		3	
14:45	2	11	3	7	5	18
15:00	4		1		5	
15:15	1		3		4	
15:30	2		1		3	
15:45	2	9	2	7	4	16
16:00	0		0		0	
16:15	1		2		3	
16:30	0		1		1	
16:45	3	4	2	5	5	9
17:00	1		1		2	
17:15	1		1		2	
17:30	2		2		4	
17:45	0	4	2	6	2	10
18:00	1		0		1	
18:15	1		1		2	
18:30	2		1		3	
18:45	4	8	2	4	6	12
19:00	3		1		4	
19:15	4		1		5	
19:30	0		7		7	
19:45	0	7	2	11	2	18
20:00	0		1		1	
20:15	0		0		0	
20:30	0		0		0	
20:45	0		2	3	2	3
21:00	0		5		5	
21:15	0		2		2	
21:30	0		0		0	
21:45	0		0	7	0	7
22:00	0		0		0	
22:15	0		1		1	
22:30	0		0		0	
22:45	0		0	1	0	1
23:00	0		0		0	
23:15	0		0		0	
23:30	0		0		0	
23:45	0		0		0	
TOTALS	56		76		132	
SPLIT %	42.4%		57.6%		62.0%	

DAILY TOTALS	IN	OUT			Total
	110	103			213

AM Peak Hour	7:30	11:45			7:30
AM Pk Volume	19	12			28
Pk Hr Factor	0.792	0.500			0.778
7 - 9 Volume	27	12	0	0	39
7 - 9 Peak Hour	7:30	7:00			7:30
7 - 9 Pk Volume	19	9	0	0	28
Pk Hr Factor	0.792	0.321	0.000	0.000	0.778

PM Peak Hour	13:30	12:15			18:45
PM Pk Volume	13	16			22
Pk Hr Factor	0.650	0.667			0.786
4 - 6 Volume	8	11	0	0	19
4 - 6 Peak Hour	16:45	16:15			16:45
4 - 6 Pk Volume	7	6	0	0	13
Pk Hr Factor	0.583	0.750	0.000	0.000	0.650

333 ADT / 68 Beds } 4.9 ADT / Bed

original TIA conducted using 20 ADT/Bed

Alt SANDAG rate : 3 ADT/Bed (convalescent/nursing)

Prepared by NDS/ATD

VOLUME

Riverside Center for Behavioral Medicine S Dwy @ Brockton Ave

Day: Wednesday
Date: 4/24/2019

City: Riverside
Project #: CA19_6050_002

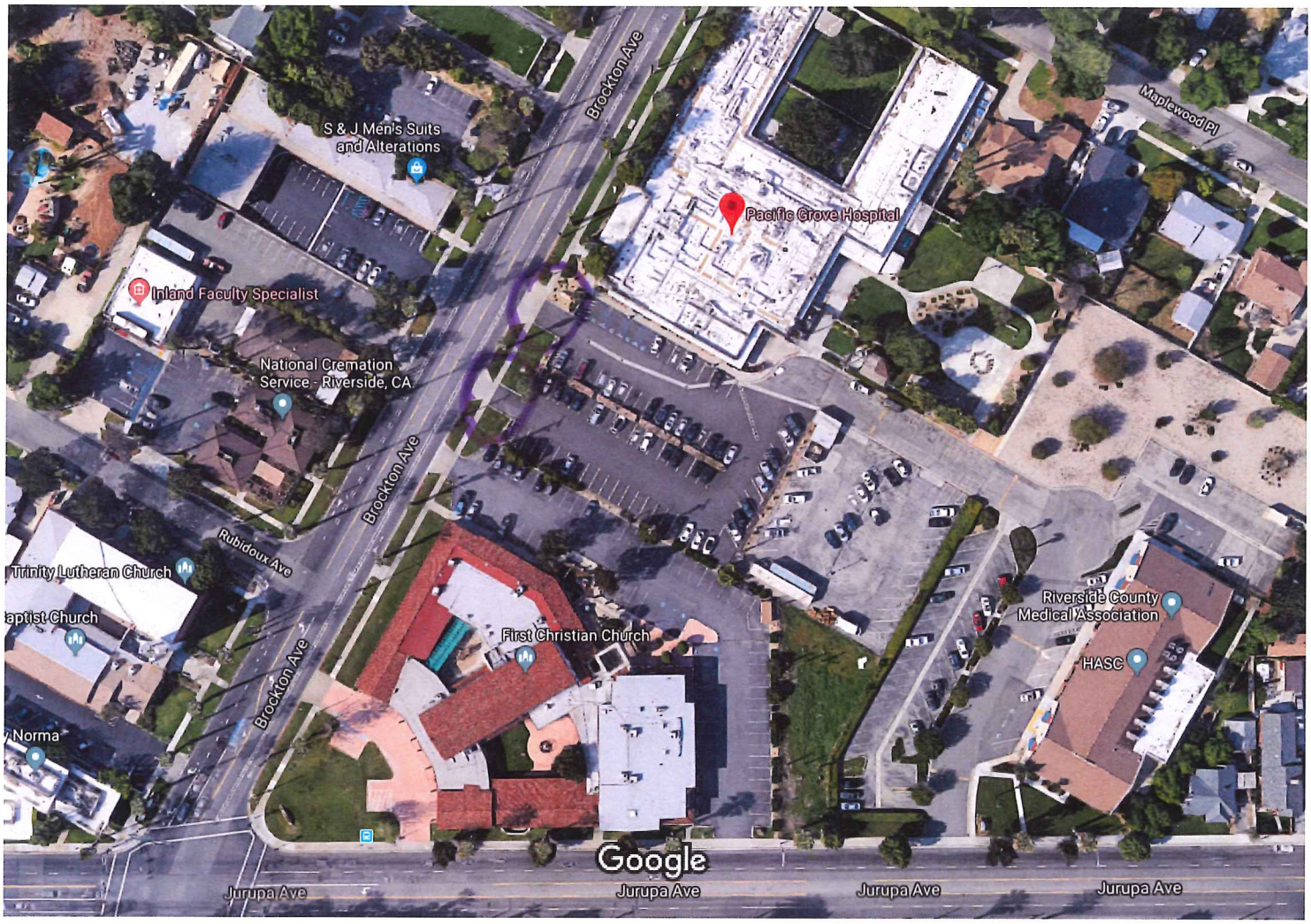
DAILY TOTALS	IN	OUT	Total
	59	61	120

AM Period	IN	OUT	TOTAL	PM Period	IN	OUT	TOTAL
0:00	0	0	0	12:00	0	1	1
0:15	0	0	0	12:15	1	0	1
0:30	0	0	0	12:30	1	3	4
0:45	0	0	0	12:45	2	2	4
1:00	0	0	0	13:00	3	3	6
1:15	0	0	0	13:15	1	4	5
1:30	0	0	0	13:30	1	1	2
1:45	0	0	0	13:45	1	0	1
2:00	0	0	0	14:00	1	0	1
2:15	0	0	0	14:15	4	1	5
2:30	0	1	1	14:30	1	1	2
2:45	0	0	0	14:45	0	0	0
3:00	0	0	0	15:00	1	0	1
3:15	0	0	0	15:15	0	1	1
3:30	0	0	0	15:30	0	2	2
3:45	0	0	0	15:45	0	0	0
4:00	1	0	1	16:00	0	4	4
4:15	0	0	0	16:15	0	0	0
4:30	0	0	0	16:30	0	1	1
4:45	0	0	0	16:45	0	1	1
5:00	1	0	1	17:00	0	1	1
5:15	0	0	0	17:15	0	3	3
5:30	0	0	0	17:30	0	1	1
5:45	0	0	0	17:45	0	0	0
6:00	1	0	1	18:00	0	2	2
6:15	1	0	1	18:15	3	0	3
6:30	1	0	1	18:30	1	0	1
6:45	6	0	6	18:45	1	1	2
7:00	5	0	5	19:00	1	0	1
7:15	1	0	1	19:15	0	1	1
7:30	2	3	5	19:30	1	8	9
7:45	1	1	2	19:45	0	1	1
8:00	3	2	5	20:00	0	2	2
8:15	2	1	3	20:15	0	1	1
8:30	2	0	2	20:30	0	2	2
8:45	1	0	1	20:45	0	0	0
9:00	1	0	1	21:00	1	0	1
9:15	2	0	2	21:15	0	1	1
9:30	1	0	1	21:30	0	1	1
9:45	0	0	0	21:45	0	0	0
10:00	0	0	0	22:00	0	0	0
10:15	0	0	0	22:15	1	0	1
10:30	1	0	1	22:30	0	1	1
10:45	0	0	0	22:45	0	0	0
11:00	0	0	0	23:00	0	0	0
11:15	0	1	1	23:15	0	1	1
11:30	0	0	0	23:30	0	0	0
11:45	0	0	0	23:45	0	0	0
TOTALS	33	9	42	TOTALS	26	52	78
SPLIT %	78.6%	21.4%	35.0%	SPLIT %	33.3%	66.7%	65.0%

DAILY TOTALS	IN	OUT	Total
	59	61	120

AM Peak Hour	6:45	7:30			6:45	PM Peak Hour	12:15	12:30			12:30
AM Pk Volume	14	7			17	PM Pk Volume	7	12			19
Pk Hr Factor	0.583	0.583			0.708	Pk Hr Factor	0.583	0.750			0.792
7 - 9 Volume	17	7	0	0	24	4 - 6 Volume	0	11	0	0	11
7 - 9 Peak Hour	7:00	7:30			7:30	4 - 6 Peak Hour		16:00			16:00
7 - 9 Pk Volume	9	7	0	0	15	4 - 6 Pk Volume	0	6	0	0	6
Pk Hr Factor	0.450	0.583	0.000	0.000	0.750	Pk Hr Factor	0.000	0.375	0.000	0.000	0.375

Google Maps Pacific Grove Hospital



Imagery ©2019 Google, Map data ©2019 Google 50 ft

APPENDIX I

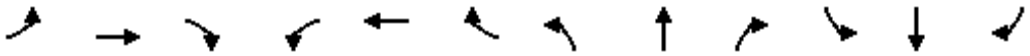
TRAFFIC VOLUME GROWTH FACTOR CALCULATIONS

Forecasting

STREET SEGMENT	% Growth	Adjusted 2035	% Growth
Average % Growth 2018 to 2035 (17 Years) * Excluding segmets with negative growth	24.15%		26.04%
Growth / Year	1.42%		1.53%
Growth / Year (Rounded Up)	1.5%		1.5%
2035 % Growth (2018 to 2035 = 17 Years)	**25.5%**		**25.5%**
2025 Growth % (2018 to 2025 = 7 years)	**10.5%**		**10.5%**

APPENDIX J

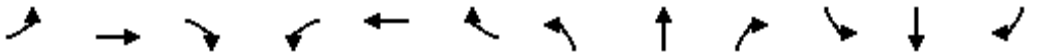
POST OPERATIONAL IMPROVEMENT INTERSECTION ANALYSIS WORKSHEETS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	240	276	90	290	399	279	80	370	220	186	380	230
Future Volume (veh/h)	240	276	90	290	399	279	80	370	220	186	380	230
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.95	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	273	314	102	330	453	317	91	420	250	211	432	261
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	250	466	486	297	516	591	117	528	310	188	615	368
Arrive On Green	0.14	0.25	0.25	0.17	0.28	0.28	0.07	0.25	0.25	0.11	0.29	0.29
Sat Flow, veh/h	1781	1870	1533	1781	1870	1537	1781	2105	1236	1781	2112	1263
Grp Volume(v), veh/h	273	314	102	330	453	317	91	354	316	211	363	330
Grp Sat Flow(s),veh/h/ln	1781	1870	1533	1781	1870	1537	1781	1777	1565	1781	1777	1598
Q Serve(g_s), s	10.5	11.3	3.7	12.5	17.3	12.0	3.8	13.9	14.2	7.9	13.6	13.8
Cycle Q Clear(g_c), s	10.5	11.3	3.7	12.5	17.3	12.0	3.8	13.9	14.2	7.9	13.6	13.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.79	1.00		0.79
Lane Grp Cap(c), veh/h	250	466	486	297	516	591	117	446	393	188	517	465
V/C Ratio(X)	1.09	0.67	0.21	1.11	0.88	0.54	0.78	0.79	0.81	1.12	0.70	0.71
Avail Cap(c_a), veh/h	250	540	546	297	590	652	169	498	439	188	517	465
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	32.2	25.3	18.8	31.2	25.9	18.0	34.4	26.2	26.3	33.5	23.6	23.7
Incr Delay (d2), s/veh	83.9	2.0	0.1	84.8	12.1	0.4	7.7	8.1	10.0	102.3	4.4	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	10.2	5.1	1.3	12.2	9.0	4.1	1.8	6.6	6.1	8.6	6.0	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	116.1	27.4	18.9	116.0	38.0	18.4	42.1	34.3	36.3	135.8	28.1	28.9
LnGrp LOS	F	C	B	F	D	B	D	C	D	F	C	C
Approach Vol, veh/h		689			1100			761			904	
Approach Delay, s/veh		61.3			55.8			36.1			53.5	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	23.7	8.4	26.8	14.0	25.7	11.4	23.8
Change Period (Y+Rc), s	3.5	5.0	3.5	5.0	3.5	5.0	3.5	5.0
Max Green Setting (Gmax), s	12.5	21.6	7.1	21.8	10.5	23.6	7.9	21.0
Max Q Clear Time (g_c+I1), s	14.5	13.3	5.8	15.8	12.5	19.3	9.9	16.2
Green Ext Time (p_c), s	0.0	1.0	0.0	2.5	0.0	1.3	0.0	2.1

Intersection Summary	
HCM 6th Ctrl Delay	51.9
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	587	1003	340	263	957	90	650	455	195	50	252	292
Future Volume (veh/h)	587	1003	340	263	957	90	650	455	195	50	252	292
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	2057	1870	1870	2057	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	618	1056	358	277	1007	95	684	479	205	53	265	307
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	513	1964	917	332	1547	146	594	1291	713	106	790	575
Arrive On Green	0.30	0.70	0.70	0.10	0.30	0.30	0.17	0.36	0.36	0.03	0.22	0.22
Sat Flow, veh/h	3456	5617	2623	3456	5206	490	3456	3554	1544	3456	3554	1530
Grp Volume(v), veh/h	618	1056	358	277	724	378	684	479	205	53	265	307
Grp Sat Flow(s),veh/h/ln	1728	1872	1312	1728	1872	1952	1728	1777	1544	1728	1777	1530
Q Serve(g_s), s	19.0	11.6	7.2	10.1	21.5	21.6	22.0	12.7	10.6	1.9	8.0	20.2
Cycle Q Clear(g_c), s	19.0	11.6	7.2	10.1	21.5	21.6	22.0	12.7	10.6	1.9	8.0	20.2
Prop In Lane	1.00		1.00	1.00		0.25	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	513	1964	917	332	1113	580	594	1291	713	106	790	575
V/C Ratio(X)	1.20	0.54	0.39	0.83	0.65	0.65	1.15	0.37	0.29	0.50	0.34	0.53
Avail Cap(c_a), veh/h	513	1964	917	432	1113	580	594	1471	791	135	999	665
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.77	0.74	0.74	0.74	1.00	1.00	1.00	0.93	0.93	0.93
Uniform Delay (d), s/veh	45.0	14.3	13.6	56.9	39.2	39.2	53.0	30.0	21.6	61.1	41.8	31.7
Incr Delay (d2), s/veh	106.0	0.8	1.0	6.3	2.2	4.2	86.4	0.2	0.3	4.0	0.3	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	14.6	3.8	1.9	4.7	10.2	11.0	16.6	5.5	3.9	0.9	3.6	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	151.0	15.1	14.6	63.2	41.4	43.4	139.4	30.2	21.8	65.1	42.1	32.6
LnGrp LOS	F	B	B	E	D	D	F	C	C	E	D	C
Approach Vol, veh/h		2032			1379			1368			625	
Approach Delay, s/veh		56.3			46.3			83.5			39.4	
Approach LOS		E			D			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.3	51.8	26.0	34.0	23.0	45.0	7.9	52.0
Change Period (Y+Rc), s	4.0	* 7	4.0	5.5	4.0	* 7	4.0	5.5
Max Green Setting (Gmax), s	16.0	* 34	22.0	36.0	19.0	* 31	5.0	53.0
Max Q Clear Time (g_c+I1), s	12.1	13.6	24.0	22.2	21.0	23.6	3.9	14.7
Green Ext Time (p_c), s	0.2	12.0	0.0	2.9	0.0	4.6	0.0	5.4

Intersection Summary	
HCM 6th Ctrl Delay	58.7
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	214	171	204	220	564	80	469	690	90	30	460	309
Future Volume (veh/h)	214	171	204	220	564	80	469	690	90	30	460	309
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	2057	1870	1870	2057	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	246	197	234	253	648	92	539	793	103	34	529	355
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	209	832	388	209	1248	352	313	1347	601	73	1099	490
Arrive On Green	0.06	0.22	0.22	0.06	0.22	0.22	0.09	0.38	0.38	0.02	0.31	0.31
Sat Flow, veh/h	3456	3744	1744	3456	5617	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	246	197	234	253	648	92	539	793	103	34	529	355
Grp Sat Flow(s),veh/h/ln	1728	1872	1744	1728	1872	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	4.0	2.9	8.0	4.0	6.7	3.2	6.0	11.8	2.9	0.6	8.0	13.2
Cycle Q Clear(g_c), s	4.0	2.9	8.0	4.0	6.7	3.2	6.0	11.8	2.9	0.6	8.0	13.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	209	832	388	209	1248	352	313	1347	601	73	1099	490
V/C Ratio(X)	1.18	0.24	0.60	1.21	0.52	0.26	1.72	0.59	0.17	0.47	0.48	0.72
Avail Cap(c_a), veh/h	209	1584	738	209	2376	671	313	1825	814	157	1664	742
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.1	21.1	23.1	31.1	22.6	21.3	30.1	16.4	13.7	32.0	18.5	20.3
Incr Delay (d2), s/veh	118.6	0.2	2.0	131.0	0.4	0.5	337.5	0.5	0.2	1.7	0.4	2.5
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	5.0	1.2	3.3	5.4	2.8	1.2	17.1	4.5	1.0	0.3	3.1	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	149.7	21.3	25.1	162.1	23.1	21.8	367.5	16.9	13.8	33.8	18.9	22.8
LnGrp LOS	F	C	C	F	C	C	F	B	B	C	B	C
Approach Vol, veh/h		677			993			1435			918	
Approach Delay, s/veh		69.3			58.4			148.4			21.0	
Approach LOS		E			E			F			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	21.7	10.0	26.5	8.0	21.7	5.4	31.1
Change Period (Y+Rc), s	4.0	* 7	4.0	* 6	4.0	* 7	4.0	* 6
Max Green Setting (Gmax), s	4.0	* 28	6.0	* 31	4.0	* 28	3.0	* 34
Max Q Clear Time (g_c+I1), s	6.0	10.0	8.0	15.2	6.0	8.7	2.6	13.8
Green Ext Time (p_c), s	0.0	3.4	0.0	5.3	0.0	6.0	0.0	7.0

Intersection Summary	
HCM 6th Ctrl Delay	83.8
HCM 6th LOS	F

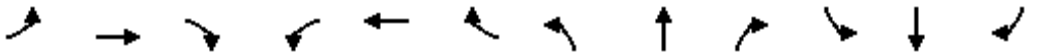
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	140	60	234	120	62	130	500	302	104	320	110
Future Volume (veh/h)	80	140	60	234	120	62	130	500	302	104	320	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	2057	1870	1870	2057	1870
Adj Flow Rate, veh/h	85	149	64	249	128	66	138	532	321	111	340	117
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	123	216	281	614	203	105	222	640	385	142	830	280
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.06	0.28	0.28	0.08	0.29	0.29
Sat Flow, veh/h	667	1170	1522	3456	1144	590	3456	2315	1394	1781	2845	960
Grp Volume(v), veh/h	234	0	64	249	0	194	138	449	404	111	231	226
Grp Sat Flow(s),veh/h/ln	1837	0	1522	1728	0	1735	1728	1955	1755	1781	1955	1850
Q Serve(g_s), s	7.8	0.0	2.3	4.2	0.0	6.8	2.6	14.2	14.2	4.0	6.2	6.4
Cycle Q Clear(g_c), s	7.8	0.0	2.3	4.2	0.0	6.8	2.6	14.2	14.2	4.0	6.2	6.4
Prop In Lane	0.36		1.00	1.00		0.34	1.00		0.79	1.00		0.52
Lane Grp Cap(c), veh/h	339	0	281	614	0	308	222	540	485	142	570	540
V/C Ratio(X)	0.69	0.00	0.23	0.41	0.00	0.63	0.62	0.83	0.83	0.78	0.41	0.42
Avail Cap(c_a), veh/h	650	0	539	1212	0	608	385	566	508	171	570	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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.0	0.0	22.8	23.9	0.0	25.0	29.9	22.3	22.3	29.6	18.7	18.7
Incr Delay (d2), s/veh	2.5	0.0	0.4	0.4	0.0	2.1	1.1	10.3	11.5	14.2	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	3.4	0.0	0.8	1.7	0.0	2.8	1.1	7.5	6.9	2.2	2.7	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.5	0.0	23.2	24.3	0.0	27.1	31.0	32.6	33.8	43.8	19.3	19.5
LnGrp LOS	C	A	C	C	A	C	C	C	C	D	B	B
Approach Vol, veh/h		298			443			991			568	
Approach Delay, s/veh		26.6			25.5			32.9			24.2	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	17.1	7.7	24.1	16.7	8.7	23.1
Change Period (Y+Rc), s	5.0	3.5	5.0	5.0	3.5	5.0
Max Green Setting (Gmax), s	23.2	7.3	18.0	23.0	6.3	19.0
Max Q Clear Time (g_c+I1), s	9.8	4.6	8.4	8.8	6.0	16.2
Green Ext Time (p_c), s	1.3	0.0	2.5	1.8	0.0	1.7

Intersection Summary	
HCM 6th Ctrl Delay	28.5
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	589	1015	820	426	1048	80	550	554	264	170	806	659
Future Volume (veh/h)	589	1015	820	426	1048	80	550	554	264	170	806	659
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.97	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	2057	1870	1870	2057	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	607	1046	845	439	1080	82	567	571	272	175	831	679
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	567	1470	692	486	1265	96	540	1318	795	230	999	692
Arrive On Green	0.27	0.44	0.44	0.14	0.24	0.24	0.16	0.37	0.37	0.07	0.28	0.28
Sat Flow, veh/h	3456	5617	2643	3456	5310	403	3456	3554	1544	3456	3554	1537
Grp Volume(v), veh/h	607	1046	845	439	761	401	567	571	272	175	831	679
Grp Sat Flow(s),veh/h/ln	1728	1872	1321	1728	1872	1968	1728	1777	1544	1728	1777	1537
Q Serve(g_s), s	21.0	19.5	33.5	16.0	24.9	24.9	20.0	15.4	13.4	6.4	28.1	36.0
Cycle Q Clear(g_c), s	21.0	19.5	33.5	16.0	24.9	24.9	20.0	15.4	13.4	6.4	28.1	36.0
Prop In Lane	1.00		1.00	1.00		0.20	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	567	1470	692	486	892	469	540	1318	795	230	999	692
V/C Ratio(X)	1.07	0.71	1.22	0.90	0.85	0.85	1.05	0.43	0.34	0.76	0.83	0.98
Avail Cap(c_a), veh/h	567	1470	692	486	892	469	540	1318	795	297	999	692
HCM Platoon Ratio	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.54	0.54	0.54	0.80	0.80	0.80	1.00	1.00	1.00	0.45	0.45	0.45
Uniform Delay (d), s/veh	46.5	32.1	36.0	54.1	46.6	46.6	54.0	30.2	18.5	58.7	43.2	35.2
Incr Delay (d2), s/veh	48.7	1.6	106.9	16.5	8.3	14.7	52.5	0.3	0.3	4.2	2.9	18.5
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	12.0	7.9	19.6	8.1	12.6	14.1	12.6	6.7	4.8	2.9	12.7	23.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	95.2	33.7	143.0	70.7	54.9	61.4	106.5	30.5	18.8	62.9	46.0	53.6
LnGrp LOS	F	C	F	E	D	E	F	C	B	E	D	D
Approach Vol, veh/h		2498			1601			1410			1685	
Approach Delay, s/veh		85.6			60.9			58.8			50.9	
Approach LOS		F			E			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	40.5	24.0	41.5	25.0	37.5	12.5	53.0
Change Period (Y+Rc), s	4.0	* 7	4.0	5.5	4.0	* 7	4.0	5.5
Max Green Setting (Gmax), s	18.0	* 34	20.0	36.0	21.0	* 31	11.0	45.0
Max Q Clear Time (g_c+I1), s	18.0	35.5	22.0	38.0	23.0	26.9	8.4	17.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	2.7	0.2	6.5

Intersection Summary	
HCM 6th Ctrl Delay	66.7
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

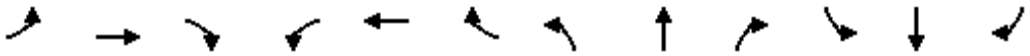
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	473	490	80	342	20	337	240	50	70	230	157
Future Volume (veh/h)	210	473	490	80	342	20	337	240	50	70	230	157
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	2057	1870	1870	2057	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	219	493	510	83	356	21	351	250	52	73	240	164
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	159	1414	658	146	2099	592	318	781	349	131	588	262
Arrive On Green	0.05	0.38	0.38	0.04	0.37	0.37	0.09	0.22	0.22	0.04	0.17	0.17
Sat Flow, veh/h	3456	3744	1744	3456	5617	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	219	493	510	83	356	21	351	250	52	73	240	164
Grp Sat Flow(s),veh/h/ln	1728	1872	1744	1728	1872	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	3.0	6.1	16.8	1.5	2.8	0.5	6.0	3.8	1.7	1.4	3.9	6.3
Cycle Q Clear(g_c), s	3.0	6.1	16.8	1.5	2.8	0.5	6.0	3.8	1.7	1.4	3.9	6.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	159	1414	658	146	2099	592	318	781	349	131	588	262
V/C Ratio(X)	1.38	0.35	0.77	0.57	0.17	0.04	1.10	0.32	0.15	0.56	0.41	0.62
Avail Cap(c_a), veh/h	159	1668	777	159	2502	706	318	1747	779	265	1692	755
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.1	14.5	17.8	30.6	13.6	12.9	29.6	21.3	20.5	30.8	24.3	25.3
Incr Delay (d2), s/veh	203.3	0.2	4.6	1.9	0.1	0.0	80.7	0.3	0.2	1.4	0.5	2.9
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	5.7	2.4	6.9	0.7	1.1	0.2	5.9	1.5	0.6	0.6	1.6	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	234.3	14.7	22.4	32.5	13.7	13.0	110.2	21.6	20.7	32.2	24.9	28.2
LnGrp LOS	F	B	C	C	B	B	F	C	C	C	C	C
Approach Vol, veh/h		1222			460			653			477	
Approach Delay, s/veh		57.3			17.1			69.2			27.1	
Approach LOS		E			B			E			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.7	31.6	10.0	16.8	7.0	31.3	6.5	20.3
Change Period (Y+Rc), s	4.0	* 7	4.0	* 6	4.0	* 7	4.0	* 6
Max Green Setting (Gmax), s	3.0	* 29	6.0	* 31	3.0	* 29	5.0	* 32
Max Q Clear Time (g_c+I1), s	3.5	18.8	8.0	8.3	5.0	4.8	3.4	5.8
Green Ext Time (p_c), s	0.0	5.8	0.0	2.5	0.0	3.2	0.0	2.1

Intersection Summary	
HCM 6th Ctrl Delay	48.4
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	220	100	485	180	104	200	630	243	123	820	180
Future Volume (veh/h)	180	220	100	485	180	104	200	630	243	123	820	180
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	2057	1870	1870	2057	1870
Adj Flow Rate, veh/h	189	232	105	511	189	109	211	663	256	129	863	189
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	201	247	388	702	226	130	247	756	292	153	921	202
Arrive On Green	0.24	0.24	0.24	0.20	0.20	0.20	0.07	0.27	0.27	0.09	0.29	0.29
Sat Flow, veh/h	821	1008	1585	3456	1113	642	3456	2756	1064	1781	3188	698
Grp Volume(v), veh/h	421	0	105	511	0	298	211	470	449	129	529	523
Grp Sat Flow(s),veh/h/ln	1829	0	1585	1728	0	1755	1728	1955	1866	1781	1955	1932
Q Serve(g_s), s	21.8	0.0	5.2	13.3	0.0	15.7	5.8	22.2	22.2	6.9	25.5	25.5
Cycle Q Clear(g_c), s	21.8	0.0	5.2	13.3	0.0	15.7	5.8	22.2	22.2	6.9	25.5	25.5
Prop In Lane	0.45		1.00	1.00		0.37	1.00		0.57	1.00		0.36
Lane Grp Cap(c), veh/h	448	0	388	702	0	356	247	536	512	153	565	558
V/C Ratio(X)	0.94	0.00	0.27	0.73	0.00	0.84	0.85	0.88	0.88	0.84	0.94	0.94
Avail Cap(c_a), veh/h	448	0	388	824	0	418	247	539	514	153	567	561
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.7	0.0	29.5	35.9	0.0	36.9	44.3	33.4	33.4	43.4	33.4	33.4
Incr Delay (d2), s/veh	28.2	0.0	0.4	2.7	0.0	12.1	23.0	15.4	16.0	30.9	23.5	23.7
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	13.0	0.0	2.0	5.8	0.0	7.8	3.3	12.5	12.0	4.3	15.4	15.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.9	0.0	29.8	38.7	0.0	49.0	67.3	48.8	49.4	74.3	56.9	57.2
LnGrp LOS	E	A	C	D	A	D	E	D	D	E	E	E
Approach Vol, veh/h		526			809			1130			1181	
Approach Delay, s/veh		57.1			42.5			52.5			58.9	
Approach LOS		E			D			D			E	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		28.6	10.4	32.9		24.6	11.8	31.5				
Change Period (Y+Rc), s		5.0	3.5	5.0		5.0	3.5	5.0				
Max Green Setting (Gmax), s		23.6	6.9	28.0		23.0	8.3	26.6				
Max Q Clear Time (g_c+I1), s		23.8	7.8	27.5		17.7	8.9	24.2				
Green Ext Time (p_c), s		0.0	0.0	0.4		1.9	0.0	1.6				

Intersection Summary												
HCM 6th Ctrl Delay			53.0									
HCM 6th LOS			D									